UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)
☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the fiscal year ended **December 31, 2021**

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____________ to _____________

Commission file number: **0-10394**

DATA I/O CORPORATION

(Exact name of registrant as specified in its charter)

Washington	**91-0864123**
(State or other jurisdiction of incorporation)	(I.R.S. Employer Identification No.)

6645 185th Ave NE, Suite 100, Redmond, Washington, 98052
(425) 881-6444
(Address, including zip code, of registrant's principle executive offices and telephone number, including area code) Securities registered pursuant to Section 12(b) of the Act

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock	DAIO	NASDAQ

Securities registered pursuant to Section 12(g) of the Act
None

Indicate by check mark whether the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark whether the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer", "accelerated filer", "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated Filer	☐	Smaller reporting company	☒
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

Aggregate market value of voting and non-voting common equity held
by non-affiliates on the registrant as of June 30, 2021:
$55,095,093

Shares of Common Stock, no par value, outstanding as of March 21, 2022:
8,622,369

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the registrant's Proxy Statement relating to its May 19, 2022 Annual Meeting of Shareholders are incorporated into Part III of this Annual Report on Form 10-K.

DATA I/O CORPORATION
FORM 10-K

For the Fiscal Year Ended December 31, 2021

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PART I

Item 1. Business

This Annual Report on Form 10-K and the documents incorporated herein by reference contain forward-looking statements based on current expectations, estimates and projections about Data I/O Corporation's industry, management's beliefs and certain assumptions made by management. See "Management's Discussion and Analysis of Financial Condition and Results of Operations – Forward Looking Statements."

General

Data I/O Corporation ("Data I/O", "We", "Our", "Us") is a global market leader for advanced programming, security deployment, security provisioning and associated Intellectual Property ("IP") protection and management solutions used in electronics manufacturing with flash memory, microcontrollers, and flash memory-based intelligent devices as well as secure element devices, authentication devices and secure microcontrollers. We collectively refer to IP protection, security provisioning of devices, provisioning of security into devices, and related services such as cloud onboarding and device and provisioning documentation management as "security deployment". Data I/O® designs, manufactures and sells programming and security deployment systems and services for electronic device manufacturers, specifically targeting high-growth areas such as high-volume users of flash memory and flash memory-based microcontrollers. Most electronic products today incorporate a number of programmable semiconductor devices that contain data, operating instructions and security credentials essential for the proper operation of the product and more and more products require security deployment.

Our mission is to bring the world's electronic devices to life. Programmable devices are used in products such as automobile electronics, smartphones, HDTV, smart meters, gaming systems and a broad category called Internet of Things ("IoT"). IoT is a broad term that addresses the interconnectivity of devices and other electronic or smart products. Our solutions, some of which include security deployment and process control capabilities, enable us to address the demanding requirements of the electronic device market, where applications security and IP protection are essential to our customer's success. Our largest customers are heavy users of programmable semiconductor devices and include original equipment manufacturers ("OEMs") in automotive electronics, consumer electronics and IoT markets as well as their programming center partners and electronic manufacturing service ("EMS") contract manufacturers.

Data I/O was incorporated in the State of Washington in 1969 and its business was founded in 1972. Our website address is www.dataio.com.

COVID-19

In 2021, we continued to react to and manage our business relative to the COVID-19 pandemic. During 2020 and throughout 2021, COVID-19 impacted all aspects of our business, from customer demand, to supply chain integrity, employee safety, business processes, and financial management. As a global company, we had to manage each of these while working within the guidelines of local and national policy in the U.S., China and Germany. Our philosophy at the start of the outbreak was simple:

1. Keep our employees and their families safe;
2. Keep our facilities safe and operational while we serve our customers as an essential business; and
3. Preserve cash.

We have managed the COVID-19 impact successfully to date, with no known employee transmissions in the workplace and significant preservation of our cash and working capital. Our resilient supply chain model kept our facilities in Shanghai, China and Redmond, Washington open, and serving customers globally, despite sporadic government restrictions on our facilities and vendors. We face continued international travel restrictions, shipping delays, and inability to meet with customers in person. As business has recovered, we have been able to respond by having the working capital needed and the workforce in place. We saw a resurgence of orders in the second quarter of 2021 as vaccinations were occurring and customers resumed business. Following this, in the third quarter of 2021, we experienced a slowdown of demand as customers, we believe, were unable to secure an adequate semiconductor parts supply for planned capacity expansion. In supply chains around the world with the re-openings and now, in a believed ripple effect, factories are experiencing the impact of chip shortages on their production plans. This appears to be a shorter-term issue, but is expected to have some continuing impact into 2022. However, the outlook by industry analysts for automotive electronics remains strong for a decade. Waves of COVID-19 infection rates and variants have kept or re-imposed revised travel restrictions. Customers largely have not permitted in-person sales and other visits. Converting these interactions to remote and virtual means has meant implementing new processes and technology.

Industry Background

We enable companies to improve productivity, increase supply-chain security and reduce costs by providing device data programming and security deployment solutions that allow our customers to take IP (large design and data files) and protect and program it into memory, microcontroller, security and logic devices quickly and cost-effectively. We also provide services related to hardware support, system installation and repair, and device programming. Companies that design and manufacture products utilizing programmable electronic devices, ranging from automobiles to cell phones, purchase programming solutions from us. Trends of increasing device densities, shrinking device packages, increased demands for security, and customers increasing their software content file sizes, combined with the increasing numbers of intelligent devices such as automotive electronics and IoT applications, are driving demand for our solutions.

Traditionally, our programming market opportunity focused on the number of semiconductor devices to be programmed, but because of the rapid increase in the density of devices, and increasing demands for supply-chain security, the focus has shifted in many cases from the number and type of devices to the number and type of bits per device to be programmed or securely provisioned. With expected growth in IoT applications, the business opportunity for this market differentiates on quality, security and automation.

Some of our automated programming systems integrate data programming, automated handling functions and/or security deployment into a single product solution. During 2021, we continued to simplify and integrate security deployment into some of our solutions adding the capability to our PSV5000 and as a field upgrade to installed systems. Quality and security-conscious customers, particularly those in high-volume manufacturing and programming, drive this portion of our business.

Products

To accommodate the expanding variety and quantities of programmable devices being manufactured today, we offer multiple solutions for the numerous types of device mix and volume usage by our customers in the various market segments and applications. We work closely with leading manufacturers of programmable devices to develop our products to meet the requirements of a particular device. Our newer products are positioned and recognized as some of the most advanced programming and security deployment solutions.

Our programming solutions include a broad range of products, systems, modules and accessories, grouped into two general categories: automated programming systems and manual programming systems. We provide two categories of automated programming systems: off-line and in-line. Our PSV family of automated programming systems delivers a broad range of programming capacity and capability to the marketplace. Our recently announced PSV2800 Automated Programming System focuses on dedicated high-volume manufacturing in a lower cost platform. Our PSV7000 Automated Programming System continues to be well adopted in the marketplace, in particular for automotive electronics customers and as a base for security deployment upgrades. Our PSV5000 automated programming system combines mid-range capacity and flexibility with competitive pricing. Our PSV3000 Automated Programming System is a lower cost platform for basic programming needs. Our PSV family of handlers has won multiple industry awards for technical excellence and innovation.

Our automated systems have list selling prices ranging from $90,000 to $610,000 and our manual systems have list selling prices ranging from $10,000 to $36,000. Our security deployment system, SentriX®, is offered for security provisioning on a pay per part use basis along with related fees.

Data I/O programming technology is integrated with the PSV family to create highly-flexible systems that deliver outstanding performance with low total cost of ownership. The LumenX programming engine is designed to support large eMMC and UFS programming of large NAND FLASH. Increasing memory densities and the need for faster data interfaces are resulting in an expected transition to the use of UFS devices. LumenX is available on our PSV7000 and PSV5000 and as a standalone manual programmer. FlashCORE™, and our universal job setup tool, Tasklink™ for Windows®, are available in each family of our automated programming systems and in FlashPAK™, our manual programming system. The SentriX security system adds security deployment capability to our data programming system. SentriX allows customers of any size and demand-profile to securely add keys, certificates, and other security information to specialized regions of authentication integrated circuits (“ICs”), secure elements and secure microcontrollers. We provide device support and service on all of our products. Device support is a critical aspect of our business and consists of writing software algorithms for devices and developing socket adapters to hold and connect to the device for programming.

Our products have both an upfront solution sale and recurring revenue elements. Adapters are a consumable item and software and maintenance are typically recurring under subscription contracts. Our SentriX system revenue typically comes from per part use fees, set-up or minimum quarterly fees, consumables, non-recurring engineering fees, service fees and the sale of equipment related to SentriX.

Sales Percentage of Total Sales Breakdown by Type			
Sales Type	**2021**	**2020**	**Drivers**
Equipment Sales	58%	56%	Capacity, Process improvement, Technology
Adapter Sales	30%	28%	Capacity utilization, New customer products
Software and Maintenance Sales	12%	16%	Installed base, Added capabilities
Total	**100%**	**100%**	

The table below presents our main products and the key features that benefit our customers:

Products	Key Features	Customer Benefits
PSV Handlers: Off-line (Automated)	• Fast program and verify speeds • Up to 112 programming sites • Up to 3000 devices per hour throughput • UFS Support • Supports LumenX and FlashCORE III programmers • Supports multiple media types • Supports quality options – fiber laser marking, 3D coplanarity • ConneX Factory Integration, Job Composer & other Software	• Managed and secure programming • High throughput for high density Flash programming • High flexibility with respect to I/O options (tray, tape, tube), marking/labeling and vision for coplanarity inspection
SentriX Security Deployment System	• Unique ability to securely provision keys and certificates one device at a time • Pay per use model reduces capital spending requirements as the market develops.	• Create Secure IoT devices across a global network • Maintain IP control over the lifecycle of their products
RoadRunner & RoadRunner3 Series Handlers: In-line, (Automated)	• Just-in-time in-line programming • Direct integration with placement machine supporting SIPLACE, Fuji NXT, Panasonic, Universal/Genesis and Assembleon/K&S • Factory Integration Software • Supports FlashCORE III programmers	• Dramatic reduction in inventory carrying and rework costs •“ Zero” footprint • Rapid return on investment (“ROI”) typically realized in a matter of months • Integration with factory systems
LumenX Programmer	• Extensible architecture for fast program, verify and download speeds • Supports UFS, microcontrollers, Serial FLASH, secure elements and other device types • Large file size support • Secure Job creation • 8 sockets with tool-less changeover with single socket adapters	• Managed and secure programming • Fast setup and job changeover • Highest yield and low total cost of programming • High performance
FlashPAK III programmer: (Non-Automated)	• Scalability • Network control via Ethernet • Stand-alone operation or PC compatible • Parallel programming	• Validate designs before moving down the firmware supply chain • Unmatched ease of use in manual production systems

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Customers/Markets

We sell our solutions to customers worldwide, many of whom are world-class manufacturers of electronic devices used in a broad range of industries, as described in the following table:

	OEMs		EMS	Programming Centers
	Automotive Electronics	**IoT, Industrial, Consumer Electronics, including Wireless**	**Contract Manufacturers**	
Notable end customers	Borg Warner, Bosch, Alps Alpine, Visteon, Kostal, JVCKenwood, Harman, Denso Ten, Continental, Panasonic, Magna, Marelli, Tesla	LG, TCL, Siemens, Danfoss, Philips, Schneider, Endress+Hauser, Insta, Microsoft, Sony, Amazon, UTEC	Pegatron, Flex, Jabil, Wistron, Sanmina SCI, Foxconn, Leesys, Calcomp	Arrow, Avnet, BTV, CPS, EPS, Elsil, Elmitech, Noa Leading
Business drivers	Infotainment, Advanced Driver Assist (ADAS), Electrification, Connectivity and Security	Higher functionality driven by increasing electronic content. Shift from analog to connected intelligent devices, security	Production contract wins	Value-added services, logistics, security
Programming equipment drivers	Growing Electronic Content, Global Support, Resilient Supply Chains, new product rollouts, growing file sizes, quality control and traceability, security	Growing Electronic Content, need for IP protection. Process improvement and simplification as well as new product rollouts, memory and new technology, security	New contracts from OEMs, programming solutions specified by OEMs	Capacity utilization of their installed base of equipment, small parts handling, security
Buying criteria	Quality, reliability, configuration control, traceability, global support, IP protection, security	Quality, reliability, configuration control, traceability, global support, IP protection, Security.	Lowest equipment procurement cost, global support	Flexibility, lowest life-cycle cost-per programmed-part, low changeover time; use of multiple vendors provides negotiating leverage, device support availability
Security Deployment	End customer focus	End customer focus	End customer and partner Focus	Partner focus of our SentriX deployments

Our solutions address the data programming of devices and security deployment needs of programmable semiconductor devices. Semiconductor devices are a large, growing market, in terms of devices, bits programmed and need for security. We believe that our sales are driven by many of the same forces that propel the semiconductor industry. We sell to the same firms that buy the semiconductors. When their business grows, they buy more semiconductors which, in turn, require additional programming equipment to maintain production speeds or program new device technologies.

Our device programming solutions currently target two high volume, growing markets: automotive electronics and IoT systems including Industrial and Consumer devices.

Growth drivers for automotive electronics

- Consumers desire advanced car features requiring higher levels of sophistication, including autonomous cars, infotainment options (audio, radio, dashboard displays, navigation), ADAS, wireless connectivity and electrification
- Proliferation of programmable microcontrollers to support the next-generation electronic car systems
- Increasing use of high-density flash to provide memory for advanced applications that require programming
- Increasing complexity to support autonomous vehicles
- Increasing need for security solutions for a secure supply chain and lifecycle firmware integrity

Growth drivers for IoT: including industrial, consumer electronics and wireless

- Securely controlling groups of connected devices through a secure supply chain and lifecycle firmware integrity management
- Adding intelligence and processing into devices
- Connecting previously unconnected devices to networks and the internet (such as smart home, including intelligent thermostats and lighting)
- Emergence of new devices and applications (such as health and wellness wearable devices and applications)

All of the above growth drivers are long term and are likely to be adversely impacted, at least temporarily, due to the global pandemic of COVID-19 and other global political and economic factors in our markets. Annual projections on spending, growth, mix, and profitability are likely to be revised substantially as new information is obtained.

Diversification of accounts receivable and net sales

During 2021, we sold products to approximately 200 customers throughout the world.

The following represented greater than 10% of net sales for the applicable year:

Percentage of Net Sales	**2021**	**2020**	**2019**
Number of customers	1	1	1
Approximate percentage of net sales	14%	12%	11%

The following represented greater than 10% of our consolidated accounts receivable for the applicable year:

Percentage of Consolidated Accounts Receivable	**2021**	**2020**	**2019**
Number of customers	3	3	2
Approximate percentage of consolidated accounts receivable balance	36%	41%	32%
Percentage of each	13%	17%	17%
Percentage of each	12%	12%	15%
Percentage of each	11%	12%	n/a

Geographic Markets and Distribution

We market and sell our products through a combination of direct sales, indirect sales representatives and distributors, as well as services through programming centers. We continually evaluate our sales channels against our evolving markets and customers and realign them as necessary to ensure that we reach our existing and potential customers in the most effective and efficient manner possible.

U.S. Sales

We market our products throughout the U.S. using a variety of sales channels, including our own field sales management personnel, independent sales representatives and direct sales. Our U.S. independent sales representatives obtain orders on an agency basis, with shipments made directly to the customer by us. Net sales in the U.S. for 2021, 2020 and 2019 were (in millions) $2.6, $1.5 and $1.7, respectively. Some of our customers' orders delivered internationally are heavily influenced by U.S. sales-based efforts.

International Sales

International sales represented approximately 90%, 93% and 92% of net sales in 2021, 2020 and 2019, respectively. We make foreign sales through our wholly-owned subsidiaries in Germany and China, as well as through independent distributors and sales representatives operating in 45 countries. Our independent foreign distributors purchase our products for resale and we generally recognize the sale at the time of shipment to the distributor. As with U.S. sales representatives, sales made by international sales representatives are on an agency basis, with sales made directly to the customer by us.

Net international sales for 2021, 2020 and 2019 were (in millions) $23.2, $18.8 and $19.8, respectively. We determine international sales by the international geographic destination into which the products are sold and delivered, and include not only sales by foreign subsidiaries but also export sales from the U.S. to our foreign distributors and to our representatives' customers. International sales do not include transfers between Data I/O and our foreign subsidiaries. Export sales are subject to U.S. Department of Commerce regulations. We have not, however, experienced difficulties to date as a result of these requirements. Our products typically do not require export licenses. We have not made sales to Iran or any Iranian governmental entities or any other blacklisted companies or countries.

Fluctuating exchange rates and other factors beyond our control, such as the coronavirus, international monetary stability, tariff and trade policies and U.S. and foreign tax and economic policies, may affect the level and profitability of international sales. We cannot predict the effect of such factors on our business, but we try to consider and respond to changes in these factors, particularly as the majority of our costs are U.S. based while the vast majority of our sales are international.

Competition

The competition in the programming systems market is highly fragmented with a small number of organizations selling directly competitive solutions and a large number of smaller organizations offering less expensive solutions. In particular, low cost automated solutions have gained market share in recent years, where the competition is primarily based on price. Typically, their equipment meets a "good enough" standard, but with reduced quality, traceability, upgradability, security and other software features such as factory integration software. Many of these competitors compete on a regional basis, with local language and support. Although competition in the security deployment market is developing, we expect competition in the market to increase as security deployment becomes more important. There are alternative security deployment solutions such as software-based security, rather than the hardware-based security of our SentriX equipment.

In addition, we compete with multiple substitute forms of device programming including "home grown" solutions. Programming after device placement may be done with In Circuit Test ("ICT"), In System Programming ("ISP"), and End of Line Downloading ("EOL"). Some automotive products may also be programmed over the air ("OTA"). IoT devices may also be programmed with ICT, ISP, EOL or OTA. In addition, new security devices may be required to be programmed using device-specific programmers developed by the semiconductor manufacturer.

While we are not aware of any published industry market information covering the programming systems or security deployment market, according to our internal analysis of competitors' revenues, we believe we continue to be the largest competitor in the programming systems equipment market and have been gaining market share in recent years, especially with our new products.

Manufacturing, Raw Materials and Backlog

We strive to manufacture and provide the best solutions for advanced programming. We primarily assemble and test our products at our principal facilities in Redmond, Washington and Shanghai, China. Both of these locations are ISO 9001:2015 certified. We outsource our circuit board manufacturing and fabrication. As a resilient supply chain strategy, we manufacture various products in both of our production facilities. This strategy allows opportunity to mitigate some of the risks of having only one location, as well as enabling tariff and tax optimization strategies. We use a combination of standard components and fabricated parts manufactured to our specifications. Most components used are available from a number of different suppliers and subcontractors but certain items, such as some handler and programmer and security deployment subassemblies, custom integrated circuits, hybrid circuits and connectors, are purchased from single sources. We believe that additional sources can be developed for most present single-source components without significant difficulties. Single-source components may not always continue to be readily available or may be subject to part shortage delays. If we cannot develop alternative sources for these components, or if we experience deterioration in relationships with these suppliers, there may be price increases, minimum order quantities, end of life purchase requirements, costs associated with integrating alternatively sourced parts, and delays or reductions in product introductions or shipments, which may materially adversely affect our operating results.

In accordance with industry practices, generally all orders are subject to cancellation prior to shipment without penalty, except for contracts calling for custom configuration. To date, such cancellations have not had a material effect on our sales volume. To meet customers' delivery requirements, we manufacture certain products based upon a combination of backlog and anticipated orders. Most orders are scheduled for delivery within 1 to 90 days after receipt of the order. Our backlog of pending orders was approximately (in millions) $2.9, $3.9 and $2.9 as of December 31, 2021, 2020 and 2019, respectively. The size of backlog at any particular date is not necessarily a meaningful indicator of the trend of our business.

Research and Development

We believe that continued investment in research and development is critical to our future success. We continue to develop new technologies and products and enhance existing products. Future growth is, to a large extent, dependent upon the timely development and introduction of new products, as well as the development of technology and algorithms to support the latest programmable devices. Where possible, we may pursue partnerships and other strategic relationships to add new products, capabilities and services, particularly in security deployment. We are currently focusing our research and development efforts on strategic growth markets, including automotive electronics, IoT and security deployment. We are continuing to develop technology for security deployment to program new categories of semiconductors, including Secure Elements, TPMs, Authentication Chips, and Secure Microcontrollers. We plan to deliver new programming technology, automated handling systems and enhancements for security deployment in the manufacturing environment. We also continue to focus on increasing our capacity and responsiveness for new device support requests from customers and programmable integrated circuit manufacturers by revising and enhancing our internal processes and tools. Our research and development efforts have resulted in the release of significant new products and product enhancements over the past several years.

During 2021, 2020 and 2019, we made expenditures for research and development of (in millions) $6.6, $6.4 and $6.5, respectively, representing 26%, 31% and 29.9% of net sales, respectively. Research and development costs are generally expensed as incurred.

Patents, Copyrights, Trademarks and Licenses

We rely on a combination of patents, copyrights, trade secrets and trademarks to protect our IP, as well as product development and marketing skill to establish and protect our market position. We continue to apply for and add new patents to our patent portfolio as we develop strategic new technologies. We have approximately 20 U.S. and international awarded patents related to the SentriX platform and security provisioning architecture, processes, and methods.

We attempt to protect our rights in proprietary systems (architecture, implementations, software), including the SentriX Security Deployment System. We attempt to protect our software, including Lumen®X software, FlashCORE software, TaskLink software, ConneX smart programming software and other software products, by retaining the title to and copyright of the software and documentation, by including appropriate contractual restrictions on use and disclosure in our licenses, and by requiring our employees to execute non-disclosure agreements. Our software products are not typically sold separately from sales of programming systems. However, when we sell software separately, we recognize revenue upon the transfer of control of the software, which is generally upon shipment, provided that only inconsequential performance obligations remain on our part and substantive acceptance conditions, if any, have been met.

Because of the rapidly changing technology in the semiconductor, electronic equipment and software industries, portions of our products might infringe upon existing patents or copyrights, and we may be required to obtain licenses or discontinue the use of the infringing technology. We believe that any exposure we may have regarding possible infringement claims is a reasonable business risk similar to that assumed by other companies in the electronic equipment and software industries. However, any claim of infringement, with or without merit, could be costly and a diversion of management's attention, and an adverse determination could adversely affect our reputation, preclude us from offering certain products, and subject us to substantial liability. As of December 31, 2021, there were no pending actions regarding infringement claims.

Employees

As of December 31, 2021, we had a total of 95 employees, of which 46 were located outside the U.S. and 9 of which were part time. We also utilize independent contractors for specialty work, primarily in research and development, and utilize temporary workers to adjust capacity to fluctuating demand and for special projects. Many of our employees are highly skilled, trained and experienced in specialized areas and our continued success will depend in part upon our ability to attract and retain employees who can be in great demand within the industry. None of our employees are represented by a collective bargaining unit and we believe relations with our employees are favorable. In foreign countries we have employment agreements or, in China, the Shanghai Foreign Services Co., Ltd. ("FSCO") labor agreement.

When hiring and retaining talent, we create specialized knowledge that is difficult to replace short term. During COVID-19, we specifically avoided COVID-19 related layoffs and other short-term measures to retain specialized skills and advance our research and development efforts while some other competitors were forced to reduce their research and development efforts.

Environmental, Social and Governance ("ESG")

Data I/O is committed to the responsibilities associated with modern age ESG. The Company's key pillars for ESG support a framework for sustainable growth and include Leadership & Governance, Environment, Innovation, Human Capital, Social Capital, and Financial Excellence. Initiatives within these areas apply to the company's daily global operations as well as within its supply chains.

We believe we are the only supplier in our industry with a published conflict mineral policy, and public company governance. We believe we are the only programming industry supplier with a diverse Board of Directors. Our facilities are subject to numerous laws and regulations concerning the discharge of materials or otherwise relating to the environment. In addition to this commitment, the company has a track record of meeting its ESG regulatory obligations, being a solid corporate citizen, delivering superior value to its customers and partners, and demonstrating enduring corporate stewardship while consistently returning capital to shareholders through share buybacks.

As the largest and only publicly traded company in its sector, Data I/O has led its industry in disclosing significant operational and financial information. The Company's Board currently includes Data I/O's CEO and five Independent Directors. It is diverse in gender, education, professional experience and differences in viewpoints and skills. Through its continuous improvement practices and our operations focus on assembly and test with no fabrication, the company consumes relatively little energy, has minimal or no emissions or pollutants to air and wastewater, and complies with workplace labor, safety and business practices on three continents.

Data I/O is also committed to giving back to our local communities through volunteer and internship programs. The Company provides employees time-off to volunteer and also coordinates group projects. In addition, the Company provides internships to local high school and college students through STEM and technical colleges.

Compliance with environmental laws has not had, nor is it currently expected to have, a material effect on our capital expenditures, financial position, results of operations or competitive position.

Executive Officers of the Registrant

Set forth below is certain information concerning the executive officers of Data I/O as of March 21, 2022:

Name	Age	Position
Anthony Ambrose	60	President and Chief Executive Officer
Joel S. Hatlen	63	Vice President, Chief Operating and Financial Officer, Secretary and Treasurer
Rajeev Gulati	58	Chief Technology Officer, Vice President of Engineering
Michael Tidwell	53	Vice President of Marketing and Business Development

Anthony Ambrose joined Data I/O on October 25, 2012 and is our President and Chief Executive Officer ("CEO"), and a member of the Board of Directors. Prior to Data I/O, Mr. Ambrose was Owner and Principal of Cedar Mill Partners, LLC, a strategy consulting firm since 2011. From 2007 to 2011, he was Vice President and General Manager at RadiSys Corporation, a leading provider of embedded wireless infrastructure solutions, where he led all product divisions and worldwide engineering. Until 2007, he was general manager and held several other progressively responsible positions at Intel Corporation, where he led development and marketing of standards-based telecommunications platforms, and grew the industry standard server business to over $1B in revenues. He is Chair of the EvergreenHealth Foundation Board of Trustees. In 2019 he also became a board member of Cipherloc Corporation (OTCQB: CLOK). Mr. Ambrose has a Bachelor's of Science in Engineering from Princeton University. He has completed the Stanford Graduate School of Business Director Symposium and earned the Carnegie Mellon University Certificate in Cybersecurity Oversight.

Joel S. Hatlen joined Data I/O in September 1991 and in July 2017 became our Chief Operating Officer in addition to serving as our Vice President, Chief Financial Officer, Secretary and Treasurer since January 1998. He was Chief Accounting Officer since February 1997 and served as Corporate Controller from December 1993 to December 1997. Previously, he was Tax Manager and Senior Tax Accountant. From September 1981 until joining Data I/O, Joel was employed by Ernst & Young LLP as a Certified Public Accountant, where his most recent position was Senior Manager. Joel is a Certified Public Accountant and holds a Masters in Taxation from Golden Gate University and a Bachelor's in Business Administration in Accounting from Pacific Lutheran University.

Rajeev Gulati joined Data I/O in July 2013 and is our Chief Technology Officer and Vice President of Engineering. Prior to Data I/O, Rajeev served as Director of Software Engineering for AMD responsible for tools, compiler strategy and execution from 2006 to 2013. He has an extensive background in software, systems and applying technology to develop new markets. Previously, he served as Director of Strategy and Planning at Freescale from 2004 to 2006; as Director of Embedded Products at Metrowerks (acquired by Motorola) from 2000 to 2004 and Director of Compilers, Libraries & Performance Tools from 1997 to 2000; and engineering and programmer positions at Apple Computer, IBM and Pacific-Sierra Research. Rajeev holds a Master of Science in Electrical & Computer Engineering from the University of Texas, Austin and a BE in Electrical Engineering from Delhi College of Engineering, New Delhi.

Michael Tidwell joined Data I/O in May 2019 and is our Vice President of Marketing and Business Development. Prior to Data I/O, he was Vice President of Marketing & Business Development at Tignis, an AI and machine learning startup. From 2012 to 2018 Michael was head of Marketing and Business Development at Sansa Security, a leading software security IP provider that was sold to ARM Holdings. Prior to Sansa, Michael was Vice President of Business and Market Development at BSQUARE Corporation. Michael has a Master of Science in Electrical Engineering from the University of Washington and a Bachelor of Electrical Engineering (Summa Cum Laude) from Georgia Institute of Technology.

Item 1A. Risk Factors

Cautionary Factors That May Affect Future Results

Our disclosure and analysis in this Annual Report contains some forward-looking statements. Forward-looking statements include our current expectations or forecasts of future events. The reader can identify these statements by the fact that they do not relate strictly to historical or current facts. In particular, these include statements relating to future action, the impact of the coronavirus, supply chain expectations, semiconductor chip shortages, Russia-Ukraine war impacts, prospective products, expected market growth, new technologies and trends, industry partnerships, foreign operations, economic expectations, future performance or results of current and anticipated products, sales efforts, expenses, outcome of contingencies, impact of regulatory requirements, tariffs and financial results.

Any or all of the forward-looking statements in this Annual Report or in any other public statement made may turn out to be wrong. They can be affected by inaccurate assumptions we might make, or known or unknown risks and uncertainties can affect these forward-looking statements. Many factors -- for example, product competition and product development -- will be important in determining future results. Moreover, neither Data I/O nor anyone else assumes responsibility for the accuracy and completeness of these forward-looking statements. Actual future results may materially vary.

We undertake no obligation to publicly update any forward-looking statements after the date of this Annual Report, whether as a result of new information, future events or otherwise. The reader should not unduly rely on our forward-looking statements. The reader is advised, however, to consult any future disclosures we make on related subjects in our 10-Q, 8-K and 10-K reports to the SEC and press releases. Also, note that we provide the following cautionary discussion of risks, uncertainties and possible inaccurate assumptions relevant to our business. These are factors that we think could cause our actual results to differ materially from expected and historical results. Other factors besides those listed here could also adversely affect us. This discussion is permitted by the Private Securities Litigation Reform Act of 1995.

RISK FACTORS:

CORONAVIRUS

The coronavirus that causes the serious disease COVID-19 (“coronavirus”), has and may continue to adversely affect our business, including revenues, suppliers, employees and facilities.

As a global company with 90% of our 2021 sales in international markets, we have been and may continue to be, significantly impacted by the word wide coronavirus outbreak, which has affected all markets we serve. Thirty of our employees are based in Shanghai, China and we have a manufacturing facility there which manufactures some of our equipment and develops most of the adapters and algorithms for our equipment. Although our facilities in Shanghai, Redmond and Germany are currently operating, they could be closed for an extended period of time due to outbreaks of new variants of coronavirus. Additionally, we source other components from China and other countries that are used to manufacture our equipment in China and in our Redmond, Washington facility and these components may not be readily available. Many of our Redmond based employees and executives are working from home or hybrid schedules and we limit visitors to our facilities. All of our facilities are subject to restrictions and closure by governmental entities. Travel restrictions have in some cases prevented and may continue to impact equipment installations, repairs and selling at customer sites. As the coronavirus continues as a pandemic, it has and may continue to impact our revenues, our ability to obtain key components and to manufacture our products, as well as sell, install and support our products around the world.

The coronavirus has and continues to impact key tradeshows and travel plans for our employees. Because of the coronavirus, we are not able to visit many of our customers and prospects. Many tradeshows, marketing activities and conferences have been canceled, postponed or made virtual.

TARIFFS AND TRADE ISSUES

Changes in tariffs and trade issues may adversely affect our business, including revenues and/or gross margins.

We produce products in the United States and China. Currently, certain of our products are subject to tariffs imposed by one country on goods manufactured in the other country. This has materially impacted our gross margins negatively. There is uncertainty regarding the tariffs expected to be imposed, and any increase in tariff rates and subjecting additional items to tariffs, could impact our costs, revenues and the competitiveness of our products due to our manufacturing locations. Trade and tariff issues are creating business uncertainty and may spread to and impact other jurisdictions.

Additionally, trade tensions between the United States and China are impacting our ability to seamlessly design, build, market and sell our products. Some customers have moved production away from China, further from our facilities and engineers. We endeavor to have multi-sourced manufacturing, but this is not currently practical for all products in all locations.

War based restrictions, embargos, and supply chain disruptions are occurring as a result of the Russian invasion of Ukraine, which could have economic and other indirect impacts to our business. We do not have any operations in Russia or Ukraine, nor do we rely on any software or hardware components sourced from these two countries.

NEW PRODUCTS OR SERVICES

We are pursuing new product or service initiatives, and business models that may develop more slowly and/or to a lesser extent than expected

In order to lead in new and potentially lucrative market opportunities, for example in security deployment of programmable devices, circuit boards and electronic systems, we are making significant investments in people, technology and business development while the market is developing and uncertain. Due to the length of time to market from design to production in security provisioning, if these markets develop more slowly than planned, or if our security deployment solutions are not widely accepted, then we may not achieve our expected return on investment in new technologies, which may significantly affect the results of our existing business.

In the security deployment area, we have introduced a new pay per use business model and service fees that may not be accepted by our customers who are accustomed to paying for capital equipment upfront, rather than paying per use charges.

Failure to adapt to technology trends in our industry may impact our competitiveness and financial results.

Product and service technology in our industry evolves rapidly, making timely product innovation essential to success in the marketplace. Introducing products and services with improved technologies or features may render our existing products obsolete and unmarketable. Technological advances and trends that may negatively impact our business include:

- new device package types, densities, chip interfaces and technologies requiring hardware and software changes in order to be programmed by our products, particularly certain segments of the high-density flash memory markets where after placement programming is recommended by certain semiconductor manufacturers;

- reduction in semiconductor process geometries for certain 3 Dimensional (3D), Multi Level Cell (MLC) and Triple Level Cell (TLC) NAND and eMMC FLASH memories impact the product data retention through Surface Mount Technology (SMT) reflow or X-ray inspection. Improper SMT process control can negatively impact the end customer's ability to successfully program devices. This can cause them to change their programing methods away from pre-programming to post placement programming techniques, including ISP, ICT. Data I/O has, and continues to work with several semiconductor manufacturers to develop best practices to minimize the impact of reflow and potential concerns about X-ray induced data loss;

- changes in Flash technology speeds will eventually require us to change the architecture of our programming engines;

- electronics equipment manufacturing practices, such as widespread use of in-circuit programming or downloading;

- adoption of proprietary security and programming protocols and additional security capabilities and requirements;

- customer software platform preferences different from those on which our products operate;

- customer adoption of newer unsupported semiconductor device technologies such as NVMe memory or device interface methods, particularly if these technologies are adopted by automotive electronics, IoT or wireless customers; and/or

- more rigid industry standards, which would decrease the value-added element of our products and support services.

If we cannot develop products or services in a timely manner in response to industry changes, or if our products or services do not perform well, our business and financial condition may be adversely affected. Also, our new products or services may contain defects or errors that give rise to product liability claims against us or cause our products to fail to gain market acceptance. Our future success depends on our ability to successfully compete with other technology firms in attracting and retaining key technical personnel.

Failure to adapt to increasing automotive electronics customer requirements may impact our competitiveness and result in a decline in sales or increased costs.

Concentration in Automotive Electronics and our orders related to automotive electronics customers has been dominant in recent years at 58% in 2021, 53% in 2020 and 60% in 2019. As we have been concentrated on automotive electronics customers, any decrease in demand from these customers (for example, many had plant shut downs during the second quarter of 2020 or experienced semiconductor part shortages during 2021) may materially impact our results, as it will take some time to transition our product line to other markets. Quality standards and business requirements by our automotive electronics customers, driven in turn by their automotive manufacturer customers, may demand processes, and certifications at a higher level than we currently are structured to provide. For example, although we currently meet the ISO 9001:2015 standard, new quality standards may be demanded by our customers with even more rigorous requirements. In addition, contractual provisions may expose us to greater potential liability and costs and we may be required to provide higher service levels than we currently provide. If we cannot adapt to these industry requirements or manage these contractual provisions, our business may be adversely affected.

Delays in development, introduction and shipment of new products or services may result in a decline in sales or increased costs.

We develop new engineering and automated programming systems and services. Significant technological, supplier, manufacturing or other problems may delay the development, introduction or production of these products or services.

For example, we may encounter these problems:

- technical problems in the development of a new programming and/or security deployment systems or the robotics for new automated handing systems;

- inability to hire qualified personnel or turnover in existing personnel or inability to engage or retain key technology partners;

- delays or failures to perform by us or third parties, including some smaller early stage or recently acquired companies, involved in our development projects;

- dependence on large semiconductor companies for cooperation and support to securely provision their devices. These companies must enable us with specific technical information, and support Data I/O as a qualified solution to their customers and channel partners;

- development of new products or services that are not accepted by the market; and/or

- experience delays in supply chain for parts needed for new products.

These problems may result in a delay or decline in sales or increased costs.

We may pursue business acquisitions that could impair our financial position and profitability.

We may pursue acquisitions of complementary technologies, product lines or businesses. Future acquisitions may include risks, such as:

- burdening management and our operating teams during the integration of the acquisition;
- diverting management's attention from other business concerns;
- failing to successfully integrate, scale or monetize the acquired products or technologies;
- lack of acceptance of the acquired products by our sales channels or customers;
- entering markets where we have no or limited prior experience;
- potential loss of key employees of the acquired company; and/or
- additional burden of support for an acquired programmer architecture.

Future acquisitions may also impact our financial position. For example, we may use significant cash or incur debt, which would weaken our balance sheet, or issue additional shares, potentially diluting existing shareholders. We may also capitalize goodwill and intangible assets acquired, the amortization or impairment of which would reduce our profitability. We cannot guarantee that future acquisitions will improve our business or operating results.

If we are unable to protect our IP, we may not be able to compete effectively or operate profitably.

We rely on patents, copyrights, trade secrets and trademarks to protect our IP, as well as product development and marketing skill to establish and protect our market position. In particular, patents are a key part of our security deployment strategy, and if we are not able to successfully enforce these patents, we might lose our competitive advantage in the security deployment market. We attempt to protect our rights in proprietary software products, including our user interface, product firmware, software module options and other software products by retaining the title to and copyright of the software and documentation, by including appropriate contractual restrictions on use and disclosure in our licenses, and by requiring our employees to execute non-disclosure agreements.

Because of the rapidly changing technology in the semiconductor, electronic equipment and software industries, portions of our products might possibly infringe upon existing patents or copyrights, and we might be required to obtain licenses or discontinue the use of the infringing technology. We believe that any exposure we may have regarding possible infringement claims is a reasonable business risk similar to that assumed by other companies in the electronic equipment and software industries. However, any claim of infringement, with or without merit, could be costly and a diversion of management's attention, and an adverse determination could adversely affect our reputation, preclude us from offering certain products, and subject us to substantial liability.

We might face increased competition and might not be able to compete successfully with current and future competitors.

Technological advances have reduced the barriers of entry into the market in which we compete. We expect competition to increase from both established and emerging companies. If we fail to compete successfully against current and future sources of competition, our profitability and financial performance will be adversely impacted.

THIRD PARTY RELATIONSHIPS

If we do not develop, enhance and retain our relationships with security partners, our business may be adversely affected and we may not be able to timely develop new and cost effective managed and secure programming solutions.

We may be required to complement our skills and expertise with partners' expertise. Some of these partners are operating with more limited capital and/or management expertise than established firms or recently acquired firms that may have different priorities. Other partners are very large companies where prioritizing work with us may be difficult in light of competing priorities. We may need to develop alternate suppliers, sales channels, and business strategies. In 2020 and 2021, we significantly reduced our dependence on third parties for our SentriX platform.

If we do not develop and enhance our relationships with semiconductor manufacturers, our business may be adversely affected.

We work closely with most semiconductor manufacturers to ensure that our data programming and security deployment systems comply with their requirements. In addition, many semiconductor manufacturers recommend our managed and secure programming systems for use by users of their programmable devices. These working relationships enable us to keep our programming systems product lines up to date and provide end-users with broad and current programmable device support. As technology changes occur that could limit the effectiveness of pre-placement programming, particularly for very small high-density NAND, e-MMC and UFS devices, certain semiconductor manufacturers may not recommend or may not continue recommending our programming systems for these devices. Our business may be adversely affected if our relationships with semiconductor manufacturers deteriorate or if semiconductor manufacturers are not willing to closely work with us on security deployment. Consolidation within the semiconductor industry may also impact us. As we develop more security deployment solutions, we will need to partner more closely with semiconductor manufacturers.

Our reliance on a small number of suppliers may result in a shortage of key components, which may adversely affect our business, and our suppliers may experience financial difficulties which could impact their ability to service our needs.

Certain parts or software used in our products are currently available from either a single supplier or from a limited number of suppliers. Our small relative level of business means we frequently lack influence and significant purchasing power. If we cannot develop alternative sources of these components, if sales of parts or software are discontinued by the supplier, if we experience deterioration in our relationship with these suppliers, or if these suppliers require financing which is not available, there may be delays or reductions in product introductions or shipments, which may materially adversely affect our operating results.

Because we rely on a small number of suppliers for certain parts, we are subject to possible price increases by these suppliers. In 2021, we have seen more part shortages and larger price increases than in recent years. Also, we may be unable to accurately forecast our production schedule. If we underestimate our production schedule, suppliers may be unable to meet our demand for components. This delay in the supply of key components may have a materially adverse effect on our business. For suppliers who discontinue parts, we may be required to make lifetime purchases covering future requirements. Over estimation of demand or excessive minimum order quantities will lead to excess inventories that may become obsolete. Part shortages, especially semiconductor parts in 2021, impact availability, lead times, and pricing that may be disruptive to our production plans, lead times, margins and may result in lost sales.

Some of our sockets, parts, subassemblies and boards are currently manufactured to our specifications by third-party foreign contract manufacturers and we are sourcing certain parts or options from foreign manufacturers, particularly in China. For example, due to the coronavirus or other viruses impacting workers, suppliers or travel, we may not be able to obtain a sufficient quantity of these products if and when needed or the quality of these parts or options may not meet our standards, which may result in lost sales.

If we are unable to attract and retain qualified third-party distributors and representatives, our business may be adversely affected.

We have an internal sales force and also utilize third-party distributors and representatives. Therefore, the financial stability of these distributors and representatives is important. Their ability to operate, timely pay us, and to acquire any necessary financing may be affected by the current economic climate. Highly skilled professional engineers use most of our products. To be effective, third-party distributors and representatives must possess significant technical, security, marketing, customer relationships and sales resources and must devote their resources to sales efforts, customer education, training and support. These required qualities limit the number of potential third-party distributors and representatives. Our business will suffer if we cannot attract and retain a sufficient number of qualified third-party distributors and representatives to market our products.

MARKET CONDITIONS

A decline in economic and market conditions may result in delayed or decreased capital spending and delayed or defaulted payments from our customers.

The coronavirus will continue to affect economic and market conditions as it continues to spread. Global impacts of the Russian invasion of Ukraine are uncertain at the present time. Our business is highly impacted by capital spending plans and other economic cycles that affect the users and manufacturers of integrated circuits. The industries are highly cyclical and are characterized by rapid technological change, short product life cycles and fluctuations in manufacturing capacity and pricing and gross margin pressures. As we experienced in this and recent prior years, our operations may in the future reflect substantial fluctuations from period-to-period as a consequence of these industry patterns, general economic conditions affecting the timing of orders from major customers, and other factors affecting capital spending. In a difficult economic climate, it may take us longer to receive payments from our customers and some of our customers' business may fail, resulting in non-payment. Our market growth forecasts and related business decisions may be wrong. These factors could have a material adverse effect on our business and financial condition.

Our international operations may expose us to additional risks that may adversely affect our business.

International sales represented approximately 90%, 93% and 92% of net sales in 2021, 2020 and 2019, respectively. We expect that international sales will continue to be a significant portion of our net revenue. International sales may fluctuate due to various factors, including:

- the impact of the coronavirus or other viruses;
- fluctuations in foreign currency exchange rates because 90% of our sales are to international markets, volatile exchange rates may also impact our competitiveness and margins;
- economic uncertainty related to the European energy cost increases;
- migration of manufacturing to low cost geographies;
- unexpected changes in regulatory requirements, including Brexit;
- tariffs and taxes;
- bi-lateral and multi-lateral trade agreements;
- difficulties in staffing and managing foreign operations;
- longer average payment cycles and difficulty in collecting accounts receivable;
- compliance with applicable export licensing requirements and the Foreign Corrupt Practices Act;
- product safety and other certification requirements;
- difficulties in integrating foreign and outsourced operations; and/or
- war, civil unrest, political and economic instability, including the Russian invasion of Ukraine.

Because we have customers located throughout the world, we have significant foreign receivables, although none are based in Russia or Ukraine. We may experience difficulties in collecting these amounts as a result of payment practices of certain foreign customers, economic uncertainty and regulations in foreign countries, the availability and reliability of foreign credit information, and potential difficulties in enforcing collection terms.

The European Union and European Free Trade Association (“EU”) has established certain electronic emission and product safety requirements (“CE”). As applicable, our products currently meet these requirements; however, failure to obtain either a CE certification or a waiver for any product may prevent us from marketing that product in Europe. The EU also has directives concerning the Reduction of Hazardous Substances (“RoHS”) and we believe we are classified within the EU RoHS Directive category list as Industrial Monitoring and Control Equipment (category 9). We believe all current products meet the RoHS directives. Failure to meet applicable directives or qualifying exemptions may prevent us from marketing certain products in Europe or other territories with similar requirements.

We have subsidiaries in Germany and China and large balances of cash are in our foreign subsidiaries. Our business and financial condition is sensitive to currency exchange rates and any restrictions imposed on their currencies including restrictions on repatriations of cash. A repatriation of cash has, and could in the future, result in tax costs and corresponding deferred tax assets with related tax valuation allowances. Currency exchange fluctuations in these countries may adversely affect our investment in our subsidiaries.

OPERATIONS

Quarterly fluctuations in our operating results may adversely affect our stock price.

Our operating results tend to vary from quarter to quarter. Our revenue in each quarter substantially depends upon orders received within that quarter. Conversely, our expenditures are based on investment plans and estimates of future revenues. We may, therefore, be unable to quickly reduce our spending if our revenues decline in a given quarter. As a result, operating results for that quarter will suffer. Our results of operations for any one quarter are not necessarily indicative of results for any future periods.

Other factors, which may cause our quarterly operating results to fluctuate, include:

- increased competition;
- timing of new product announcements and timing of development expenditures;
- product or service releases and pricing changes by us or our competitors;
- market acceptance or delays in the introduction of new products or services;
- production constraints, including part shortages impact on us and our supply chains;
- quality issues;
- labor or material constraints;
- timing of significant orders;
- timing of installation or customer acceptance requirements;
- sales channel mix of direct vs. indirect distribution;
- civil unrest, war or terrorism;
- health issues such as the outbreak of the coronavirus or other viruses impacting workers, suppliers, customers, travel, or our facilities;
- customers' budgets;
- changes in accounting rules, tax or other legislation;
- adverse movements in exchange rates, interest rates or tax rates;
- cyclical and seasonal nature of demand for our customers' products;
- general economic conditions in the countries where we sell products;
- expenses and delays obtaining authorizations in setting up new operations or locations; and/or
- facilities relocations.

Due to any of the foregoing factors, it is possible that in some future quarters, our operating results will be below expectations of analysts and investors.

<u>We have a history of operating losses and may be unable to generate enough revenue to achieve and maintain profitability.</u>

We have incurred operating losses in five of the last ten years. We operate in a cyclical industry. We will continue to examine our level of operating expense based upon our projected revenues. Any planned increases in operating expenses may result in losses in future periods if projected revenues are not achieved or the investment level required is too large. As a result, we may need to generate greater revenues than we have recently in order to maintain profitability. However, we cannot provide assurance that our revenues will continue to increase and our business strategies may not be successful, resulting in future losses.

<u>The loss of key employees may adversely affect our operations.</u>

We have employees located in the U.S., Germany and China. We also utilize independent contractors for specialty work, primarily in research and development, and utilize temporary workers to adjust capacity to fluctuating demand. Many of our employees are highly skilled, and our continued success will depend in part upon our ability to attract and retain employees who can be in great demand within the industry. None of our employees are represented by a collective bargaining unit, and we believe relations with our employees are favorable, though no assurance can be made that this will be the case in the future. In China, our workers have benefits and similar arrangements provided under a "FSCO" labor agreement, and we could be adversely affected if we were unable to continue that arrangement.

<u>We may need to raise additional capital and our future access to capital is uncertain.</u>

Our past revenues have sometimes been, and our future revenues may again be, insufficient to support the expense of our operations and any expansion of our business. We may therefore need additional equity or debt capital to finance our operations. If we are unable to generate sufficient cash flows from operations or to obtain funds through additional debt, lease or equity financing, we may have to reduce some or all of our development and sales and marketing efforts and limit the expansion of our business.

We believe that we have sufficient cash or working capital available under our operating plan to fund our operations and capital requirements through at least the next one-year period. In the event we require additional cash for U.S. operations or other needs, we may choose to repatriate some, or all, of the cash held in our foreign subsidiaries. There may be tax, legal and other impediments to any repatriation actions. Our working capital may be used to fund possible losses, business growth, project initiatives, share repurchases, and business development initiatives including acquisitions, which could reduce our liquidity and result in a requirement for additional cash before that time. Any substantial inability to achieve our current business plan could have a material adverse impact on our financial position, liquidity, or results of operations and may require us to reduce expenditures and/or seek additional financing.

Therefore, we may seek additional funding through public or private debt or equity financing or from other sources. We have no commitments for additional financing, and given a potential future unfavorable economic climate and our financial results, we may experience difficulty in obtaining funding on favorable terms, if at all. Any financing we obtain may contain covenants that restrict our freedom to operate our business or may require us to issue securities that have rights, preferences or privileges senior to our Common Stock and may dilute your ownership interest.

Cybersecurity breaches or terrorism could result in liabilities or costs as well as damage to or loss of our data or customer access to our website and information systems. The collection, storage, transmission, use and disclosure of user data and personal information, if accessed improperly, could give rise to liabilities or additional costs as a result of laws, governmental regulations and evolving views of personal privacy rights.

Cybersecurity attacks may increase as a result of the Russian invasion of Ukraine. Cybersecurity breaches or terrorism could result in the exposure or theft of private or confidential information as well as interrupt our business, including denying customer access to our website and information systems. We transmit, and in some cases store, end-user data, including personal information. In jurisdictions around the world, personal information is becoming increasingly subject to legislation and regulations intended to protect consumers' privacy and security. The interpretation of privacy and data protection laws and regulations regarding the collection, storage, transmission, use and disclosure of such information in some jurisdictions is unclear and evolving. These laws may be interpreted and applied in conflicting ways from country to country and in a manner that is not consistent with our current data protection practices. Complying with these varying international requirements could cause us to incur additional costs and change our business practices. Because our services are accessible in many foreign jurisdictions, some of these jurisdictions may claim that we are required to comply with their laws, even where we have no local entity, employees or infrastructure. We could be forced to incur significant expenses if we were required to modify our products, our services or our existing security and privacy procedures in order to comply with new or expanded regulations.

Our stock price may be volatile and, as a result, our shareholders may lose some or all of their investment.

The stock prices of technology companies tend to fluctuate significantly. We believe factors such as announcements of new products or services by us or our competitors and quarterly variations in financial results and outlook may cause the market price of our Common Stock to fluctuate substantially. In addition, overall volatility in the stock market, particularly in the technology company sector, is often unrelated to the operating performance of companies. If these market fluctuations continue in the future, they may adversely affect the price of our Common Stock. Additionally, securities of certain companies have recently experienced significant and extreme volatility in stock price due to short sellers of shares of common stock, known as a "short squeeze." These short squeezes have caused extreme volatility in both the stock prices of those companies and in the market, and have led to the price per share of those companies to trade at a significantly inflated rate that is disconnected from the underlying value of the company. Many investors who have purchased shares in those companies at an inflated rate face the risk of losing a significant portion of their original investment, as in many cases the price per share has declined steadily as interest in those stocks have abated. While we have no reason to believe our shares would be the target of a short squeeze, there can be no assurance that we won't be in the future, and you may lose a significant portion or all of your investment if you purchase our shares at a rate that is significantly disconnected from our underlying value.

REGULATORY REQUIREMENTS

Failure to comply with increasing regulatory requirements may adversely affect our stock price and business.

As a public company, we are subject to numerous governmental and stock exchange requirements, with which we believe we are in compliance. Our failure to meet regulatory requirements and exchange listing standards may result in actions such as: the delisting of our stock, impacting our stock's liquidity; SEC enforcement actions; and securities claims and litigation.

The Sarbanes-Oxley Act of 2002 and the Securities and Exchange Commission (SEC) have requirements that we may fail to meet or we may fall out of compliance with, such as the internal controls auditor attestation required under Section 404 of the Sarbanes-Oxley Act of 2002, with which we are not currently required to comply as we are a smaller reporting company. We assume that we will continue to have the status of a smaller reporting company based on the aggregate market value of the voting and non-voting shares held as of June 30, 2021. If we fail to achieve and maintain the adequacy of our internal controls, as such standards are modified, supplemented or amended from time to time, we may not be able to ensure that we can conclude on an ongoing basis that we have effective internal controls over financial reporting in accordance with Section 404 of the Sarbanes-Oxley Act of 2002. Moreover, effective internal controls, particularly those related to revenue recognition, are necessary for us to produce reliable financial reports and are important to help prevent financial fraud. If we cannot provide reliable financial reports or prevent fraud, our business and operating results could be harmed, investors could lose confidence in our reported financial information, and the trading price of our stock could drop significantly.

While we have policies and procedures in place designed to prevent corruption and bribery, because our business is significantly international, violations of the Foreign Corrupt Practices Act (FCPA) could have a significant adverse effect on our business due to the disruption and distraction of an investigation, financial penalties and criminal penalties.

Government regulations regarding the use of "conflict" minerals could adversely affect our prospects and results of operations.

Regulatory requirements regarding disclosure of our use of "conflict" minerals mined from the Democratic Republic of Congo and adjoining countries could affect the sourcing and availability of minerals used in the manufacture of certain products. Although we do not buy raw materials, manufacture, or produce any electronic equipment using conflict minerals directly, some components provided by our suppliers and contained in our products contain conflict minerals. Our goal is for our products to be conflict free. As a result, there may only be a limited pool of suppliers who provide conflict free metals, and we cannot assure you that we will be able to obtain products in sufficient quantities or at competitive prices. Single source suppliers may not respond, or respond negatively regarding conflict mineral sourcing, and we may be unable to find alternative sources to replace them. Also, because our supply chain is complex, we may face reputational challenges with our customers and other stakeholders if we are unable to sufficiently verify the origins for all metals used in the products that we sell. Further, if we are unable to comply with the new laws or regulations or if our efforts to comply with new laws, regulations and standards differ from the activities intended by regulatory or governing bodies due to ambiguities related to practice, regulatory authorities may initiate legal proceedings against us. We may need to incur additional costs and invest additional resources, including management's time, in order to comply with the new regulations and anticipated additional reporting and disclosure obligations.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

During the fourth quarter of 2021, we amended our lease agreement for the Redmond, Washington headquarters facility, extending the lease to January 31, 2026. The lease is for approximately 20,460 square feet. The lease base annual rental payments during 2021 and 2020 were approximately $372,000 and $361,000, respectively.

In addition to the Redmond facility, approximately 24,000 square feet is leased at two foreign locations, including our sales, service, operations and engineering office located in Shanghai, China, and our German sales, service and engineering office located near Munich, Germany.

Our lease for a facility located in Shanghai, China ran through October 31, 2021. In April 2021, we signed a lease extension effective November 1, 2021 that extends the lease through October 31, 2024. This lease is for approximately 19,400 square feet. The lease base annual rental payments during 2021 and 2020 were approximately $317,000 and $301,000, respectively.

Our lease for our facility located near Munich, Germany ran through February 28, 2022 and in March 2022 we entered into a lease extension to 2027. This lease is for approximately 4,895 square feet. The lease base annual rental payments during 2021 and 2020 were approximately $58,000 and $62,000, respectively.

Item 3. Legal Proceedings

From time to time, we may be involved in litigation relating to claims arising out of our operations in the normal course of business. As of December 31, 2021, we were not a party to any legal proceedings or aware of any indemnification agreement claims, the adverse outcome of which in management's opinion, individually or in the aggregate, would have a material adverse effect on our results of operations or financial position.

Item 4. Mine Safety Disclosures

Not Applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Our Common Stock is listed on the NASDAQ Capital Market (NASDAQ symbol is DAIO). The closing price was $4.61 on December 31, 2021.

The approximate number of shareholders of record as of March 21, 2022 was 376.

Except for special cash dividend of $4.15 per share paid on March 8, 1989, we have not paid cash dividends on our Common Stock and do not anticipate paying regular cash dividends in the foreseeable future.

No sales of unregistered securities were made by us during the periods ended December 31, 2021, 2020 or 2019.

See Item 12 for the Equity Compensation Plan Information.

Item 6. Selected Financial Data

Not applicable.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Forward-Looking Statements

This Annual Report on Form 10-K includes forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. This Act provides a "safe harbor" for forward-looking statements to encourage companies to provide prospective information about themselves as long as they identify these statements as forward-looking and provide meaningful cautionary statements identifying important factors that could cause actual results to differ from the projected results. All statements other than statements of historical fact made in this Annual Report on Form 10-K are forward-looking. In particular, statements herein regarding economic outlook, impact of COVID-19; industry prospects and trends; expected business recovery; industry partnerships; future results of operations or financial position; future spending; breakeven revenue point; expected market decline, bottom or growth; market acceptance of our newly introduced or upgraded products or services; the sufficiency of our cash to fund future operations and capital requirements; development, introduction and shipment of new products or services; changing foreign operations; trade issues and tariffs; expected inventory levels; expectations for unsupported platform or product versions and related inventory and other charges; Russia-Ukraine war impacts; supply chain expectations; semiconductor chip shortages; and any other guidance on future periods are forward-looking statements. Forward-looking statements reflect management's current expectations and are inherently uncertain. Although we believe that the expectations reflected in these forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance, achievements, or other future events. Moreover, neither Data I/O nor anyone else assumes responsibility for the accuracy and completeness of these forward-looking statements. We are under no duty to update any of these forward-looking statements after the date of this Annual Report. The Reader should not place undue reliance on these forward-looking statements. The following discussions and the section entitled "Risk Factors – Cautionary Factors That May Affect Future Results" describes some, but not all, of the factors that could cause these differences.

OVERVIEW

In 2021, we continued to react to and manage our business relative to the COVID-19 pandemic. During 2020 and throughout 2021, COVID-19 impacted all aspects of our business, from customer demand, to supply chain integrity, employee safety, business processes, and financial management. As a global company, we had to manage each of these while working within the guidelines of local and national policy in the U.S., China and Germany. Our philosophy at the start of the outbreak was simple:

1. Keep our employees and their families safe;
2. Keep our facilities safe and operational while we serve our customers as an essential business; and
3. Preserve cash.

We have managed the COVID-19 impact successfully to date, with no known employee transmissions in the workplace and significant preservation of our cash and working capital. Our resilient supply chain model kept our facilities in Shanghai, China and Redmond, Washington open, and serving customers globally, despite sporadic government restrictions on our facilities and vendors. We face continued international travel restrictions, shipping delays, and inability to meet with customers in person. As business has recovered, we have been able to respond by having the working capital needed and the workforce in place. We saw a resurgence of orders in the second quarter of 2021 as vaccinations were occurring and customers resumed business. Following this, in the third quarter of 2021, we experienced a slowdown of demand as customers, we believe, were unable to secure an adequate semiconductor parts supply for planned capacity expansion. In supply chains around the world with the re-openings and now, in a believed ripple effect, factories are experiencing the impact of chip shortages on their production plans. This appears to be a shorter-term issue, but is expected to have some continuing impact into 2022. However, the outlook by industry analysts for automotive electronics remains strong for a decade. Waves of COVID-19 infection rates and variants have kept or re-imposed revised travel restrictions. Customers largely have not permitted in-person sales and other visits. Converting these interactions to remote and virtual means has meant implementing new processes and technology.

In production, in addition to adding protective health measures for our employees, we have focused on supply chain resilience and duplicating production capability for some products in both our Shanghai, China and Redmond, USA facilities. We implemented additional supplier financial and other monitoring, as well as adding additional local suppliers and increasing inventory stock levels of key parts. Other than production employees who are required to be onsite, most other employees are working with hybrid flexibility to be onsite as desired or needed and this is expected to continue. Our workforce is over 90% vaccinated world-wide.

Our short-term challenge continues to be operating in a cyclical, COVID-19 impacted, and rapidly evolving industry environment, which saw significant improvement of revenue, up 27%, as compared to 2020. Bookings were up 23% for 2021, compared to 2020, despite the demand decline in the third quarter of 2021 relative to the second quarter, which we believe, was due to semiconductor chip shortages discussed above. Our focus has been dealing with COVID-19 related issues, especially supply chain shortages and lead-times, which have been managed though carefully maintaining and increasing key inventory levels. We also continue to balance a host of current issues including industry changes, industry partnerships, new technologies, business geography shifts, travel and customer restrictions, customer shut downs, exchange rate volatility, trade issues and tariffs, semiconductor chip shortages, shipping challenges, increasing costs (inflation) and strategic investments in our business with the level of demand and mix of business we expect. We continue to manage our costs carefully and execute strategies for cash preservation, protecting our employee base and managing supply chain price increases. The Russia–Ukraine war has had little direct impact on our business, however, the uncertainty and ripple effects created by it, may have unknown indirect impacts.

We are focusing our research and development efforts in our strategic growth markets, namely automotive electronics and IoT new programming technologies, secure supply chain solutions, automated programming systems and their enhancements for the manufacturing environment and software. At Data I/O, we are investing for the long-term to retain and extend our leadership position in automotive electronics and security deployment. We are continuing to develop technology to securely provision newer categories of semiconductors, including Secure Elements, Authentication Chips, and Secure Microcontrollers. In late 2020, we released updated SentriX hardware and tools which simplify the customer acquisition process, and reduce dependency on third party suppliers. We also upgraded the SentriX® security deployment systems in the field to this new architecture. We plan to deliver new programming technology and automated handling systems for managed and secure programming in the manufacturing environment. We continue to focus on extending the capabilities and support for our product lines and supporting the latest semiconductor devices, including various configurations of NAND Flash, e-MMC, UFS and microcontrollers on our newer products.

Our customer focus has been on global and strategic high-volume manufacturers in key market segments like automotive electronics, IoT, industrial controls and consumer electronics, as well as programming centers.

Although the long-term prospects for our strategic growth markets should remain good, these markets and our business have been, and are likely to continue to be, adversely impacted by the global COVID-19 pandemic and other global political and economic factors. Semiconductor shortages are causing issues and some automotive plant or production shutdowns. This appears to be temporary and, in some cases for us, drives consumable adapter demand in order to support alternative semiconductors.

CRITICAL ACCOUNTING POLICY JUDGMENTS AND ESTIMATES

The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America requires that we make estimates and judgments, which affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosures of contingent assets and liabilities. On an on-going basis, we evaluate our estimates, including those related to revenue recognition, sales returns, bad debts, inventories, intangible assets, income taxes, warranty obligations, restructuring charges, contingencies, such as litigation and contract terms that have multiple elements and other complexities typical in the capital equipment industry. We base our estimates on historical experience and other assumptions that we believe are reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions.

We believe the following critical accounting policies affect the more significant judgments and estimates used in the preparation of our financial statements:

Revenue Recognition: Topic 606 provides a single, principles-based five-step model to be applied to all contracts with customers. It generally provides for the recognition of revenue in an amount that reflects the consideration to which the Company expects to be entitled, net of allowances for estimated returns, discounts or sales incentives, as well as taxes collected from customers when control over the promised goods or services are transferred to the customer.

We expense contract acquisition costs, primarily sales commissions, for contracts with terms of one year or less and will capitalize and amortize incremental costs with terms that exceed one year. During 2021 and 2020, the impact of capitalization of incremental costs for obtaining contracts was immaterial. We exclude sales, use, value added, some excise taxes and other similar taxes from the measurement of the transaction price.

We recognize revenue upon transfer of control of the promised products or services to customers in an amount that reflects the consideration we expect to receive in exchange for those products or services. We have determined that our programming equipment has reached a point of maturity and stability such that product acceptance can be assured by testing at the factory prior to shipment and that the installation meets the criteria to be a separate performance obligation. These systems are standard products with published product specifications and are configurable with standard options. The evidence that these systems could be deemed as accepted was based upon having standardized factory production of the units, results from batteries of tests of product performance to our published specifications, quality inspections and installation standardization, as well as past product operation validation with the customer and the history provided by our installed base of products upon which the current versions were based.

The revenue related to products requiring installation that is perfunctory is recognized upon transfer of control of the product to customers, which generally is at the time of shipment. Installation that is considered perfunctory includes any installation that is expected to be performed by other parties, such as distributors, other vendors, or the customers themselves. This considers the complexity, skill and training needed as well as customer expectations regarding installation.

We enter into arrangements with multiple performance obligations that arise during the sale of a system that includes an installation component, a service and support component and a software maintenance component. We allocate the transaction price of each element based on relative selling prices. Relative selling price is based on the selling price of the standalone system. For the installation and service and support performance obligations, we use the value of the discount given to distributors who perform these components. For software maintenance performance obligations, we use what we charge for annual software maintenance renewals after the initial year the system is sold. Revenue is recognized on the system sale based on shipping terms, installation revenue is recognized after the installation is performed, and hardware service and support and software maintenance revenue is recognized ratably over the term of the agreement, typically one year. Deferred revenue includes service, support and maintenance contracts and represents the undelivered performance obligation of agreements that are typically for one year.

When we sell software separately, we recognize revenue upon the transfer of control of the software, which is generally upon shipment, provided that only inconsequential performance obligations remain on our part and substantive acceptance conditions, if any, have been met.

We recognize revenue when there is an approved contract that both parties are committed to perform, both parties rights have been identified, the contract has substance, collection of substantially all the consideration is probable, the transaction price has been determined and allocated over the performance obligations, the performance obligations, including substantive acceptance conditions, if any, in the contract have been met, the obligation is not contingent on resale of the product, the buyer's obligation would not be changed in the event of theft, physical destruction or damage to the product, the buyer acquiring the product for resale has economic substance apart from us, and we do not have significant obligations for future performance to directly bring about the resale of the product by the buyer. We establish a reserve for sales returns based on historical trends in product returns and estimates for new items. Payment terms are generally 30 days from shipment.

We transfer certain products out of service from their internal use and make them available for sale. The products transferred are typically our standard products in one of the following areas: service loaners, rental or test units; engineering test units; or sales demonstration equipment. Once transferred, the equipment is sold by our regular sales channels as used equipment inventory. These product units often involve refurbishing and an equipment warranty, and are conducted as sales in our normal and ordinary course of business. The transfer amount is the product unit's net book value, and the sale transaction is accounted for as revenue and cost of goods sold.

Allowance for Doubtful Accounts: We base the allowance for doubtful accounts receivable on our assessment of the collectability of specific customer accounts and the aging of accounts receivable. If there is deterioration of a major customer's credit worthiness or actual defaults are higher than historical experience, our estimates of the recoverability of amounts due to us could be adversely affected.

Inventory: Inventories are stated at the lower of cost or net realizable value. Adjustments are made to standard cost, which approximates actual cost on a first-in, first-out basis. We estimate reductions to inventory for obsolete, slow-moving, excess and non-salable inventory by reviewing current transactions and forecasted product demand. We evaluate our inventories on an item-by-item basis and record inventory adjustments accordingly. If there is a significant decrease in demand for our products, uncertainty during product line transitions, or a higher risk of inventory obsolescence because of rapidly changing technology and customer requirements, we may be required to increase our inventory adjustments, and our gross margin could be adversely affected.

Warranty Accruals: We accrue for warranty costs based on the expected material and labor costs to fulfill our warranty obligations. If we experience an increase in warranty claims, which are higher than our historical experience, our gross margin could be adversely affected.

Tax Valuation Allowances: Given the uncertainty created by our loss history, as well as the current and ongoing cyclical and COVID-19 related uncertain economic outlook for our industry and capital and geographic spending, as well as income and current net deferred tax assets by entity and country, we expect to continue to limit the recognition of net deferred tax assets and accounting for uncertain tax positions and maintain the tax valuation allowances. At the current time, we expect, therefore, that reversals of the tax valuation allowance will take place as we are able to take advantage of the underlying tax loss or other attributes in carry forward or their use by future income or circumstances allow us to realize these attributes. The transfer pricing and expense or cost sharing arrangements are complex areas where judgments, such as the determination of arms-length arrangements, can be subject to challenges by different tax jurisdictions.

Share-based Compensation: We account for share-based awards made to our employees and directors, including employee stock option awards and restricted stock unit awards, using the estimated grant date fair value method of accounting. For options, we estimate the fair value using the Black-Scholes valuation model and an estimated forfeiture rate. Restricted stock unit awards are valued based on the average of the high and low price on the date of the grant and an estimated forfeiture rate. For both options and restricted awards, expense is recognized as compensation expense on the straight-line basis. Employee Stock Purchase Plan ("ESPP") shares were issued under provisions that do not require us to record any equity compensation expense.

RESULTS OF OPERATIONS:

NET SALES

Net sales by product line	**2021**	**Change**	**2020**
(in thousands)			
Automated programming systems	$ 20,864	26.4%	$ 16,509
Non-automated programming systems	4,971	30.2%	3,819
Total programming systems	$ 25,835	27.1%	$ 20,328

Net sales by location		2021	Change		2020
(in thousands)					
United States	$	2,607	72.0%	$	1,516
% of total		10.1%			7.5%
International	$	23,228	23.5%	$	18,812
% of total		89.9%			92.5%

Net sales by type		2021	Change		2020
(in thousands)					
Equipment Sales	$	14,989	30.6%	$	11,480
Adapter Sales		7,818	41.5%		5,527
Software and Maintenance Sales		3,028	(8.8%)		3,321
Total	$	25,835	27.1%	$	20,328

Net sales for the year ended December 31, 2021 increased approximately 27.1% to $25.8 million compared to 2020 primarily as a result of COVID-19 related recovery in capital spending resulting in higher demand in Automotive Electronics and Programming Centers during 2021. On a regional basis, net sales increased approximately 21% in Asia and approximately 60% in the Americas and 12% in Europe.

Order bookings were $25.5 million for 2021, up approximately 23% compared to $20.8 million in 2020. Backlog at December 31, 2021 and 2020 was $2.9 million and $3.9 million, respectively. Deferred revenue was $1.5 million at December 31, 2021 compared to $1.1 million at December 31, 2020.

GROSS MARGIN

		2021	Change		2020
(in thousands)					
Gross margin	$	14,720	36.0%	$	10,822
Percentage of net sales		57.0%			53.2%

Gross margin as a percentage of sales for the year ended December 31, 2021 was 57.0%, compared to 53.2% in 2020. The improvement in gross margin percentage was due to the impact of channel and price mix, factory charges, and in 2020, one-time impairment obsolescence of $291,000 for certain end of service support and first generation SentriX parts.

RESEARCH AND DEVELOPMENT

		2021	Change		2020
(in thousands)					
Research and development	$	6,635	4.4%	$	6,357
Percentage of net sales		25.7%			31.3%

Research and development ("R&D") expense increased $278,000 for the year ended December 31, 2021 compared to 2020. The increase was primarily related to higher incentive compensation. R&D as a percentage of sales decreased primarily due to the increase in 2021 sales.

We believe it is essential to invest in R&D to significantly enhance our existing products and to create new products as markets develop and technologies change. During 2021, we continued strategically investing in creating a second generation of SentriX, which was introduced in the fourth quarter. In addition to product development, a significant part of R&D spending is on creating software and support for new devices introduced by the semiconductor companies. We are currently focusing our research development efforts on strategic growth markets, including automotive electronics and IoT. We are developing technology and the SentriX product line to securely program new categories of semiconductors, including Secure Elements, Authentication Chips, and Secure Microcontrollers. We delivered new enhanced programming technology and automated handling systems for managed and secure programming in the manufacturing environment and extending the capabilities and support for our programmer architecture. Our R&D spending fluctuates based on the number, type, and the development stage of our product initiatives and projects.

SELLING, GENERAL AND ADMINISTRATIVE

(in thousands)	2021	Change	2020
Selling, general & administrative	$ 8,358	21.3%	$ 6,891
Percentage of net sales	32.4%		33.9%

Selling, General and Administrative ("SG&A") expenses increased approximately $1.5 million for the year ended December 31, 2021 compared to 2020. The increase was primarily related to higher sales commissions on increased sales volume, higher incentive compensation, consulting and rent, offset in part by lower stock-based compensation and travel related expenses. Cost control measures remain in effect.

INTEREST

(in thousands)	2021	Change	2020
Interest income	$ 11	(21.4%)	$ 14

Interest income was relatively consistent for the year ended December 31, 2021 compared to 2020.

INCOME TAXES

(in thousands)	2021	Change	2020
Income tax (expense) benefit	($ 112)	(71.1%)	$ (387)

Income tax (expense) decreased by $275,000 for the year ended December 31, 2021 compared to 2020. The decrease was primarily a result of the withholding tax of $257,000 on the repatriation of cash from subsidiaries in 2020. Income tax (expense) in 2021 and 2020 is primarily the result of foreign subsidiary income tax and minimal U.S. state income tax.

The effective tax rate for 2021 of (25.4%) and 2020 of (10.8%) differed from the statutory tax rates in our tax reporting jurisdictions primarily due to the effect of valuation allowances. We have a valuation allowance of $7.9 million and $8.9 million as of December 31, 2021 and 2020, respectively. Our deferred tax assets and valuation allowance have increased by approximately $392,000 and $365,000 associated with the requirements of accounting for uncertain tax positions as of December 31, 2021 and 2020, respectively. Given the uncertainty created by our loss history, particularly in the U.S., which is where most of our net deferred tax assets are located, and the ongoing uncertain economic outlook for our industry, as well as capital and geographic spending, we currently expect to continue to limit the recognition of net deferred tax assets and maintain the tax valuation allowances.

INFLATION AND CHANGES IN FOREIGN CURRENCY EXCHANGE RATES

Sales and expenses incurred by foreign subsidiaries are denominated in the subsidiary's local currency and translated into U.S. Dollar amounts at average rates of exchange during the year. We recognized foreign currency transaction loss of $(202,000) in 2021 and foreign transaction loss of $(513,000) in 2020. The transaction gains or losses resulted primarily from translation adjustments to foreign inter-company accounts and U.S. Dollar accounts held by foreign subsidiaries and sales by our German subsidiary to certain customers, which were invoiced in U.S. Dollars. Because approximately 90% of our sales are to international markets, volatile exchange rates may also impact our competitiveness and margins. We increased prices in response to cost increases caused by inflation and part shortages and believe we will continue to utilize this strategy.

IMPAIRMENT & RELATED CHARGES

In 2021 we had no substantial impairments. During the fourth quarter of 2020, we launched a new generation of SentriX tools. This obsoleted components of the first-generation hardware, software and inventory. We also ended support for some legacy automated handlers, impairing the remaining service inventory. As a result, certain capital equipment assets, advance payments and inventory were analyzed and determined to be impaired, totaling $943,000. This included impairment of $652,000, consisting of $252,000 of equipment and software, $400,000 of prepaid royalties, as well as impairment related charges of $291,000, due to inventory obsolescence (cost of goods sold) for end of certain product support.

FINANCIAL CONDITION:

LIQUIDITY AND CAPITAL RESOURCES

(in thousands)	2021	Change	2020
Working capital	$ 18,484	$ 425	$ 18,059

At December 31, 2021, our principal sources of liquidity consisted of existing cash and cash equivalents which remained relatively unchanged from the December 31, 2020 cash balance. Our working capital increased in $425,000 during 2021 due to better business conditions, timely collections, and increases in inventories and accounts receivable, and offset in part by accrued incentive compensation and our operating loss. Our current ratio was 3.7 and 4.5 for December 31, 2021 and 2020, respectively. The company continues to have no debt.

Although we have no significant external capital expenditure plans currently, we expect to continue to carefully make and manage capital expenditures to support our business. We plan to increase our internally developed rental, security provisioning, sales demonstration and test equipment as we develop and release new products. Capital expenditures are currently expected to be funded by existing and internally generated funds.

As a result of our cyclical and seasonal industry, significant product development, customer support and selling and marketing efforts, we have required substantial working capital to fund our operations. We have tried to balance our level of development spending with the goal of profitable operations or managing down business levels related to COVID-19. We have implemented or have initiatives to implement geographic shifts in our operations, optimize real estate usage, reduce exposure to the impact of currency volatility and tariffs, increase product development differentiation, and reduce costs.

We believe that we have sufficient cash or working capital available under our operating plan to fund our operations and capital requirements through the next one-year period, and beyond. We may require additional cash at the U.S. headquarters, which could cause potential repatriation of cash that is held in our foreign subsidiaries. We have liquidated our subsidiary in Canada and repatriated its cash. For any repatriation, there may be tax and other impediments to any repatriation actions. As many repatriations typically have associated withholding taxes, those withheld will be a current tax without generating a current or deferred tax benefit. Our working capital may be used to fund possible losses, business growth, project initiatives, share repurchases and business development initiatives including acquisitions, which could reduce our liquidity and result in a requirement for additional cash before that time. Any substantial inability to achieve our current business plan could have a material adverse impact on our financial position, liquidity, or results of operations and may require us to reduce expenditures and/or seek possible additional financing.

OFF-BALANCE SHEET ARRANGEMENTS

Except as noted in the accompanying consolidated financial statements in Note 7, “Other Commitments”, we had no material off-balance sheet arrangements.

SHARE REPURCHASE PROGRAMS

Data I/O did not have a share repurchase program in 2021.

NON-GENERALLY ACCEPTED ACCOUNTING PRINCIPLES (GAAP) FINANCIAL MEASURES

Earnings Before Interest, Taxes, Depreciation, and Amortization (“EBITDA”) and Adjusted EBITDA excluding equity compensation and impairment & related charges (non-cash, one-time items) are set forth below. Non-GAAP financial measures should not be considered a substitute for, or superior to, measures of financial performance prepared in accordance with GAAP. We believe that these non-GAAP financial measures provide meaningful supplemental information regarding our results and facilitate the comparison of results.

During 2021, we analyzed assets for impairment and none were identified as being impaired. During the fourth quarter of 2020, certain capital equipment assets, advance payments and inventory were analyzed and determined to be impaired totaling $943,000. This included impairment of assets consisting of $252,000 of equipment and software, $400,000 of prepaid royalties, of $652,000 as well as impairment related charges of $291,000 due primarily to end of certain product support as discussed further above.

A reconciliation of net income to EBITDA and Adjusted EBITDA follows:

	For Year Ended December 31,			
	2021		2020	
(in thousands)				
Net Income (loss)	$	(555)	$	(3,964)
Interest (income)		(11)		(14)
Taxes		112		387
Depreciation and amortization		667		815
EBITDA	$	213	$	(2,776)
Equity compensation		1,238		1,467
Impairment & related charges		-		943
Adjusted EBITDA, excluding equity compensation and impairment & related charges	$	1,451	$	(366)

NEW ACCOUNTING PRONOUNCEMENTS

On January 1, 2021 the Company adopted ASU 2019-12, Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes. This ASU clarifies and simplifies accounting for income taxes by eliminating certain exceptions for intraperiod tax allocation principles and the methodology for calculating income tax rates in an interim period, among other updates. The adoption of this ASU did not have a material impact on our financial statements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Not applicable.

Item 8. Financial Statements and Supplementary Data

See pages 28 through 48.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Stockholders
Data I/O Corporation

Opinion on the financial statements
We have audited the accompanying consolidated balance sheets of Data I/O Corporation (a Washington corporation) and subsidiaries (the "Company") as of December 31, 2021 and 2020, the related consolidated statements of operations, comprehensive income (loss), changes in stockholders' equity, and cash flows for each of the two years in the period ended December 31, 2021, and the related notes and financial statement schedules included under Item 15(a)(2) (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2021, in conformity with accounting principles generally accepted in the United States of America.

Basis for opinion
These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical audit matter
The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Net realizable value of inventory

As described further in Note 1 to the financial statements, management measures the net realizable value of inventory based on estimated reductions to inventory for obsolete, slow-moving, excess and non-salable inventory by reviewing current transactions and forecasted demand. We identified the net realizable value of inventory specifically as a critical audit matter.

The principal considerations for our determination that the net realizable value of inventory represents a critical audit matter are that the assessment of the valuation of inventory is complex and includes an estimate of forecasted demand. The demand estimate is subjective and requires the Company to consider significant assumptions such as economic conditions, technological advances, historical usage, and consumer trends, which are subject to significant uncertainty and therefore require significant auditor judgement.

Our audit procedures related to the net realizable value of inventory included the following, among others:

- obtained management's analysis of parts in inventory and expected customer demand, recalculated inputs into the analysis. This included, among other inputs, historical usage compared to quantities on hand, age, and general ledger balances.
- tested selected inventory items by making inquiries of management and evaluating the appropriateness of judgments, assumptions and documentation supporting adjustments to the reserve estimate.
- inquired with management and various staff members outside of the finance team to obtain support for selected forecast demand inputs as well as product specific trends

GRANT THORNTON LLP
We have served as the Company's auditor since 2001.

Bellevue, Washington
Date: March 29, 2022

DATA I/O CORPORATION
CONSOLIDATED BALANCE SHEETS
(in thousands, except share data)

	December 31, 2021	December 31, 2020
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	$ 14,190	$ 14,167
Trade accounts receivable, net of allowance for doubtful accounts of $89 and $66, respectively	3,995	2,494
Inventories	6,351	5,270
Other current assets	737	1,319
TOTAL CURRENT ASSETS	25,273	23,250
Property, plant and equipment – net	946	1,216
Other assets	2,838	1,126
TOTAL ASSETS	$ 29,057	$ 25,592
LIABILITIES AND STOCKHOLDERS' EQUITY		
CURRENT LIABILITIES:		
Accounts payable	$ 1,373	$ 1,245
Accrued compensation	2,496	1,509
Deferred revenue	1,507	1,068
Other accrued liabilities	1,413	1,307
Income taxes payable	-	62
TOTAL CURRENT LIABILITIES	6,789	5,191
Operating lease liabilities	2,277	588
Long-term other payables	138	174
COMMITMENTS	-	-
STOCKHOLDERS' EQUITY		
Preferred stock -		
Authorized, 5,000,000 shares, including 200,000 shares of Series A Junior Participating Issued and outstanding, none	-	-
Common stock, at stated value -		
Authorized, 30,000,000 shares Issued and outstanding, 8,621,007 shares as of December 31, 2021 and 8,416,335 shares as of December 31, 2020	20,886	20,071
Accumulated earnings (deficit)	(2,011)	(1,456)
Accumulated other comprehensive income (loss)	978	1,024
TOTAL STOCKHOLDERS' EQUITY	19,853	19,639
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 29,057	$ 25,592

See notes to consolidated financial statements

DATA I/O CORPORATION
CONSOLIDATED STATEMENTS OF OPERATIONS
(in thousands, except per share amounts)

	For the Years Ended December 31, 2021	2020
Net sales	$ 25,835	$ 20,328
Cost of goods sold	11,115	9,506
Gross margin	14,720	10,822
Operating expenses:		
Research and development	6,635	6,357
Selling, general and administrative	8,358	6,891
Impairment	-	652
Total operating expenses	14,993	13,900
Operating income (loss)	(273)	(3,078)
Non-operating income (loss):		
Interest income	11	14
Gain on sale of assets	21	-
Foreign currency transaction gain (loss)	(202)	(513)
Total non-operating income (loss)	(170)	(499)
Income (loss) before income taxes	(443)	(3,577)
Income tax (expense) benefit	(112)	(387)
Net income (loss)	$ (555)	$ (3,964)
Basic earnings (loss) per share	$ (0.06)	$ (0.48)
Diluted earnings (loss) per share	$ (0.06)	$ (0.48)
Weighted-average basic shares	8,545	8,333
Weighted-average diluted shares	8,545	8,333

See notes to consolidated financial statements

DATA I/O CORPORATION
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)
(in thousands)

	For the Years Ended December 31, 2021	2020
Net Income (loss)	$ (555)	$ (3,964)
Other comprehensive income:		
Foreign currency translation gain (loss)	(46)	750
Comprehensive income (loss)	$ (601)	$ (3,214)

See notes to consolidated financial statements

DATA I/O CORPORATION
CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY
(in thousands, except share amounts)

	Common Stock		Accumulated Earnings (Deficit)	Accumulated and Other Comprehensive Income (Loss)	Total Stockholders' Equity
	Shares	Amount			
Balance at December 31, 2019	8,212,748	$ 18,748	$ 2,508	$ 274	$ 21,530
Stock options exercised, net	-	-	-	-	-
Repurchased shares	-	-	-	-	-
Stock awards issued, net of tax withholding	195,773	(173)	-	-	(173)
Issuance of stock through: Employee Stock Purchase Plan	7,814	29	-	-	29
Share-based compensation	-	1,467	-	-	1,467
Net income (loss)	-	-	(3,964)	-	(3,964)
Other comprehensive income gain (loss)	-	-	-	750	750
Balance at December 31, 2020	8,416,335	$ 20,071	$ (1,456)	$ 1,024	$ 19,639
Stock options exercised, net	2,444	(6)	-	-	(6)
Repurchased shares	-	-	-	-	-
Stock awards issued, net of tax withholding	197,744	(441)	-	-	(441)
Issuance of stock through: Employee Stock Purchase Plan	4,484	24	-	-	24
Share-based compensation	-	1,238	-	-	1,238
Net income (loss)	-	-	(555)	-	(555)
Other comprehensive income gain (loss)	-	-	-	(46)	(46)
Balance at December 31, 2021	8,621,007	$ 20,886	$ (2,011)	$ 978	$ 19,853

See notes to consolidated financial statements

DATA I/O CORPORATION
CONSOLIDATED STATEMENTS OF CASH FLOWS
(in thousands)

	For the Twelve Months Ended December 31, 2021	2020
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net income (loss)	$ (555)	$ (3,964)
Adjustments to reconcile net income (loss)		
to net cash provided by (used in) operating activities:		
Depreciation and amortization	667	815
Equipment transferred to cost of goods sold	220	245
Share-based compensation	1,238	1,467
Impairment and related charges	-	943
Net change in:		
Trade accounts receivable	(1,565)	1,664
Inventories	(750)	(414)
Other current assets	598	(398)
Accounts payable and accrued liabilities	94	(38)
Deferred revenue	539	(380)
Other long-term liabilities	251	(491)
Deposits and other long-term assets	673	1,182
Net cash provided by (used in) operating activities	1,410	631
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchases of property, plant and equipment	(623)	(860)
Cash provided by (used in) investing activities	(623)	(860)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Net proceeds from issuance of common stock, less payments for shares withheld to cover tax	(423)	(144)
Cash provided by (used in) financing activities	(423)	(144)
Increase (decrease) in cash and cash equivalents	364	(373)
Effects of exchange rate changes on cash	(341)	604
Cash and cash equivalents at beginning of period	14,167	13,936
Cash and cash equivalents at end of period	$ 14,190	$ 14,167
Supplemental disclosure of cash flow information:		
Cash paid during the period for:		
Income taxes	$ 415	$ 137

See notes to consolidated financial statements

DATA I/O CORPORATION
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Nature of Operations

Data I/O Corporation ("Data I/O", "We", "Our", "Us") designs, manufactures and sells programming systems used by designers and manufacturers of electronic products. Our programming system products are used to program integrated circuits ("ICs" or "devices" or "semiconductors") with the specific unique data necessary for the ICs contained in various products, and are an important tool for the electronics industry experiencing growing use of programmable ICs. Customers for our programming system products are located around the world, primarily in Asia, Europe and the Americas. Our manufacturing operations are currently located in Redmond, Washington, United States and Shanghai, China.

Principles of Consolidation

The consolidated financial statements include the accounts of Data I/O Corporation and our wholly-owned subsidiaries. Intercompany accounts and transactions have been eliminated in consolidation.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America ("U.S. GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Significant estimates include:

- Revenue Recognition
- Allowance for Doubtful Accounts
- Inventory
- Warranty Accruals
- Tax Valuation Allowances
- Share-based Compensation

Foreign Currency Translation

Assets and liabilities of foreign subsidiaries are translated at the exchange rate on the balance sheet date. Revenues, costs and expenses of foreign subsidiaries are translated at average rates of exchange prevailing during the year. Translation adjustments resulting from this process are charged or credited to stockholders' equity. Realized and unrealized gains and losses resulting from the effects of changes in exchange rates on assets and liabilities denominated in foreign currencies are included in non-operating expense as foreign currency transaction gains and losses.

Cash and Cash Equivalents

All highly liquid investments purchased with an original maturity of 90 days or less are considered cash equivalents. We maintain our cash and cash equivalents with major financial institutions in the United States of America, which are insured by the Federal Deposit Insurance Corporation (FDIC), and in foreign jurisdictions. Deposits in U.S. banks exceed the FDIC insurance limit. We have not experienced any losses on our cash and cash equivalents. Cash and cash equivalents held in foreign bank accounts in China and Germany, totaled (in millions) $6.8 at both December 31, 2021 and 2020.

Fair Value of Financial Instruments

Certain financial instruments are carried at cost on the consolidated balance sheets, which approximates fair value due to their short-term, highly liquid nature. These instruments include cash and cash equivalents, accounts receivable, accounts payable and accrued expenses, and other short-term liabilities.

Accounts Receivable

The majority of our accounts receivable are due from companies in the electronics manufacturing industries. Credit is extended based on an evaluation of a customer's financial condition and, generally, collateral is not required. Accounts receivable are typically due within 30 to 60 days and are stated at amounts due from customers net of an allowance for doubtful accounts. Accounts receivable outstanding longer than the contractual payment terms are considered past due. We determine the allowance by considering a number of factors, including the length of time trade accounts receivable are past due, the industry and geographic payment practices involved, our previous bad debt experience, the customer's current ability to pay their obligation to us, and the condition of the general economy and the industry as a whole. We write off accounts receivable when they become uncollectible, and payments subsequently received on such receivables are credited to the allowance for doubtful accounts. Interest may be charged, at the discretion of management and according to our standard sales terms, beginning on the day after the due date of the receivable. However, interest income is subsequently recognized on these accounts either to the extent cash is received, or when the future collection of interest and the receivable balance is considered probable by management.

Inventories

Inventories are stated at the lower of cost or net realizable value with cost being the currently adjusted standard cost, which approximates cost on a first-in, first-out basis. We estimate changes to inventory for obsolete, slow-moving, excess and non-salable inventory by reviewing current transactions and forecasted product demand. We evaluate our inventories on an item by item basis and record an adjustment (lower of cost or net realizable value) accordingly.

Property, Plant and Equipment

Property, plant and equipment, including leasehold improvements, are stated at cost, and depreciation is calculated over the estimated useful lives of the related assets or lease terms on the straight-line basis. We depreciate substantially all property, plant and equipment over periods of three to seven years. We depreciate leasehold improvements over the remaining portion of the lease or over the expected life of the asset if less than the remaining term of the lease.

We regularly review all of our property, plant and equipment for impairment whenever events or changes in circumstances indicate that the carrying value may not be recoverable. If the total of future undiscounted cash flows is less than the carrying amount of these assets, an impairment loss, if any, based on the excess of the carrying amount over the fair value of the assets, is recorded. Based on this evaluation, for the year ended December 31, 2021, no impairment was noted or recorded for property, plant and equipment. For the year ended December 31, 2020, approximately $252,000 of property, plant and equipment impairment was recorded.

Patent Costs

We expense external costs, such as filing fees and associated attorney fees, incurred to obtain initial patents, but capitalize patents obtained through acquisition as intangible assets. We also expense costs associated with maintaining and defending patents subsequent to their issuance.

Income Taxes

Income taxes are computed at current enacted tax rates, less tax credits using the asset and liability method. Deferred taxes are adjusted both for items that do not have tax consequences and for the cumulative effect of any changes in tax rates from those previously used to determine deferred tax assets or liabilities. Tax provisions include amounts that are currently payable, changes in deferred tax assets and liabilities that arise because of temporary differences between the timing of when items of income and expense are recognized for financial reporting and income tax purposes, and any changes in the valuation allowance caused by a change in judgment about the realization of the related deferred tax assets. A valuation allowance is established when necessary to reduce deferred tax assets to amounts expected to be realized. The CARES Act, enacted in Q1 2020, accelerated the AMT credit refund of $640,000, which was previously carried as a current asset, which the majority was received in September 2021.

Share-Based Compensation

All stock-based compensation awards are measured based on estimated fair values on the date of grant and recognized as compensation expense on the straight-line method. Our share-based compensation is reduced for estimated forfeitures at the time of grant and revised as necessary in subsequent periods if actual forfeitures differ from those estimates.

Revenue Recognition

Topic 606 provides a single, principles-based five-step model to be applied to all contracts with customers. It generally provides for the recognition of revenue in an amount that reflects the consideration to which the Company expects to be entitled, net of allowances for estimated returns, discounts or sales incentives, as well as taxes collected from customers when control over the promised goods or services are transferred to the customer.

We expense contract acquisition costs, primarily sales commissions, for contracts with terms of one year or less and will capitalize and amortize incremental costs with terms that exceed one year. During 2021 and 2020, the impact of capitalization of incremental costs for obtaining contracts was immaterial. We exclude sales, use, value added, some excise taxes and other similar taxes from the measurement of the transaction price.

We recognize revenue upon transfer of control of the promised products or services to customers in an amount that reflects the consideration we expect to receive in exchange for those products or services. We have determined that our programming equipment has reached a point of maturity and stability such that product acceptance can be assured by testing at the factory prior to shipment and that the installation meets the criteria to be a separate performance obligation. These systems are standard products with published product specifications and are configurable with standard options. The evidence that these systems could be deemed as accepted was based upon having standardized factory production of the units, results from batteries of tests of product performance to our published specifications, quality inspections and installation standardization, as well as past product operation validation with the customer and the history provided by our installed base of products upon which the current versions were based.

The revenue related to products requiring installation that is perfunctory is recognized upon transfer of control of the product to customers, which generally is at the time of shipment. Installation that is considered perfunctory includes any installation that is expected to be performed by other parties, such as distributors, other vendors, or the customers themselves. This considers the complexity, skill and training needed as well as customer expectations regarding installation.

We enter into arrangements with multiple performance obligations that arise during the sale of a system that includes an installation component, a service and support component and a software maintenance component. We allocate the transaction price of each element based on relative selling prices. Relative selling price is based on the selling price of the standalone system. For the installation and service and support performance obligations, we use the value of the discount given to distributors who perform these components. For software maintenance performance obligations, we use what we charge for annual software maintenance renewals after the initial year the system is sold. Revenue is recognized on the system sale based on shipping terms, installation revenue is recognized after the installation is performed, and hardware service and support and software maintenance revenue is recognized ratably over the term of the agreement, typically one year. Deferred revenue includes service, support and maintenance contracts and represents the undelivered performance obligation of agreements that are typically for one year.

When we sell software separately, we recognize revenue upon the transfer of control of the software, which is generally upon shipment, provided that only inconsequential performance obligations remain on our part and substantive acceptance conditions, if any, have been met.

We recognize revenue when there is an approved contract that both parties are committed to perform, both parties rights have been identified, the contract has substance, collection of substantially all the consideration is probable, the transaction price has been determined and allocated over the performance obligations, the performance obligations including substantive acceptance conditions, if any, in the contract have been met, the obligation is not contingent on resale of the product, the buyer's obligation would not be changed in the event of theft, physical destruction or damage to the product, the buyer acquiring the product for resale has economic substance apart from us and we do not have significant obligations for future performance to directly bring about the resale of the product by the buyer. We establish a reserve for sales returns based on historical trends in product returns and estimates for new items. Payment terms are generally 30 days from shipment.

We transfer certain products out of service from their internal use and make them available for sale. The products transferred are typically our standard products in one of the following areas: service loaners, rental or test units; engineering test units; or sales demonstration equipment. Once transferred, the equipment is sold by our regular sales channels as used equipment inventory. These product units often involve refurbishing and an equipment warranty, and are conducted as sales in our normal and ordinary course of business. The transfer amount is the product unit's net book value, and the sale transaction is accounted for as revenue and cost of goods sold.

The following table represents our revenues by major categories:

Net sales by type	2021	2020
(in thousands)		
Equipment Sales	$ 14,989	$ 11,480
Adapter Sales	7,818	5,527
Software and Maintenance Sales *	3,028	3,321
Total	$ 25,835	$ 20,328

* includes an insignificant amount of service and part sales

Leases - Accounting Standards Codification 842

Leases arise from contracts which convey the right to control the use of identified property or equipment for a period of time in exchange for consideration. Our leasing arrangements are primarily for office space we use to conduct our operations. In addition, there are automobiles and a small amount of office equipment leased. We determine whether contracts include a lease at the inception date, which is generally upon contract signing, considering factors such as whether the contract includes an asset which is physically distinct, which party obtains substantially all of the capacity and economic benefit of the asset, and which party directs how, and for what purpose, the asset is used during the contractual period of use. Our leases commence when the lessor makes the asset available for our use. At commencement, we record a lease liability at the present value of future lease payments, net of any future lease incentives to be received. Some of our lease agreements include cancellable future periods subject to termination or extension options. We include cancellable lease periods in our future lease payments when we are reasonably certain to continue to utilize the asset for those periods. We calculate the present value of future lease payments at commencement using a discount rate which we estimate as the collateralized borrowing rate we believe that would be incurred on our future lease payments over a similar term. At commencement, we also record a corresponding right-of-use asset, which is calculated based on the amount of the lease liability, adjusted for any advance lease payments paid, initial direct costs incurred or lease incentives received prior to commencement. Right-of-use assets are subject to evaluation for impairment or disposal on a basis consistent with other long-lived assets.

Leases are classified at commencement, as either operating or finance leases. As of December 31, 2021, all of our leases are classified as operating leases. Rent expense for operating leases is recognized on the straight-line method over the term of the agreement beginning on the lease commencement date.

In accounting for leases, we utilize certain practical expedients and policy elections available under the lease accounting standard. For example, we do not record right-of-use assets or lease liabilities for leases with terms of 12 months or less. For contracts containing real estate leases, we do not combine lease and non-lease components. The primary impact of this policy election is that we do not include in our calculation of lease liabilities any fixed and non-cancelable future payments due under the contract for items such as common area maintenance, utilities and other costs. Lease-related costs which are variable rather than fixed are expensed in the period incurred.

Assumptions, judgments and estimates impacting the carrying value of our right-of-use assets and liabilities include evaluating whether an arrangement contains a lease, determining whether the lease term should include any cancellable future periods, estimating the discount rate used to calculate our lease liabilities, estimating the fair value and useful life of the leased asset for the purpose of classifying the lease as an operating or finance lease, evaluating whether a lease contract amendment represents a new lease agreement or a modification to the existing lease and evaluating our right-of-use assets for impairment.

Research and Development

Research and development costs are generally expensed as incurred.

Advertising Expense

Advertising costs are expensed as incurred. Total advertising expenses were approximately $121,000 and $127,000 in 2021 and 2020, respectively.

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Warranty Expense

We record a liability for an estimate of costs that we expect to incur under our basic limited warranty when product revenue is recognized. Factors affecting our warranty liability include the number of units sold and historical and anticipated rates of claims and costs per claim. We normally provide a warranty for our products against defects for periods ranging from ninety days to one year. We provide for the estimated cost that may be incurred under our product warranties and periodically assess the adequacy of our warranty liability based on changes in the above factors. We record revenues on extended warranties on a straight-line basis over the term of the related warranty contracts. Service costs are expensed as incurred.

Earnings (Loss) Per Share

Basic earnings (loss) per share exclude any dilutive effects of stock options. Basic earnings (loss) per share are computed using the weighted-average number of common shares outstanding during the period. Diluted earnings per share are computed using the weighted-average number of common shares and common stock equivalent shares outstanding during the period. The common stock equivalent shares from equity awards used in calculating diluted earnings per share were 186,000 and 74,000 for the years ended December 31, 2021 and 2020, respectively. Options to purchase 12,500 and 25,000 shares of common stock were outstanding as of December 31, 2021 and 2020, respectively, but were excluded from the computation of diluted earnings per share for the periods then ended, because the options were anti-dilutive.

Diversification of Credit Risk

Financial instruments, which potentially subject us to concentrations of credit risk, consist primarily of trade receivables. Our trade receivables are geographically dispersed and include customers in many different industries. Our consolidated accounts receivable balance as of December 31, 2021 and 2020 includes foreign accounts receivable in the functional currency of our foreign subsidiaries amounting to $1,813,000 and $587,000, respectively. We generally do business with our foreign distributors in U.S. Dollars. We believe that risk of loss is significantly reduced due to the diversity of our end-customers and geographic sales areas. We perform on-going credit evaluations of our customers' financial condition and require collateral, such as letters of credit and bank guarantees, or prepayment whenever deemed necessary.

The following represented greater than 10% of our consolidated accounts receivable for the applicable year:

Percentage of Consolidated Accounts Receivable	**2021**	**2020**
Number of customers	3	3
Approximate percentage of consolidated accounts receivable balance	36%	41%
Percentage of each	13%	17%
Percentage of each	12%	12%
Percentage of each	11%	12%

Diversification of net sales

The following represented greater than 10% of net sales for the applicable year:

Percentage of Net Sales	**2021**	**2020**
Number of customers	1	1
Approximate percentage of net sales	14%	12%

COVID-19

In 2021, we continued to react to and manage our business relative to the COVID-19 pandemic. During 2020 and throughout 2021, COVID-19 impacted all aspects of our business, from customer demand, to supply chain integrity, employee safety, business processes, and financial management. As a global company, we had to manage each of these while working within the guidelines of local and national policy in the U.S., China and Germany. Our philosophy at the start of the outbreak was simple:

1. Keep our employees and their families safe;
2. Keep our facilities safe and operational while we serve our customers as an essential business; and
3. Preserve cash.

We have managed the COVID-19 impact successfully to date, with no known employee transmissions in the workplace and significant preservation of our cash and working capital. Our resilient supply chain model kept our facilities in Shanghai, China and Redmond, Washington open, and serving customers globally, despite sporadic government restrictions on our facilities and vendors. We face continued international travel restrictions, shipping delays, and inability to meet with customers in person. As business has recovered, we have been able to respond by having the working capital needed and the workforce in place. We saw a resurgence of orders in the second quarter of 2021 as vaccinations were occurring and customers resumed business. Following this, in the third quarter of 2021, we experienced a slowdown of demand as customers, we believe, were unable to secure an adequate semiconductor parts supply for planned capacity expansion. In supply chains around the world with the re-openings and now, in a believed ripple effect, factories are experiencing the impact of chip shortages on their production plans. This appears to be a shorter-term issue, but is expected to have some continuing impact into 2022. However, the outlook by industry analysts for automotive electronics remains strong for a decade. Waves of COVID-19 infection rates and variants have kept or re-imposed revised travel restrictions. Customers largely have not permitted in-person sales and other visits. Converting these interactions to remote and virtual means has meant implementing new processes and technology.

In production, in addition to adding protective health measures for our employees, we have focused on supply chain resilience and duplicating production capability for some products in both our Shanghai, China and Redmond, USA facilities. We implemented additional supplier financial and other monitoring, as well as adding additional local suppliers and increasing inventory stock levels of key parts. Other than production employees who are required to be onsite, most other employees are working with hybrid flexibility to be onsite as desired or needed and this is expected to continue.

New Accounting Pronouncements

On January 1, 2021 the Company adopted ASU 2019-12, Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes. This ASU clarifies and simplifies accounting for income taxes by eliminating certain exceptions for intraperiod tax allocation principles and the methodology for calculating income tax rates in an interim period, among other updates. The adoption of this ASU did not have a material impact on our financial statements.

NOTE 2 – ACCOUNTS RECEIVABLE, NET

(in thousands)	December 31, 2021	December 31, 2020
Trade accounts receivable	$ 4,084	$ 2,560
Less allowance for doubtful receivables	89	66
Trade accounts receivable, net	$ 3,995	$ 2,494

Changes in Data I/O's allowance for doubtful accounts are as follows:

(in thousands)	December 31, 2021	December 31, 2020
Beginning balance	$ 66	$ 80
Bad debt expense (reversal)	23	(14)
Accounts written-off	-	-
Recoveries	-	-
Ending balance	$ 89	$ 66

NOTE 3 – INVENTORIES

(in thousands)	December 31, 2021	December 31, 2020
Raw material	$ 3,771	$ 3,143
Work-in-process	1,602	1,204
Finished goods	978	923
Inventories	$ 6,351	$ 5,270

NOTE 4 – PROPERTY, PLANT AND EQUIPMENT, NET

(in thousands)	December 31, 2021	December 31, 2020
Leasehold improvements	$ 430	$ 421
Equipment	5,218	5,625
Sales demonstration equipment	754	963
	6,402	7,009
Less accumulated depreciation	5,456	5,793
Property and equipment, net	$ 946	$ 1,216

Total depreciation expense recorded for 2021 and 2020 was $667,000 and $815,000, respectively.

NOTE 5 – OTHER ACCRUED LIABILITIES

Other accrued liabilities consisted of the following components:

(in thousands)	December 31, 2021	December 31, 2020
Lease liability - short term	$ 601	$ 673
Product warranty	432	371
Sales return reserve	71	61
Other taxes	180	109
Other	129	93
Other accrued liabilities	$ 1,413	$ 1,307

The changes in our product warranty liability for the year ending December 31, 2021 are follows:

(in thousands)	December 31, 2021
Liability, beginning balance	$ 371
Net expenses	864
Warranty claims	(864)
Accrual revisions	61
Liability, ending balance	$ 432

NOTE 6 – OPERATING LEASE COMMITMENTS

We have commitments under non-cancelable operating leases and other agreements, primarily for factory and office space, with initial or remaining terms of one year or more for the years ending December 31 are as follows:

(in thousands)	Operating Lease Commitments
2022	$ 802
2023	911
2024	826
2025	576
2026	124
Thereafter	16
Total	$ 3,447
Less Imputed interest	(377)
Total operating lease liabilities	$ 2,878

Cash paid for operating lease liabilities for the twelve months ended December 31, 2021 and 2020, respectively, was $815,000 and $770,000. There were eight new or modified leases during the twelve months ended December 31, 2021 that are accounted for in the amounts disclosed above.

The following table presents supplemental balance sheet information related to leases as of December 31, 2021:

	Year Ended December 31,	
(in thousands)	2021	2020
Right-of-use assets (Long-term other assets)	$ 2,793	$ 1,081
Lease liability-short term (Other accrued liabilities)	$ 601	$ 673
Lease liability-long term (Operating lease liabilities)	$ 2,277	$ 588

At December 31, 2021, the weighted average remaining lease term is 3.4 years and the weighted average discount rate used is 5%.

The components of our lease expense for the twelve months ended December 31, 2021 and 2020, respectively, include operating lease costs of $751,000 and $692,000, which includes short-term lease costs of $31,000 and $34,000. Variable payments were not material, and were treated as non-lease components and were recognized in the period for which the costs occur.

Our real estate facility leases are described below:

During the fourth quarter of 2021, we amended our lease agreement for the Redmond, Washington headquarters facility, extending the lease to January 31, 2026. The lease is for approximately 20,460 square feet. The lease base annual rental payments during 2021 and 2020 were approximately $372,000 and $361,000, respectively.

In addition to the Redmond facility, approximately 24,000 square feet is leased at two foreign locations, including our sales, service, operations and engineering office located in Shanghai, China, and our German sales, service and engineering office located near Munich, Germany.

Our lease for a facility located in Shanghai, China ran through October 31, 2021. In April 2021, we signed a lease extension effective November 1, 2021 that extends the lease through October 31, 2024. This lease is for approximately 19,400 square feet. The lease base annual rental payments during 2021 and 2020 were approximately $317,000 and $301,000, respectively.

Our lease for our facility located near Munich, Germany ran through February 28, 2022 and in March 2022 we entered into a lease extension to 2027. This lease is for approximately 4,895 square feet. The lease base annual rental payments during 2021 and 2020 were approximately $58,000 and $62,000, respectively.

NOTE 7 – OTHER COMMITMENTS

We have purchase obligations for inventory and production costs, as well as other obligations such as capital expenditures, service contracts, marketing, and development agreements. Arrangements are considered purchase obligations if a contract specifies all significant terms, including fixed or minimum quantities to be purchased, a pricing structure and approximate timing of the transaction. Most arrangements are cancelable without a significant penalty, and with short notice, typically less than 90 days. At December 31, 2021, the purchase commitments and other obligations totaled $ 1.8 million, of which all but $3,500 are expected to be paid over the next twelve months.

NOTE 8 – CONTINGENCIES

As of December 31, 2021, we were not a party to any legal proceedings or aware of any indemnification agreement claims, the adverse outcome of which in management’s opinion, individually or in the aggregate, would have a material adverse effect on our results of operations or financial position.

NOTE 9 – STOCK AND RETIREMENT PLANS

Stock Option Plans

At December 31, 2021, there were 570,892 shares available for future grant under Data I/O Corporation 2000 Stock Compensation Incentive Plan (“2000 Plan”). At December 31, 2021, there were shares of Common Stock reserved for issuance consisting of 37,500 inducement reserve shares and 598,777 shares under the 2000 Plan. The inducement reserve shares were granted in 2019 consisting of 25,000 options (12,500 unvested and unissued) and 50,000 RSU, which were not from the 2000 Plan, but were made under the terms of the 2000 Plan. During 2021, 12,500 shares were issued from the inducement reserve. Pursuant to the 2000 Plan, options are granted to our officers and key employees with exercise prices equal to the fair market value of the Common Stock at the date of grant and generally vest over four years. Options granted under the plans have a maximum term of six years from the date of grant. Stock awards are also granted under the 2000 Plan which generally vest over four years and one year for nonemployee Directors.

Employee Stock Purchase Plan

Under the Employee Stock Purchase Plan (“ESPP”), eligible employees may purchase shares of our Common Stock at six-month intervals at 95% of the fair market value on the last day of each six-month period. Employees may purchase shares having a value not exceeding ten percent of their gross compensation during an offering period. During 2021 and 2020, a total of 4,484 and 7,814 shares, respectively, were purchased under the plan at average prices of $5.38 and $3.71 per share, respectively. At December 31, 2021 and 2020, 29,098 and 31,769 shares were reserved for future issuance respectively.

Stock Appreciation Rights Plan

We have a Stock Appreciation Rights ("SAR") Plan under which each director, executive officer or holder of 10% or more of our Common Stock has a SAR with respect to each exercisable stock option. The SAR entitles the SAR holder to receive cash from us for the difference between the market value of the stock and the exercise price of the option in lieu of exercising the related option. SARs are only exercisable following a tender offer or exchange offer for our stock, or following approval by shareholders of Data I/O of any merger, consolidation, reorganization or other transaction providing for the conversion or exchange of more than 50% of the common shares outstanding. As no event has occurred, which would make the SARs exercisable, and no such event is deemed probable, no compensation expense has been recorded under this plan. At December 31, 2021 and 2020, there were 25,000 SARs outstanding.

Director Fee Plan

We have a Director Fee Plan available to compensate directors who are not employees of Data I/O Corporation with equity. During 2021, no shares were issued from the plan and 20,559 shares were issued from the plan in 2020. At December 31, 2021 and 2020 130,763 shares remain available in the plan.

Retirement Savings Plan

We have a savings plan that qualifies as a cash or deferred salary arrangement under Section 401(k) of the Internal Revenue Code. Under the plan, participating U.S. employees may defer their pre-tax salary or post-tax salary if Roth is elected, subject to IRS limitations. In fiscal years 2021 and 2020, we contributed one dollar for each dollar contributed by a participant, with a maximum contribution of four percent of a participant's eligible earnings. Our matching contribution expense for the savings plan, net of forfeitures, was approximately $186,000 and $184,000 in 2021 and 2020, respectively. Employer matching contributions owed to the plan were $224,000 and $200,000 at December 31, 2021 and 2020, respectively.

NOTE 10 – SHARE-BASED COMPENSATION

For share-based awards granted, we have recognized compensation expense based on the estimated grant date fair value method. For these awards we have recognized compensation expense using a straight-line amortization method and reduced for estimated forfeitures. The impact on our results of operations of recording share-based compensation for the year ended December 31, 2021 and 2020 was as follows:

	Year Ended December 31,	
	2021	2020
(in thousands)		
Cost of goods sold	$ 57	$ 44
Research and development	303	371
Selling, general and administrative	878	1,052
Total share-based compensation	$ 1,238	$ 1,467

An immaterial amount of share-based compensation was capitalized into inventory as overhead for the years ended December 31, 2021 and 2020, respectively.

The following table summarizes stock option activity under our stock option plans for the twelve months ended December 31:

	2021			2020		
	Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Life in Years	Options	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Life in Years
Outstanding at beginning of year	25,000	$ 4.98		25,000	$ 4.98	
Granted	-	-		-	-	
Exercised	(12,500)	4.98		-	-	
Cancelled, Expired or Forfeited	-	-		-	-	
Outstanding at end of year	12,500	$ 4.98	3.33	25,000	$ 4.98	4.33
Vested or expected to vest at the end of the period	12,166	$ 4.98	3.33	24,068	$ 4.98	4.33
Exercisable at end of year	3,125	$ 4.98	3.33	9,375	$ 4.98	4.33

The aggregate intrinsic value of outstanding options is $0. There were no stock option awards exercised in 2020.

Restricted stock award activity including performance-based stock award activity under our share-based compensation plan was as follows:

	2021		2020	
	Awards	Weighted - Average Grant Date Fair Value	Awards	Weighted - Average Grant Date Fair Value
Outstanding at beginning of year	643,228	$ 4.16	536,403	$ 5.44
Granted	262,001	5.95	383,951	3.02
Vested	(272,952)	4.56	(230,901)	5.16
Cancelled	(8,500)	4.15	(46,225)	4.58
Outstanding at end of year	623,777	$ 4.73	643,228	$ 4.16

During the years ended December 31, 2021 and 2020, 85,264 and 55,687 shares respectively were withheld from issuance related to restricted stock units vesting and stock option exercises to cover employee taxes and stock options exercise price.

The remaining unamortized expected future compensation expense and remaining amortization period associated with unvested option grants and restricted stock awards are:

	December 31, 2021	December 31, 2020
Unamortized future compensation expense	$ 2,300,286	$ 2,017,501
Remaining weighted average amortization period in years	2.57	2.35

NOTE 11 – SHARE REPURCHASE PROGRAMS

Data I/O did not have a share repurchase program in 2021.

NOTE 12 – INCOME TAXES

Components of income (loss) before taxes:

	Year Ended December 31,	
(in thousands)	**2021**	**2020**
U.S. operations	$ (2,086)	$ (4,451)
Foreign operations	1,643	874
Total income (loss) before taxes	$ (443)	$ (3,577)

Income tax expense (benefit) consists of:

	Year Ended December 31,	
(in thousands)	**2021**	**2020**
Current tax expense (benefit)		
U.S. federal	$ 0	$ 0
State	(2)	(2)
Foreign	114	389
	112	387
Deferred tax expense (benefit) – U.S. federal	-	-
Total income tax expense (benefit)	$ 112	$ 387

A reconciliation of our effective income tax and the U.S. federal tax rate is as follows:

	Year Ended December 31,	
(in thousands)	**2021**	**2020**
Statutory tax	$ (93)	$ (751)
State and foreign income tax, net of federal income tax benefit	(254)	151
Valuation allowance for deferred tax assets	454	1,513
Foreign sourced deemed dividend income	341	(394)
Stock based compensation	(325)	(136)
Other	(11)	4
Total income tax expense (benefit)	$ 112	$ 387

The tax effects of temporary differences that gave rise to significant portions of the deferred tax assets are presented below:

	Year Ended December 31,	
	2021	2020
(in thousands)		
Deferred income tax assets:		
Allowance for doubtful accounts	$ 13	$ 10
Inventory and product return reserves	484	573
Compensation accruals	2,421	1,973
Accrued liabilities	202	179
Book-over-tax depreciation and amortization	23	91
Foreign net operating loss carryforwards	22	53
U.S. net operating loss carryforwards	3,301	3,739
U.S. credit carryforwards	1,440	2,345
	7,906	8,963
Valuation Allowance	(7,906)	(8,963)
Total Deferred Income Tax Assets	$ -	$ -

The valuation allowance for deferred tax assets decreased $1,057,000 and increased $1,422,000 during the years ended December 31, 2021 and 2020, respectively. The net deferred tax assets have a full valuation allowance provided due to uncertainty regarding our ability to utilize such assets in future years. This full valuation allowance evaluation is based upon our volatile history of losses and the cyclical nature of our industry and capital spending. Credit carryforwards consist primarily of research and experimental and foreign tax credits. We intend to continue to reinvest foreign earnings of our operating subsidiaries.

U.S. net operating loss carryforwards are $15.7 million at December 31, 2021 with expiration years from 2023 to 2034. Utilization of net operating loss and credit carryforwards is subject to certain limitations under Section 382 of the Internal Revenue Code of 1986, as amended.

The gross changes in uncertain tax positions resulting in unrecognized tax benefits are presented below:

	Year Ended December 31,	
	2021	2020
(in thousands)		
Unrecognized tax benefits, opening balance	$ 365	$ 348
Prior period tax position increases	-	-
Additions based on tax positions related to current year	27	17
Unrecognized tax benefits, ending balance	$ 392	$ 365

Historically, we have incurred minimal interest expense and no penalties associated with tax matters. We have adopted a policy whereby amounts related to penalties associated with tax matters are classified as general and administrative expense when incurred and amounts related to interest associated with tax matters are classified as interest income or interest expense.

Tax years that remain open for examination include 2018, 2019, 2020 and 2021 in the United States of America. In addition, various tax years from 2002 to 2014 may be subject to examination in the event that we utilize the net operating losses and credit carryforwards from those years in our current or future year tax returns.

NOTE 13 – SEGMENT AND GEOGRAPHIC INFORMATION

We consider our operations to be a single operating segment, focused on the design, manufacturing and sale of programming systems used by designers and manufacturers of electronic products.

Major operations outside the U.S. include sales, engineering and service support by subsidiaries in Germany as well as in China, which also manufactures some of our products.

The following tables provide summary operating information by geographic area:

(in thousands)		Year Ended December 31, 2021		2020
Net sales:				
U.S.	$	2,607	$	1,516
Europe		9,387		8,415
Rest of World		13,841		10,397
	$	25,835	$	20,328
Included in Europe and Rest of World are the following significant balances:				
Germany	$	3,783	$	3,851
China	$	4,203	$	3,490
Operating income:				
U.S.	$	257		($713)
Europe		(1,037)		(1,698)
Rest of World		507		(667)
	$	(273)	$	(3,078)
Identifiable assets:				
U.S.	$	15,840	$	13,858
Europe		5,638		5,878
Rest of World		7,579		5,856
	$	29,057	$	25,592

NOTE 14 – IMPAIRMENT AND RELATED CHARGES

During 2021, no impairment or impairment related charges were taken. During the fourth quarter of 2020, we launched a new generation of SentriX tools and capability. This obsoleted components of the first-generation hardware, software and inventory. We also ended support for some legacy automated handlers, impairing the remaining service inventory. As a result, certain capital equipment assets, advance payments and inventory were analyzed and determined to be impaired, totaling $943,000 in the fourth quarter of 2020. This included impairment of $652,000, consisting of $252,000 of equipment and software, $400,000 of prepaid royalties, as well as impairment related charges of $291,000, due to inventory obsolescence (cost of goods sold) for end of certain product support.

NOTE 15 – SUBSEQUENT EVENTS

In preparing the financial statements, the Company has reviewed all known events which have occurred after December 31, 2021 through March 29, 2022, the date on which the financial statements are available for issuance, for potential recognition or disclosure in the consolidated financial statements and footnotes.

On February 23, 2022, Edward J. Smith was appointed a director of Data I/O.

During the first quarter of 2022, new COVID-19 outbreaks resulted in sporadic government restrictions on our facilities, customers and vendors in China, which caused supply chain, production, shipment and economic uncertainty impacting our business. On March 28, 2022, the Shanghai China government announced additional restrictive measures which will close the Company's Shanghai operations through April 5, 2022.

The Russia-Ukraine war is resulting in increased geo-political and economic uncertainty. Even though we do not have operations in Russia or Ukraine, our business may be impacted.

There were no other subsequent events which would require additional disclosures to the financial statements other than those already disclosed throughout the Notes to Consolidated Financial Statements.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

(a) Evaluation of disclosure controls and procedures.

Under the supervision and with the participation of our management, including our Chief Executive Officer and Chief Financial Officer, we evaluated the effectiveness of the design and operation of our disclosure controls and procedures (as defined in Rule 13a-15(e) and Rule 15d-15(e) under the Exchange Act) as of the end of the period covered by this report (the "Evaluation Date"). Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that, as of the Evaluation Date, our disclosure controls and procedures were effective at the reasonable assurance level. Disclosure controls are controls and procedures designed to ensure that information required to be disclosed in our reports filed or submitted under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls are also designed to ensure that such information is accumulated and communicated to our management, including the CEO and CFO, as appropriate to allow timely decisions regarding required disclosure.

(b) Management's Report on Internal Control Over Financial Reporting.

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control systems are designed to provide reasonable assurance to the Company's management and board of directors regarding reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Internal control over financial reporting is defined in Rule 13a-15(f) promulgated under the Exchange Act and includes those policies and procedures that:

(i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company;

(ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and

(iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements.

All internal controls, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statements preparation and presentation.

Our management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2021. In making this assessment, we used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in Internal Control – Integrated Framework (2013). Based on this assessment our Chief Executive Officer and Chief Financial Officer have concluded that, as of December 31, 2021, our internal control over financial reporting was effective.

This annual report does not include an attestation report of the company's registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to attestation by the company's registered public accounting firm pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act, which permanently exempts smaller reporting companies from complying with Section 404(b) of the Sarbanes-Oxley Act of 2002.

(c) Changes in internal controls.

There were no changes made in our internal controls during the period covered by this report that has materially affected or is reasonably likely to materially affect our internal control over financial reporting.

Item 9B. Other Information

None.

Item 9C. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Information regarding the Registrant's directors is set forth under "Election of Directors" in our Proxy Statement relating to our annual meeting of shareholders to be held on May 19, 2022 and is incorporated herein by reference. Such Proxy Statement will be filed within 120 days of our year-end. Information regarding the Registrant's executive officers is set forth in Item 1 of Part I herein under the caption "Executive Officers of the Registrant."

Code of Ethics

We have adopted a Code of Ethics that applies to all directors, officers and employees of Data I/O, including the Chief Executive Officer and Chief Financial Officer. The key principles of the Code of Ethics are to act legally and with integrity in all work for Data I/O. The Code of Ethics is posted on the corporate governance page of our website:

http://www.dataio.com/Company/InvestorRelations/CorporateGovernance.aspx

We will post any amendments to our Code of Ethics on our website. In the unlikely event that the Board of Directors approves any sort of waiver to the Code of Ethics for our executive officers or directors, information concerning such waiver will also be posted on our website. In addition to posting information regarding amendments and waivers on our website, the same information will be included in a Current Report on Form 8-K within four business days following the date of the amendment or waiver, unless website posting of such amendments or waivers is permitted by NASDAQ's rules.

Item 11. Executive Compensation

Information called for by Part III, Item 11, is included in our Proxy Statement relating to our annual meeting of shareholders to be held on May 19, 2022 and is incorporated herein by reference. The information appears in the Proxy Statement under the caption "Executive Compensation." Such Proxy Statement will be filed within 120 days of our year-end.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Information called for by Part III, Item 12, is included in our Proxy Statement relating to our annual meeting of shareholders to be held on May 19, 2022 and is incorporated herein by reference. The information appears in the Proxy Statement under the caption "Voting Securities and Principal Holders." Such Proxy Statement will be filed within 120 days of our year end.

Equity Compensation Plan Information

The following table gives information about our Common Stock that may be issued upon the exercise of options and rights under all of our existing equity compensation plans as of December 31, 2021. See Notes 9 and 10 of "Notes to Consolidated Financial Statements."

	(a) Number of securities to be issued upon the exercise of outstanding options, warrants and rights	(b) Weighted–average exercise price of outstanding options, warrants and rights	(c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Equity compensation plans approved by the security holders (1) (2)	1,362	$ 4.75	730,753
Equity compensation plans not approved by the security holders (3)	12,500	$ 4.98	-
Total	13,862	$ 4.96	730,753

(1) Represents shares of our Common Stock issuable pursuant to the Data I/O Corporation 2000 Stock Compensation Incentive Plan, 1982 Employee Stock Purchase Plan and 1996 Director Fee Plan. Table excludes unvested restricted stock awards of 598,777 from the 2000 Plan.

(2) Stock Appreciation Rights Plan ("SAR") provides that directors, executive officers or holders of 10% or more of our Common Stock have an accompanying SAR with respect to each exercisable option. While the plan has been approved by the security holders, no amounts are included in columns (a), (b), or (c) relating to the SAR.

(3) Inducement grant to Michael Tidwell of 25,000 non-qualified stock options with 12,500 remaining unexercised. Table excludes 25,000 unvested 2019 restricted stock inducement grant to Michael Tidwell.

Item 13. Certain Relationships and Related Transactions, and Director Independence

The information required by this item is contained in, and incorporated by reference from, the Proxy Statement for our 2022 Annual Meeting of Shareholders under the caption "Certain Relationships and Related Transactions."

Item 14. Principal Accounting Fees and Services

The information required by this Item with respect to principal accountant fees and services is incorporated by reference to the section captioned "Principal Accountant's Fees and Services" in the Proxy Statement relating to our annual meeting of shareholders to be held on May 19, 2022. Such Proxy Statement will be filed within 120 days of our year-end.

PART IV

Item 15. Exhibits, Financial Statement Schedules

Executive Compensation Plans and Arrangements

The following list is a subset of the list of exhibits described below and contains all compensatory plans, contracts or arrangements in which any director or executive officer of Data I/O is a participant, unless the method of allocation of benefits thereunder is the same for management and non-management participants:

(1) Amended and Restated 1982 Employee Stock Purchase Plan. See Exhibit 10.5.

(2) Data I/O Corporation Tax Deferral Retirement Plan and Trust with Great West Financial (formerly Orchard Trust Company). See Exhibits 10.15, 10.16, 10.17, 10.29, 10.30 and 10.37.

(3) Summary of Amended and Restated Management Incentive Compensation Plan. See Exhibit 10.2.

(4) Amended and Restated 1983 Stock Appreciation Rights Plan. See Exhibit 10.1.

(5) Amended and Restated Executive Agreements. See Exhibit 10.8, 10.20, 10.23 and 10.27.

(6) 1996 Director Fee Plan. See Exhibit 10.4.

(7) Data I/O Corporation 2000 Stock Compensation Incentive Plan. See Exhibit 10.6, 10.11, 10.21, 10.25 and 10.35.

(8) Form of Option Agreement. See Exhibit 10.7.

(9) Form of Indemnification Agreement. See Exhibit 10.18.

(10) Letter Agreement with Anthony Ambrose. See Exhibit 10.20.

(11) Letter Agreement with Rajeev Gulati. See Exhibit 10.23.

(12) Form of Restricted Stock Agreement. See Exhibit 10.12.

(13) Letter Agreement with Joel S. Hatlen. See Exhibit 10.27.

(14) Form of Executive Agreement. See Exhibit 10.26.

(15) Form of Restricted Stock Unit Award Agreement. See Exhibit 10.24.

(16) Letter Agreement with Michael Tidwell. See Exhibit 10.34.

(a) **List of Documents Filed as a Part of This Report:** Page

(1) Index to Financial Statements:

(2) Index to Financial Statement Schedules:

All other schedules not listed above have been omitted because the required information is included in the consolidated financial statements or the notes thereto, or is not applicable or required.

(3) Index to Exhibits:

3 **Articles of Incorporation:**

3.1	Data I/O's restated Articles of Incorporation filed November 2, 1987 (Incorporated by reference to Exhibit 3.1 of Data I/O's 1987 Annual Report on Form 10-K (File No. 0-10394) and attached as a PDF to Exhibit 3.1 in our 2017 Annual Report on Form 10-K).
3.2	Data I/O's Bylaws as amended and restated as of July 20, 2011 (Incorporated by reference to Data I/O's Current Report on Form 8-K filed July 26, 2011).
3.3	Certification of Designation, Preferences and Rights of Series A Junior Participating Preferred Stock (Incorporated by reference to Exhibit 1 of Data I/O's Registration Statement on Form 8-A filed March 13, 1998 (File No. 0-10394)).

4 **Instruments Defining the Rights of Security Holders, Including Indentures:**

4.1	Rights Agreement dated as of April 4, 1998, between Data I/O Corporation and ChaseMellon Shareholder Services, L.L.C. as Rights Agent, which includes: as Exhibit A thereto, the Form of Right Certificate; and, as Exhibit B thereto, the Summary of Rights to Purchase Series A Junior Participating Preferred Stock (Incorporated by reference to Data I/O's Current Report on Form 8-K filed on March 13, 1998).
4.2	Description of Data I/O Corporation's Common Stock.

10 **Material Contracts:**

10.1	Amended and Restated 1983 Stock Appreciation Rights Plan dated February 3, 1993 (Incorporated by reference to Exhibit 10.23 of Data I/O's 1992 Annual Report on Form 10-K (File No. 0-10394) and attached as a PDF to Exhibit 10.1 in our 2017 Annual Report on Form 10-K).
10.2	Amended and Restated Management Incentive Compensation Plan dated January 1, 1997 (Incorporated by reference to Exhibit 10.25 of Data I/O's 1997 Annual Report on Form 10-K (File No. 0-10394)).
10.3	Amended and Restated Performance Bonus Plan dated January 1, 1997 (Incorporated by reference to Exhibit 10.26 of Data I/O's 1997 Annual Report on Form 10-K (File No. 0-10394)).
10.4	Amended and Restated Data I/O Corporation 1996 Director Fee Plan (Incorporated by reference to Exhibit 10.32 of Data I/O's 1997 Annual Report on Form 10-K (File No. 0-10394)).
10.5	Amended and Restated 1982 Employee Stock Purchase Plan dated May 16, 2003 (Incorporated by reference to Data I/O's 2003 Proxy Statement dated March 31, 2003).
10.6	Amended and Restated Data I/O Corporation 2000 Stock Compensation Incentive Plan dated May 24, 2006 (Incorporated by reference to Data I/O's 2006 Proxy Statement dated April 6, 2006).
10.7	Form of Option Agreement (Incorporated by reference to Data I/O's 2004 Annual Report on Form 10-K (File No. 0-10394)).
10.8	Amended and Restated Executive Agreement with Joel S. Hatlen dated December 31, 2011 (Incorporated by reference to Data I/O's 2011 Annual Report on Form 10K (File No. 0-10394)).

10.9	Lease, Redmond East Business Campus between Data I/O Corporation and Carr Redmond PLLC dated February 28, 2006 (Incorporated by reference to Data I/O's 2005 Annual Report on Form 10K (File No. 0-10394)).
10.10	Second Amendment to Lease, (Redmond East) between Data I/O Corporation and Arden Realty Limited Partnership, made as of January 31, 2011. (Incorporated by reference to Data I/O's 2010 Annual Report on Form 10-K (File No. 0-10394)).
10.11	Amended and Restated Data I/O Corporation 2000 Stock Compensation Incentive Plan approved May 17, 2011 (Incorporated by reference to Data I/O's 2011 Proxy Statement filed April 5, 2011).
10.12	Form of Restricted Stock Award Agreement (Incorporated by reference to Exhibit 10.29 of Data I/O's June 30, 2006 Quarterly Report on Form 10-Q (File No. 0-10394)).
10.13	Patent Purchase Agreement (Incorporated by reference to Data I/O's Current Report on Form 8-K filed on March 25, 2008)).
10.14	First Amendment to the Patent Purchase Agreement (Incorporated by reference to Data I/O's Current Report on Form 8-K filed on March 25, 2008).
10.15	Great West Financial (formerly Orchard Trust Company) Defined Contribution Prototype Plan and Trust (Incorporated by reference to Data I/O's 2007 Annual Report on Form 10-K (File No. 0-10394)).
10.16	Great West Financial (formerly Orchard Trust Company) Non-standardized 401(k) Plan (Incorporated by reference to Data I/O's 2007 Annual Report on Form 10-K (File No. 0-10394)).
10.17	Great West Financial (formerly Orchard Trust Company) Defined Contribution Prototype Plan and Trust Amendment for Pension Protection Act and Heart Act. (Incorporated by reference to Data I/O's 2009 Annual Report on Form 10-K (File No. 0-10394)).
10.18	Form of Indemnification Agreement. (Incorporated by reference to Data I/O's 2010 Annual Report on Form 10-K (File No. 0-10394)).
10.19	Executive Agreement with Anthony Ambrose dated October 25, 2012. (Incorporated by reference to Data I/O's 2012 Annual Report on Form 10-K (File No. 0-10394)).
10.20	Letter Agreement with Anthony Ambrose (Incorporated by reference to Data I/O's Current Report on Form 8-K filed on October 29, 2012).
10.21	Amended and Restated Data I/O Corporation 2000 Stock Compensation Incentive Plan approved May 10, 2012 (Incorporated by reference to Data I/O's 2012 Proxy Statement filed April 3, 2012).
10.22	Executive Agreement with Rajeev Gulati dated July 25, 2013. (Incorporated by reference to Data I/O's 2013 Annual Report on Form 10-K (File No. 0-10394)).
10.23	Letter Agreement with Rajeev Gulati (Incorporated by reference to Data I/O's Current Report on Form 8-K filed on July 31, 2013).
10.24	Form of Restricted Stock Unit Award Agreement (Incorporated by reference to Exhibit 10.29 of Data I/O's March 31, 2014 Quarterly Report on Form 10-Q (File No. 0-10394)).
10.25	Amended and Restated Data I/O Corporation 2000 Stock Compensation Incentive Plan approved April 30, 2014 (Incorporated by reference to Exhibit 10.30 of Data I/O's March 31, 2014 Quarterly Report on Form 10-Q (File No. 0-10394)).

	10.26	Form of Executive Agreement (Incorporated by reference to Exhibit 10.31 of Data I/O’s June 30, 2014 Quarterly Report on Form 10-Q (File No. 0-10394)).
	10.27	Letter Agreement with Joel S. Hatlen (Incorporated by reference to Exhibit 10.32 of Data I/O’s June 30, 2014 Quarterly Report on Form 10-Q (File No. 0-10394)).
	10.28	Third Amendment to Lease, (Redmond East) between Data I/O Corporation and Arden Realty Limited Partnership, made as of June 1, 2015 (Incorporated by reference to Exhibit 10.29 of Data I/O’s June 30, 2015 Quarterly Report on Form 10-Q (File No. 0-10394)).
	10.29	Great West Financial Adoption Agreement #005 Non-standardized 401(k) Plan (Incorporated by reference to Data I/O’s 2015 Annual Report on Form 10-K (File No. 0-10394)).
	10.30	Great West Financial Adoption Agreement #005 Non-standardized 401(k) Plan (Incorporated by reference to Data I/O’s 2016 Annual Report on Form 10-K (File No. 0-10394)).
	10.31	Negotiation Protocol for the Purchase of Data I/O’s PSV7000, a supply agreement executed July 20, 2016, between Data I/O Corporation and Bosch Car Multimedia Group (Incorporated by reference to Exhibit 10.31 of Data I/O’s September 30, 2016 Quarterly Report on Form 10-Q (File No. 0-10394)). (Portions of this exhibit have been omitted based on confidential treatment granted by the SEC. The omitted portions of these exhibits have been filed separately with the SEC. The registrant undertakes to furnish on a supplemental basis a copy of any omitted schedules to the Securities and Exchange Commission upon request.).
	10.32	Fifth Amendment to Lease, between Data I/O Corporation and BRE WA OFFICE OWNER LLC, made as of September 12, 2017 (Incorporated by reference to Data I/O’s September 30, 2017 Quarterly Report on Form 10-Q (File No. 0-10394)).
	10.33	1st Amendment to Negotiation Protocol executed on September 24, 2018 between Data I/O Corporation and Robert Bosch GmbH (Incorporated by reference to Exhibit 10.35 of Data I/O’s September 30, 2018 Quarterly Report on Form 10-Q (File No. 0-10394)). (Portions of this exhibit have been omitted based on a request for confidential treatment made to the SEC. The omitted portions of these exhibits have been filed separately with the SEC. The registrant undertakes to furnish on a supplemental basis a copy of any omitted schedules to the Securities Exchange Commission upon request.).
	10.34	Letter Agreement with Michael Tidwell (Incorporated by reference to Form 8-K filed on May 1, 2019).
	10.35	Amended and Restated Data I/O Corporation 2000 Stock Compensation Incentive Plan approved May 20, 2021 (Incorporated by reference to Data I/O’s 2021 Proxy Statement dated April 5, 2021).
	10.36	Sixth Amendment to Lease, between Data I/O Corporation and Alco Redmond East, LLC, made as of October 4, 2021.
	10.37	Great West Financial Adoption Agreement #001 Non-standardized 401(k) Plan.
	21.1	Subsidiaries of the Registrant
	23.1	Consent of Independent Registered Public Accounting Firm
31	**Certification – Section 302:**	
	31.1	Chief Executive Officer Certification
	31.2	Chief Financial Officer Certification
32	**Certification – Section 906:**	
	32.1	Chief Executive Officer Certification
	32.2	Chief Financial Officer Certification
101	**Interactive Date Files Pursuant to Rule 405 of Regulation S-T**	

Item 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

DATA I/O CORPORATION
(REGISTRANT)

DATED: March 29, 2022

By: /s/Anthony Ambrose
Anthony Ambrose
President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

NAME & DATE		TITLE
By: /s/Anthony Ambrose Anthony Ambrose	March 29, 2022	President and Chief Executive Officer (Principal Executive Officer), Director
By: /s/Joel S. Hatlen Joel S. Hatlen	March 29, 2022	Chief Operating and Financial Officer Vice President Secretary, Treasurer (Principal Financial and Accounting Officer)
By: /s/Douglas W. Brown Douglas W. Brown	March 29, 2022	Director
By: /s/Mark J. Gallenberger Mark J. Gallenberger	March 29, 2022	Director
By: /s/Sally A. Washlow Sally A. Washlow	March 29, 2022	Director
By: /s/Cheemin Bo-Linn Cheemin Bo-Linn	March 29, 2022	Director
By: s/Edward J. Smith Edward J. Smith	March 29, 2022	Director

DATA I/O CORPORATION
SCHEDULE II – CONSOLIDATED VALUATION AND QUALIFYING ACCOUNTS

(in thousands)	Balance at Beginning of Period	Charged/ (Credited) to Costs and Expenses	Deductions- Describe	Balance at End of Period
Year Ended December 31, 2020:				
Allowance for bad debts	$ 80	$ (14)	$ -[1]	$ 66
Year Ended December 31, 2021:				
Allowance for bad debts	$ 66	$ 23	$ -[1]	$ 89

[1] Uncollectable accounts written off, net of recoveries

EXHIBIT 4.2

DATA I/O CORPORATION
DESCRIPTION OF DATA I/O CORPORATION'S COMMON STOCK

The common stock of Data I/O Corporation is its only class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended (the "**Exchange Act**").

The following description of our Common Stock is a summary and does not purport to be complete. It is subject to and qualified in its entirety by reference to our Restated Articles of Incorporation and Certificate of Designation, Preferences and Rights of Series A Junior Participating Preferred Stock (the "**Articles**") and our Amended and Restated Bylaws (the "**Bylaws**"), each of which attached as exhibit to the Annual Report on Form 10-K. We are incorporated in the State of Washington and are subject to the Washington Business Corporation Act, Title 23B of the Revised Code of Washington.

Authorized Capital Shares

Our authorized capital shares are thirty-five million (35,000,000), consisting of thirty million (30,000,000) shares of Common Stock ("**Common Stock**"), and five million (5,000,000) shares of Preferred Stock. Two hundred thousand (200,000) shares of Series A Junior Participating Preferred Stock have been designated. The outstanding shares of our Common Stock are fully paid and nonassessable. There are no shares of Preferred Stock outstanding.

Voting Rights

Holders of Common Stock are entitled to one vote per share on all matters voted on by the shareholders, including the election of directors. Our Common Stock does not have cumulative voting rights.

Dividend Rights

The holders of Common Stock are entitled to receive dividends, if any, as may be declared from time to time by the Board of Directors in its discretion out of funds legally available for the payment of dividends.

Liquidation Rights

Holders of Common Stock will share ratably in all assets legally available for distribution to our shareholders in the event of dissolution.

Other Rights and Preferences

Our Common Stock has no sinking fund or redemption provisions or preemptive, conversion or exchange rights. Holders of Common Stock may act by unanimous written consent.

Potential Limitations on Rights of Holders of Common Stock

Our Articles authorize our board of directors to issue up to 5,000,000 shares of Preferred Stock and to determine the price, rights, preferences, privileges and restrictions, including voting rights, of those shares without any further vote or action by the shareholders. Two hundred thousand (200,000) shares of Series A Junior Participating Preferred Stock have been designated, but none are outstanding. The rights of the holders of Common Stock may be subject to, and may be adversely affected by, the rights of the holders of any Preferred Stock that may be issued in the future.

Listing

The Common Stock is traded on The Nasdaq Stock Market LLC under the trading symbol "DAIO."

EXHIBIT 10.36 - Sixth Amendment to Lease, between Data I/O Corporation and Alco Redmond East, LLC, made as of October 4, 2021

Alco Investment Company
PO Box 3546
Seattle, WA 98124-3546

CBA

CBA Form LA
Lease Addendum
Rev. 5/07

**SIXTH AMENDMENT TO LEASE –
DATA I/O CORPORATION**

The following Amendment to the Commercial Lease Agreement is dated ~~September 30, 2021~~ October 4, 2021, between Alco Redmond East, LLC ("Landlord") and Data I/O Corporation, a Washington Corporation ("Tenant") regarding the Premises on the Property commonly known as: 6645 185th Avenue NE Suite 100 & 200, Redmond, WA 98052

IT IS AGREED BETWEEN THE LANDLORD AND TENANT AS FOLLOWS:
Pursuant to the Original Lease dated February 28, 2006, the First Lease Amendment dated August 24, 2006, the Second Lease Amendment dated January 31, 2011, the Third Lease Amendment dated May 18, 2016, the Fourth Lease Amendment dated April 8, 2015, and the Fifth Lease Amendment dated September 12, 2018, Landlord and Tenant now desire to amend the lease upon the terms and conditions set forth in this Sixth Lease Amendment:

1. **Extended Lease Term.** Tenant and Landlord mutually agree to extend the Lease Term by forty-two (42) months, from August 1, 2022 through January 31, 2026 (the "Third Extended Term").

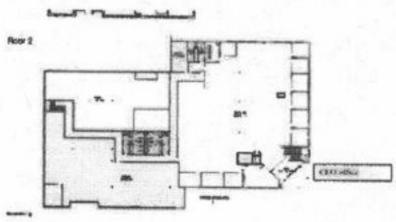
2. **Base Rent.** Rent shall be calculated as follows during the Third Extended Term:

Months	RSF	Annual Rent
01-02	20,460	$0.00/SF per year, plus NNN*
03-12	20,460	$21.50/SF per year, plus NNN
13-24	20,460	$22.50/SF per year, plus NNN
25-36	20,460	$23.50/SF per year, plus NNN
37-42	20,460	$24.50/SF per year, plus NNN

* Tenant is responsible for NNN expenses during the Rent Abatement period.

3. **Tenant's Proportionate Share.** During the Third Extended Term, Tenant's Proportionate Share is based on the ratio of the agreed rentable area of the Premises to the agreed rentable area of the Building for expenses related to the Building, and all other Buildings on the Project for expenses related to the Project.

4. **Landlord Improvements.** Landlord agrees to rebalance the HVAC system and perform any necessary repairs in CEO's office, as shown below, within sixty (60) days of the execution of this Sixth Amendment.



All other terms and conditions of the lease and the prior amendments shall remain unchanged and in full force.

Alco Investment Company
PO Box 3546
Seattle, WA 98124-3546

CBA

CBA Form LA
Lease Addendum
Rev. 5/07

**SIXTH AMENDMENT TO LEASE –
DATA I/O CORPORATION**

Signature:
Landlord/Lessor: Adam Rosen **Date:** 10-6-21

Tenant/Lessee: Joel S Hatlen **Date:** 10-4-2021

STATE OF WASHINGTON
COUNTY OF King | SS.

I CERTIFY THAT I KNOW OR HAVE SATISFACTORY EVIDENCE THAT Adam Rosen IS THE PERSON WHO APPEARED BEFORE ME AND SAID PERSON ACKNOWLEDGED THAT he SIGNED THIS INSTRUMENT, ON OATH STATED THAT he WAS AUTHORIZED TO EXECUTE THE INSTRUMENT AND ACKNOWLEDGED IT AS THE Portfolio manager OF Alco Redmond East LLC TO BE THE FREE AND VOLUNTARY ACT OF SUCH PARTY FOR THE USES AND PURPOSES MENTIONED IN THE INSTRUMENT.

DATED THIS 6 DAY OF October, 2021

EMILY A THOMPSON
NOTARY PUBLIC
21022848
COMMISSION EXPIRES 7-08-25
STATE OF WASHINGTON

Emily A Thompson
(SIGNATURE OF NOTARY)

Emily A Thompson
(LEGIBLY PRINT OR STAMP NAME OF NOTARY)

NOTARY PUBLIC IN AND FOR THE STATE OF Washington
RESIDING AT Seattle
MY APPOINTMENT EXPIRES 7-08-2025

STATE OF WASHINGTON
COUNTY OF King | SS.

I CERTIFY THAT I KNOW OR HAVE SATISFACTORY EVIDENCE THAT Joel S. Hatlen IS THE PERSON WHO APPEARED BEFORE ME AND SAID PERSON ACKNOWLEDGED THAT he SIGNED THIS INSTRUMENT, ON OATH STATED THAT he WAS AUTHORIZED TO EXECUTE THE INSTRUMENT AND ACKNOWLEDGED IT AS THE VP/CFO/COO OF Data I/O Corporation TO BE THE FREE AND VOLUNTARY ACT OF SUCH PARTY FOR THE USES AND PURPOSES MENTIONED IN THE INSTRUMENT.

DATED THIS 4th DAY OF October, 2021

KATHRYN M DAINES
4373
NOTARY
PUBLIC
COMMISSION EXPIRES 09-02-25
STATE OF WASHINGTON

Kathryn M Daines
(SIGNATURE OF NOTARY)

Kathryn M Daines
(LEGIBLY PRINT OR STAMP NAME OF NOTARY)

NOTARY PUBLIC IN AND FOR THE STATE OF Washington
RESIDING AT Mill Creek
MY APPOINTMENT EXPIRES 9/2/2025

EXHIBIT 10.37 - Great West Financial Adoption Agreement #001 Non-standardized 401(k) Plan

DATA I/O CORPORATION TAX DEFERRAL RETIREMENT PLAN

ADOPTION AGREEMENT #001
NON-STANDARDIZED
DEFINED CONTRIBUTION PRE-APPROVED PLAN

The undersigned Employer, by executing this Adoption Agreement, establishes a retirement plan (collectively "Plan") under the Great-West Trust Company, LLC Defined Contribution Pre-Approved Plan (basic plan document #02). The Employer, subject to the Employer's Adoption Agreement elections, adopts fully the Pre-Approved Plan provisions. This Adoption Agreement, the basic plan document and any attached Appendices or agreements permitted or referenced therein, constitute the Employer's entire plan document. *All "Election" references within this Adoption Agreement are Adoption Agreement Elections. All "Article" or "Section" references are basic plan document references. Numbers in parentheses which follow election numbers are basic plan document references.* Where an Adoption Agreement election calls for the Employer to supply text, the Employer (without altering the content of any existing printed text) may lengthen any space or line, or create additional tiers. When Employer-supplied text uses terms substantially similar to existing printed options, all clarifications and caveats applicable to the printed options apply to the Employer-supplied text unless the context requires otherwise. The Employer makes the following elections granted under the corresponding provisions of the basic plan document.

ARTICLE I
DEFINITIONS

1. EMPLOYER **(1.24)**. *(An amendment to the Adoption Agreement is not needed solely to reflect a change in this Employer Information Section.)*

Name: Data I/O Corporation

Address: 6645 185th Avenue NE, Suite 100, Redmond, Washington 98052

Phone number: (425) 867-6816

Taxpayer Identification Number (TIN): 91-0864123

E-mail *(optional)*: ____

Employer's Taxable Year *(optional)*: December 31

2. PLAN **(1.42)**.

Name: Data I/O Corporation Tax Deferral Retirement Plan

Plan number: 002 *(3-digit number for Form 5500 reporting)*

Name of Trust: Data I/O Corporation Tax Deferral Retirement Trust

Trust EIN *(optional)*: ____

3. PLAN/LIMITATION YEAR **(1.44/1.34)**. Plan Year and Limitation Year mean the 12 consecutive month period (except for a short Plan/Limitation Year) ending every:

[*Note: Complete any applicable blanks under Election 3 with a specific date, e.g., June 30 OR the last day of February OR the first Tuesday in January. In the case of a Short Plan Year or a Short Limitation Year, include the year, e.g., May 1, 2020.*]

Plan Year *(select one of (a) or (b); choose (c) if applicable)*:

(a) [X] **December 31.**

(b) [ ] **Fiscal Plan Year:** ending: ____.

(c) [ ] **Short Plan Year:** commencing: ____ and ending: ____.

Limitation Year *(select one of (d) or (e); choose (f) if applicable)*:

(d) [X] **Generally same as Plan Year.** The Limitation Year is the same as the Plan Year except where the Plan Year is a short year in which event the Limitation Year is always a 12 month period, unless the short Plan Year (and short Limitation Year) result from a Plan amendment.

(e) [ ] **Different Limitation Year:** ending: ____.

(f) [ ] **Short Limitation Year:** commencing: ____ and ending: ____.

4. EFFECTIVE DATE **(1.20)**. The Employer's adoption of the Plan is a *(select one of (a) or (b); complete (c) for all plans; complete (d) if an amendment and restatement)*:

(a) [ ] **New Plan.**

(b) [X] **Restated Plan.**

CYCLE 3 RESTATEMENT (leave blank if not applicable)

(1) [ ] This is an amendment and restatement to bring a plan into compliance with the requirements of the 2017 Cumulative List (Notice 2017-37).

Initial Effective Date of Plan *(enter date)*

(c) [X] February 1, 1984 (hereinafter called the "Effective Date" unless 4(d) is entered below)

[Note: The Effective Date in 4(c) cannot be earlier than the first day of the Plan Year in which the Plan is adopted. The Effective Date of any Salary Reduction Agreement will not be earlier than the date the Plan is adopted. See 1.57(A)]

Restatement Effective Date *(If this is an amendment and restatement, enter effective date of the restatement)*

(d) [X] February 1, 2022 (enter month day, year; this date cannot be earlier than the first day of the current Plan Year. The Plan contains appropriate retroactive effective dates with respect to provisions for the appropriate laws if the Plan is a Cycle 3 Restatement.) (hereinafter called the "Effective Date")

[*Note: See Section 1.54 for the definition of Restated Plan. If this Plan is a Cycle 3 Restatement, the basic plan document supplies the Effective Dates of various recent legal changes. If specific Plan provisions, as reflected in this Adoption Agreement and the basic plan documents, do not have the Effective Date stated in this Election 4, indicate as such in the election where called for or in Appendix A.*]

Optional provisions. *(choose one or more of (e) and (f) if applicable):*

(e) [ ] **Restatement of surviving and merging plans.** The Plan restates two (or more) plans *(Complete 4(c) and (d) above for this (surviving) Plan. Complete (1) below for the merging plan. Choose (2) if applicable. Unless otherwise noted, the restated Effective Date with regard to a merging plan is the later of the date of the merger or the restated Effective Date of this Plan.):*

(1) [ ] **Merging plan.** The ______________________ Plan was or will be merged into this surviving Plan as of: ______________. The merging plan's restated Effective Date is: ______________. The merging plan's original Effective Date was: ______________.

[*See the Note under Election 4(d) if this document is the merging plan's Cycle 3 restatement.*]

(2) [ ] **Additional merging plans.** The following additional plans were or will be merged into this surviving Plan *(Complete a.; complete b. if applicable):*

	Name of merging plan	Merger date	Restated Effective Date	Original Effective Date
a.				
b.				

(f) [ ] **Special Effective Date for Elective Deferral provisions:** ______________________

[*Note: If Elective Deferral provision is not effective as of the Initial Effective Date or the Restatement Effective Date, enter the date as of which the Elective Deferral provision is effective. The Special Effective Date may not precede the date on which the Employer adopted the Plan.*]

5. TYPE OF PLAN **(1.29/1.36/1.48)** *(select one of (a), (b), or (c))*

(a) [X] **401(k) Plan.** *[Note: A 401(k) Plan is also a Profit Sharing Plan. Section 1.29]*

(b) [ ] **Money Purchase Pension Plan.** [*Note: Under Contributions, may only elect 6(d), 6(f), and 6(h). In applying Adoption Agreement elections, Nonelective Contributions include Money Purchase Pension Contributions unless the context requires otherwise.]*

(c) [ ] **Profit Sharing Plan.** [*Note: Under Contributions, may only elect 6(d), 6(f), and 6(h).*]

6. CONTRIBUTION TYPES **(1.12)**. The selections made below should correspond with the selections made under Article III of this Adoption Agreement. *(If this is a frozen Plan (i.e., all contributions have ceased), choose (a) only and PRIOR CONTRIBUTIONS only):*

Frozen Plan. See Sections 3.01(J) and 11.04. *(leave blank if not applicable)*

(a) [ ] **Contributions cease.** All Contributions have ceased or will cease (Plan is frozen). *(choose (1) if applicable, then skip to Election 7)*

(1) [ ] **Effective date of freeze:** ______________ [*Note: Effective date is optional unless this is the amendment or restatement to freeze the Plan.*]

[*Note: Elections 20 through 30 and Elections 35 through 37 do not apply to any Plan Year in which the Plan is frozen.*]

Contributions. The Employer and/or Participants, in accordance with the Plan terms, make the following Contribution Types to the Plan/Trust *(select one or more of (b) through (h)):*

(b) [X] **Pre-Tax Deferrals.** See Section 3.02 and Elections 20-23.

(1) [X] **Roth Deferrals.** See Section 3.02(E) and Elections 20, 21, and 23. [*Note: The Employer may not limit Elective Deferrals to Roth Deferrals only.*]

(c) [X] **Matching.** See Sections 1.35 and 3.03 and Elections 24-26. [*Note: The Employer may make an Operational QMAC without electing 6(c). See Section 3.03(C)(2). Do not elect for a safe harbor plan; use 6(e) instead.*]

(d) [X] **Nonelective/Money Purchase Pension Plan.** See Sections 1.38 and 3.04 and Elections 27-29. [*Note: The Employer may make an Operational QNEC without electing 6(d). See Section 3.04(C)(2).*]

(e) [ ] **Safe Harbor/Additional Matching.** The Plan is (or pursuant to a delayed election, may be) a safe harbor 401(k) Plan. The Employer will make (or under a delayed election, may make) Safe Harbor Contributions as it elects in Election 30. The Employer may or may not make Additional Matching Contributions as it elects in Election 30. See Election 26 as to matching Catch-Up Deferrals. See Section 3.05.

(f) [ ] **Employee (after-tax).** See Section 3.09 and Election 35.

(g) [ ] **SIMPLE 401(k).** The Plan is a SIMPLE 401(k) Plan. See Section 3.10. [*Note: The Employer electing 6(g) must elect a calendar year under 3(a) and may not elect any other Contribution Types except under Elections 6(b) and 6(h).*]

(h) [ ] **Designated IRA.** See Section 3.12 and Election 36.

Prior Contributions. The Plan used to permit, but no longer does, the following contributions (optional; choose all that apply, if any):

(i) [ ] Pre-tax Elective Deferrals

(j) [ ] Roth Elective Deferrals

(k) [ ] Safe Harbor Contributions

(l) [ ] Matching contributions

(m) [ ] Money Purchase Pension Plan contributions

(n) [ ] Other Nonelective contributions

(o) [ ] Rollover contributions

(p) [ ] Employee contributions

(q) [ ] SIMPLE 401(k) contributions

(r) [ ] Designated IRA

7. <u>DISABILITY</u> **(1.16)**. A Participant is Disabled or has a Disability if *(select one of (a) through (d)):*

(a) [X] The Participant is unable to engage in any substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or which has lasted or can be expected to last for a continuous period of not less than twelve months. The permanence and degree of such impairment must be supported by medical evidence.

(b) [ ] The Social Security Administration or Railroad Retirement Board determines that the Participant is totally disabled.

(c) [ ] The applicable insurance company providing disability insurance to the Participant under an Employer sponsored disability program determines that a Participant is disabled under the insurance contract definition of disability.

(d) [ ] **Describe:** ______________________________

[*Note: The Employer may elect an alternative definition of disability for purposes of Plan distributions (e.g., Participants covered under the Employer's disability insurance program are Disabled if the applicable insurance company providing insurance pursuant to that program determines that the Participant is disabled under the insurance contract definition of disability. Other Participants are disabled if the Social Security Administration or Railroad Retirement Board determines that the Participant is totally disabled.).*]

8. <u>EXCLUDED EMPLOYEES</u> **(1.22(D))**. The following Employees are not Eligible Employees but are Excluded Employees *(select one of (a), (b), or (c)):*

[*Note: Regardless of the Employer's elections under Election 8: (i) Employees of any Related Employers (excluding the Signatory Employer) are Excluded Employees unless the Related Employer becomes a Participating Employer; and (ii) Reclassified Employees and Leased Employees are Excluded Employees unless the Employer in Appendix B elects otherwise. See Sections 1.22(B), 1.22(D)(3), and 1.24(D). However, in the case of a Multiple Employer Plan, see Section 12.02(B) as to the Employees of the Lead Employer.*]

(a) [ ] **No Excluded Employees.** There are no additional excluded Employees under the Plan *as to any Contribution Type (skip to Election 9).*

(b) [X] **Exclusions - same for all Contribution Types.** The following Employees are Excluded Employees for all Contribution Types *(select one or more of (e) through (l); select column (1) for each exclusion elected at (e) through (k)):*

(c) [ ] **Exclusions - different exclusions apply.** The following Employees are Excluded Employees for the designated Contribution Type *(select one or more of (d) through (l); select Contribution Type as applicable (may only be selected with 401(k) plans)):*

[*Note for 401(k) plans: For this Election 8, unless described otherwise in Election 8(l), Elective Deferrals includes Pre-Tax Deferrals, Roth Deferrals, Employee Contributions and Safe Harbor Contributions. Matching includes all Matching Contributions except Safe Harbor Matching Contributions. Nonelective includes all Nonelective Contributions except Safe Harbor Nonelective Contributions.*]

Exclusions	**(1) All Contributions**		**(2) Elective Deferrals**	**(3) Matching**	**(4) Nonelective**
(d) [ ] **No exclusions.** No exclusions as to the designated Contribution Type.	N/A (See Election 8(a))		[ ]	[ ]	[ ]
(e) [X] **Collective Bargaining (union) Employees.** As described in Code §410(b)(3)(A). See Section 1.22(D)(1).	[X]	OR	[ ]	[ ]	[ ]
(f) [X] **Non-Resident Aliens.** As described in Code §410(b)(3)(C). See Section 1.22(D)(2).	[X]	OR	[ ]	[ ]	[ ]
(g) [ ] **HCEs.** See Section 1.22(E). See Election 30(f) as to exclusion of some or all HCEs from Safe Harbor Contributions.	[ ]	OR	[ ]	[ ]	[ ]
(h) [ ] **Hourly paid Employees.**	[ ]	OR	[ ]	[ ]	[ ]
(i) [ ] **Residents of Puerto Rico.**	[ ]	OR	[ ]	[ ]	[ ]
(j) [ ] **Interns.** See Section 1.22(D)(7). [*Note: This exclusion could result in the plan failing to meet the coverage requirements of Code §410(b), and may not be utilized as a disguised age or service condition.*]	[ ]	OR	[ ]	[ ]	[ ]
(k) [X] **Part-Time/Temporary/Seasonal Employees.** See Section 1.22(D)(4). A Part-Time, Temporary or Seasonal Employee is an Employee whose regularly scheduled Service is less than <u>1,000</u> *(specify a maximum of 1,000)* Hours of Service in the relevant Eligibility Computation Period. [*Note: The "relevant" Eligibility Computation Period is the Initial or Subsequent Eligibility Computation Period as defined in Section 2.02(C). Also see Appendix B, Election (b)(9).*]	[X]	OR	[ ]	[ ]	[ ]

[*Note: If the Employer under Election 8(k) elects to treat Part-Time, Temporary and Seasonal Employees as Excluded Employees and any such Employee actually completes at least 1,000 Hours of Service during the relevant Eligibility Computation Period, the Employee becomes an Eligible Employee. See Section 1.22(D)(4).*]

(l) [ ] **Describe exclusion category and/or Contribution Type:** ______________________
(e.g., Exclude Division B Employees OR Exclude salaried Employees from Discretionary Matching Contributions.)

[*Notes: Any exclusion under Election 8(l), except as to Part-Time/Temporary/Seasonal Employees, may not be based on age or Service or level of Compensation. See Election 14 for eligibility conditions based on age or Service. The exclusions entered under Election 8(l) cannot result in the group of Nonhighly Compensated Employees (NHCEs) participating under the plan being only those NHCEs with the lowest amount of compensation and/or the shortest periods of service and who may represent the minimum number of these employees necessary to satisfy coverage under Code §410(b).*]

9. <u>COMPENSATION</u> **(1.11(B))**. The following base Compensation (as adjusted under Elections 10 and 11) applies in allocating Employer Contributions (or the designated Contribution Type) *(select one or more of (a) through (d); for 401(k) plans, select Contribution Type as applicable):*

[*Note: For this Election 9 all definitions <u>include</u> Elective Deferrals unless excluded under Election 11. See Section 1.11(D). In applying any Plan definition which references Section 1.11 Compensation, where the Employer in this Election 9 elects more than one Compensation definition for allocation purposes, the Plan Administrator will use W-2 Wages for other Plan definitions of Compensation if the Employer has elected W-2 Wages for any Contribution Type or Participant group under Election 9. If the Employer has not elected W-2 Wages, the Plan Administrator for such other Plan definitions will use 415 Compensation. If the Plan is a Multiple Employer Plan, see Section 12.07. Election 9(d) below may cause allocation Compensation to fail to be nondiscriminatory under Treas. Reg. §1.414(s).*]

[*Note for 401(k) plans: Unless described otherwise in Election 9(d), Elective Deferrals includes Pre-Tax Deferrals, Roth Deferrals and Employee Contributions, Matching includes all Matching Contributions and Nonelective includes all Nonelective Contributions.*]

			(1) All Contributions		(2) Elective Deferrals	(3) Matching	(4) Nonelective
(a)	[ ]	**W-2 Wages (plus Elective Deferrals).** See Section 1.11(B)(1).	[ ]	OR	[ ]	[ ]	[ ]
(b)	[ ]	**Code §3401(a) Federal Income Tax Withholding Wages (plus Elective Deferrals).** See Section 1.11(B)(2).	[ ]	OR	[ ]	[ ]	[ ]
(c)	[X]	**415 Compensation (simplified).** See Section 1.11(B)(3). [*Note: The Employer may elect an alternative "general 415 Compensation" definition by electing 9(c) and by electing the alternative definition in Appendix B. See Section 1.11(B)(4).*]	[X]	OR	[ ]	[ ]	[ ]

(d) [ ] **Describe Compensation by Contribution Type or by Participant group:** ___________________________________

[*Note: Under Election 9(d), the Employer may: (i) elect Compensation from the elections available under Elections 9(a), (b), or (c), or a combination thereof as to a Participant group (e.g., W-2 Wages for Matching Contributions for Division A Employees and 415 Compensation in all other cases); and/or (ii) for 401(k) plans, define the Contribution Type column headings in a manner which differs from the "all-inclusive" description in the Note immediately preceding Election 9(a) (e.g., Compensation for Safe Harbor Matching Contributions means W-2 Wages and for Additional Matching Contributions means 415 Compensation). Selection of 9(d) may require testing of the plan's compensation definition under Treas. Reg. §1.414(s)-1 for it to be used in nondiscrimination testing, including the ADP or ACP tests.*]

Allocate based on specified 12-month period *(leave blank if not applicable)*

(e)	[ ]	The allocation of all Contribution Types (or specified Contribution Types) will be made based on Compensation within a specified 12-month period ending within the Plan Year as follows: ______________________.	[ ]	OR	[ ]	[ ]	[ ]

10. PRE-ENTRY/POST-SEVERANCE COMPENSATION (**1.11(H)/(I)**). Compensation under Election 9:

[*Note: Election 10(c) below may cause allocation Compensation to fail to be nondiscriminatory under Treas. Reg. §1.414(s).*]

[*Note for 401(k) plans: For this Election 10, unless described otherwise in Elections 10(c) or (n), Elective Deferrals includes Pre-Tax Deferrals, Roth Deferrals and Employee Contributions, Matching includes all Matching Contributions and Nonelective includes all Nonelective Contributions.*]

		Pre-Entry Compensation *(select one of (a), (b), or (c); for 401(k) plans, also select Contribution Type as applicable)*:	(1) All Contributions		(2) Elective Deferrals	(3) Matching	(4) Nonelective
(a)	[X]	**Plan Year.** Compensation for the entire Plan Year which includes the Participant's Entry Date. [*Note: If the Employer under Election 9(e) elects to allocate some or all Contribution Types based on a specified 12-month period, Election 10(a) applies to that 12-month period in lieu of the Plan Year.*]	[X]	OR	[ ]	[ ]	[ ]
(b)	[ ]	**Participating Compensation.** Only Participating Compensation. See Section 1.11(H)(1).	[ ]	OR	[ ]	[ ]	[ ]

[*Note: Under a Participating Compensation election, in applying any Adoption Agreement elected contribution limit or formula, the Plan Administrator will count only the Participant's Participating Compensation. See Section 1.11(H)(1) as to plan disaggregation.*]

(c) [ ] **Describe Pre-Entry Compensation by Contribution Type or by Participant group:** ___________________________

[*Note: Under Election 10(c), the Employer may: (i) elect Compensation from the elections available under Pre-Entry Compensation or a combination thereof as to a Participant group (e.g., Participating Compensation for all Contribution Types as to Division A Employees, Plan Year Compensation for all Contribution Types to Division B Employees); and/or (ii) for 401(k) plans, define the Contribution Type column headings in a manner which differs from the "all-inclusive" description in the Note immediately preceding Pre-Entry*

Compensation (e.g., Compensation for Nonelective Contributions is Participating Compensation and for Safe Harbor Nonelective Contributions is Plan Year Compensation). Selection of 10(c) may require testing of the plan's compensation definition under Treas. Reg. §1.414(s)-1 for it to be used in nondiscrimination testing, including the ADP or ACP tests.]

Post-Severance Compensation. The following adjustments apply to Post-Severance Compensation paid within any applicable time period as may be required *(select one of (d), (e), or (f)):*

[*Note: Under the basic plan document, if the Employer does not elect any adjustments, post-severance compensation includes regular pay, leave cash-outs, and deferred compensation, and excludes military and disability continuation payments.*]

(d) [X] **None.** The Plan includes post-severance regular pay, leave cash-outs, and deferred compensation, and excludes post-severance military and disability continuation payments as to any Contribution Type except as required under the basic plan document *(skip to Election 11).*

(e) [ ] **Same for all Contribution Types.** The following adjustments to Post-Severance Compensation apply to all Contribution Types *(select one or more of (h) through (n); select column (1) for each option elected at (h) through (m)):*

(f) [ ] **Adjustments - different conditions apply.** The following adjustments to Post-Severance Compensation apply to the designated Contribution Types *(select one or more of (g) through (n); select Contribution Type as applicable) (may only be selected with 401(k) Plans):*

Post-Severance Compensation:	**(1) All Contributions**		**(2) Elective Deferrals**	**(3) Matching**	**(4) Nonelective**
(g) [ ] **None.** The Plan takes into account Post-Severance Compensation as to the designated Contribution Types as specified under the basic plan document.	**N/A** (See Election 10(d))		[ ]	[ ]	[ ]
(h) [ ] **Exclude All.** Exclude all Post-Severance Compensation. [*Note: 415 testing Compensation (versus allocation Compensation) must include Post-Severance Compensation comprised of regular pay. See Section 4.05(F).*]	[ ]	**OR**	[ ]	[ ]	[ ]
(i) [ ] **Regular Pay.** Exclude Post-Severance Compensation comprised of regular pay. See Section 1.11(I)(1)(a). [*Note: 415 testing Compensation (versus allocation Compensation) must include Post-Severance Compensation comprised of regular pay. See Section 4.05(F).*]	[ ]	**OR**	[ ]	[ ]	[ ]
(j) [ ] **Leave cash-out.** Exclude Post-Severance Compensation comprised of leave cash-out. See Section 1.11(I)(1)(b).	[ ]	**OR**	[ ]	[ ]	[ ]
(k) [ ] **Deferred Compensation.** Exclude Post-Severance Compensation comprised of deferred compensation. See Section 1.11(I)(1)(c).	[ ]	**OR**	[ ]	[ ]	[ ]
(l) [ ] **Salary continuation for military service.** Include Post-Severance Compensation comprised of salary continuation for military service. See Section 1.11(I)(2).	[ ]	**OR**	[ ]	[ ]	[ ]
(m) [ ] **Salary continuation for disabled Participants.** Include Post-Severance Compensation comprised of salary continuation for disabled Participants. See Section 1.11(I)(3). *(select one of (1) or (2)):*	[ ]	**OR**	[ ]	[ ]	[ ]
(1) [ ] **For NHCEs only.**					
(2) [ ] **For all Participants.** The salary continuation will continue for the following fixed or determinable period: ________________ *(specify period).*					

(n) [ ] **Describe Post-Severance Compensation by Contribution Type or by Participant group:** ________________

[*Note: Under Election 10(n), the Employer may: (i) elect Compensation from the elections available under Post-Severance Compensation or a combination thereof as to a Participant group (e.g., Include regular pay Post-Severance Compensation for all Contribution Types as to Division A Employees, no Post-Severance Compensation for all Contribution Types to Division B Employees); and/or (ii) for 401(k) Plans define the Contribution Type column headings in a manner which differs from the "all-inclusive" description in the Note immediately preceding Pre-Entry Compensation (e.g., Compensation for Nonelective Contributions does not include any Post-Severance Compensation* *and for Safe Harbor Nonelective Contributions includes regular pay Post-Severance Compensation). Selection of 10(n) may require testing of the plan's compensation definition under Treas. Reg. §1.414(s)-1 for it to be used in nondiscrimination testing, including the ADP or ACP tests.*]

11. EXCLUDED COMPENSATION (1.11(G)). Apply the following Compensation exclusions to Elections 9 and 10 *(select one of (a), (b), or (c)):*

[*Note: If the Plan applies permitted disparity, allocations also must be based on a nondiscriminatory definition of Compensation if the Plan is to avoid more complex testing. Elections 11(h) through (m) below may cause allocation Compensation to fail to be nondiscriminatory under Treas. Reg. §1.414(s)-1 and may result in more complex nondiscrimination testing.*]

(a) [ ] **No exclusions.** Compensation as to all Contribution Types means Compensation as elected in Elections 9 and 10 *(skip to Election 12).*

(b) [X] **Exclusions - same for all Contribution Types.** The following exclusions apply to all Contribution Types *(select one or more of (e) through (m); select column (1) for each option elected at (e) through (k)):*

(c) [ ] **Exclusions - different conditions apply.** The following exclusions apply for the designated Contribution Types *(select one or more of (d) through (m) below; select Contribution Type as applicable) (may only be selected with 401(k) Plans):*

[*Note for 401(k) Plans: In a safe harbor 401(k) plan, allocations qualifying for the ADP or ACP test safe harbors must be based on a nondiscriminatory definition of Compensation. For this Election 11, unless described otherwise in Election 11(m), Elective Deferrals includes Pre-Tax Deferrals, Roth Deferrals and Employee Contributions, Matching includes all Matching Contributions and Nonelective includes all Nonelective Contributions. Selection of (e)(1), Elective Deferrals, All Contributions, does not reduce Compensation for purposes of determining the amount of Elective Deferrals.*]

Compensation Exclusions	**(1) All Contributions**		**(2) Elective Deferrals**	**(3) Matching**	**(4) Nonelective**
(d) [ ] **No exclusions - limited.** No exclusion as to the designated Contribution Type(s).	N/A (See Election 11(a))		[ ]	[ ]	[ ]
(e) [ ] **Elective Deferrals.** See Section 1.21.	[ ]		N/A	[ ]	[ ]
(f) [ ] **Fringe benefits.** As described in Treas. Reg. §1.414(s)-1(c)(3).	[ ]	OR	[ ]	[ ]	[ ]
(g) [ ] **Compensation exceeding $_____.** Apply this election to *(select one of (1) or (2)):*	[ ]	OR	[ ]	[ ]	[ ]
(1) [ ] **All Participants.** [*Note: If the Employer elects Safe Harbor Contributions under Election 6(e), the Employer may not elect in this 11(g) to limit the Safe Harbor Contribution allocation to the NHCEs.*]					
(2) [ ] **HCE Participants only.**					
(h) [ ] **Bonus.***	[ ]	OR	[ ]	[ ]	[ ]
(i) [ ] **Commission.***	[ ]	OR	[ ]	[ ]	[ ]
(j) [ ] **Overtime.***	[ ]	OR	[ ]	[ ]	[ ]
(k) [ ] **Related Employers.** See Section 1.24(C). **Non-Participating.** Compensation paid to Employees by a Related Employer that is not a Participating Employer.*	[ ]	OR	[ ]	[ ]	[ ]
(l) [ ] **Severance pay paid prior to severance.** Severance pay paid after severance is automatically excluded. See 1.11(I)*	[ ]	OR	[ ]	[ ]	[ ]

(m) [X] **Describe Compensation exclusion(s):*** As to All Contributions, exclude relocation costs, taxable fringe benefits, group term life, awards and flexible benefit credit.

[*Note: Under Election 11(m), the Employer may: (i) describe Compensation from the elections available under Elections 11(d) through (l), or a combination thereof as to a Participant group (e.g., No exclusions as to Division A Employees and exclude bonus as to Division B Employees); (ii) for 401(k) Plans, define the Contribution Type column headings in a manner which differs from the "all-inclusive" description in the Note immediately following Election 11(c) (e.g., Elective Deferrals means §125 cafeteria deferrals only OR No exclusions as to Safe Harbor Contributions and exclude bonus as to Nonelective Contributions); and/or (iii) describe another exclusion* *(e.g., Exclude shift differential pay). Selection of any item indicated with an asterisk (*) may require testing of the plan's compensation definition under Treas. Reg. §1.414(s)-1 for it to be used in nondiscrimination testing, including the ADP or ACP tests.*]

12. HOURS OF SERVICE (**1.32**). The Plan credits Hours of Service for the following purposes (and to the Employees described in Elections 12(d) or (e)) as follows *(select one or more of (a) through (e); select purposes as applicable)*:

			(1) All Purposes		(2) Eligibility	(3) Vesting	(4) Allocation Conditions
(a)	[X]	**Actual Method.** See Section 1.32(A)(1).	[X]	OR	[ ]	[ ]	[ ]
(b)	[ ]	**Equivalency Method:** ________ *(e.g., daily, weekly, etc.)*. See Section 1.32(A)(2).	[ ]	OR	[ ]	[ ]	[ ]
(c)	[ ]	**Elapsed Time Method.** See Section 1.32(A)(3).	[ ]	OR	[ ]	[ ]	[ ]
(d)	[ ]	**Actual (hourly) and Equivalency (salaried).** Actual Method for hourly paid Employees and Equivalency Method: ________ *(e.g., daily, weekly, etc.)* for Employees for whom records of actual Hours of Service are not maintained or available, such as salaried Employees.	[ ]	OR	[ ]	[ ]	[ ]

(e) [ ] **Describe method:** ________

[*Note: Under Election 12(e), the Employer may describe Hours of Service from the elections available under Elections 12(a) through (d), or a combination thereof as to a Participant group and/or Contribution Type (e.g., For all purposes, Actual Method applies to office workers and Equivalency Method applies to truck drivers).*]

13. ELECTIVE SERVICE CREDITING (**1.59(C)**). The Plan must credit Related Employer Service under Section 1.24(C) and also must credit certain Predecessor Employer/Predecessor Plan Service under Section 1.59(B). If the Plan is a Multiple Employer Plan, the Plan also must credit Service as provided in Section 12.08. The Plan also elects under Section 1.59(C) to credit as Service the following Predecessor Employer service *(select one of (a) or (b))*:

(a) [X] **Not applicable.** No elective Predecessor Employer Service crediting applies *(skip to Election 14)*.

(b) [ ] **Applies.** The Plan credits the specified service with the following designated Predecessor Employers as Service for the Employer for the purposes indicated *(select one or more of (1) and (2))*:

[*Note: Any elective Service crediting under this Election 13 must be nondiscriminatory.*]

(1) [ ] **All purposes.** Credit as Service for all purposes, service with Predecessor Employer(s): ________ *(insert as many names as needed)*.

(2) [ ] **Designated purposes.** Credit as Service, service with the following Predecessor Employer(s) for the designated purpose(s): *(select one* or more *of (a) through (d); select purposes as applicable.)*

		(1) Eligibility	(2) Vesting	(3) Contribution Allocation
a.	[ ] Employer: ________	[ ]	[ ]	[ ]
b.	[ ] Employer: ________	[ ]	[ ]	[ ]
c.	[ ] Employer: ________	[ ]	[ ]	[ ]
d.	[ ] Any entity the Employer acquires whether by asset or stock purchase, but only with respect to individuals who are employees of the acquired entity at the time of the acquisition	[ ]	[ ]	[ ]

Time period. Subject to any exceptions noted under Election 13(f), the Plan credits as Service under Elections 13(b)(1) or (2) *(select one or more of (c), (d), or (e))*:

(c) [ ] **All.** All service, regardless of when rendered.

(d) [ ] **Service after.** All service, which is or was rendered after: ___________ *(specify date).*

(e) [ ] **Service before.** All service, which is or was rendered before: ___________ *(specify date).*

Describe elective Predecessor Employer Service crediting *(leave blank if not applicable)*

(f) [ ] **Describe:** ____

[*Note: Under Election 13(f), the Employer may describe service crediting from the elections available under Elections 13(b) through (e), or a combination thereof as to a Participant group and/or Contribution Type (e.g., For all purposes credit all service with X, but credit service with Y only on/after 1/1/18 OR Credit all service for all purposes with entities the Employer acquires after 12/31/17 OR Service crediting for X Company applies only for purposes of Nonelective Contributions and not for Matching Contributions).*]

ARTICLE II
ELIGIBILITY REQUIREMENTS

14. ELIGIBILITY **(2.01).** To become a Participant in the Plan, an Eligible Employee must satisfy *(select one of (a), (b), or (c)):*

[*Note for 401(k) Plans: If the Employer under a safe harbor plan elects "early" eligibility for Elective Deferrals (e.g., less than one Year of Service and age 21), but does not elect early eligibility for any Safe Harbor Contributions, also see Election 30(m).*]

[*Note: No eligibility conditions apply to Prevailing Wage Contributions. See Section 2.01(D).*]

(a) [ ] **No conditions.** No eligibility conditions as to all Contribution Types. Entry is on the Employment Commencement Date (if that date is also an Entry Date), or if later, upon the next following Plan Entry Date *(skip to Election 16).*

(b) [X] **Eligibility - same for all Contribution Types.** To become a Participant in the Plan as to all Contribution Types, an Eligible Employee must satisfy the following eligibility conditions *(select one or more of (e) through (k)). Choose column (1) for each option elected at (e) through (j).:*

(c) [ ] **Eligibility - different conditions apply.** To become a Participant in the Plan for the designated Contribution Types, an Eligible Employee must satisfy the following eligibility conditions (either as to all Contribution Types or as to the designated Contribution Type) *(select one or more of (d) through (k); select Contribution Type as applicable) (may only be selected with 401(k) Plans):*

[*Note for 401(k) plans: For this Election 14, unless described otherwise in Election 14(k), or the context otherwise requires, Elective Deferrals includes Pre-Tax Deferrals, Roth Elective Deferrals and Employee Contributions, Matching includes all Matching Contributions (except Safe Harbor Matching Contributions, Operational Matches, and Operational QMACs) and Nonelective includes all Nonelective Contributions (except Safe Harbor Nonelective Contributions and Operational QNECs). The Plan Administrator may apply Plan provisions relating to months based on a 30-day month or adopt similar reasonable conventions. Section 2.02(E)(3). Thus, the Plan may apply a 3-month service requirement as a 90-day requirement. Safe Harbor includes Safe Harbor Nonelective and Safe Harbor Matching Contributions. If the Employer elects more than one Year of Service as to Additional Matching, the Plan will not satisfy the ACP test safe harbor. See Section 3.05(F)(3).*]

Eligibility Conditions	**(1) All Contributions**		**(2) Elective Deferrals**	**(3) Matching**	**(4) Nonelective**	**(5) Safe Harbor**
(d) [ ] **None.** Entry on the Employment Commencement Date (if that date is also an Entry Date) or if later, upon the next following Plan Entry Date.	N/A (See Election 14(a))		[ ]	[ ]	[ ]	[ ]
(e) [X] **Age** _18_ *(not to exceed age 21 except as provided in Section 2.02(G).)*	[X]	OR	[ ]	[ ]	[ ]	[ ]
(f) [ ] **One Year of Service.** See Election 16(a).	[ ]	OR	[ ]	[ ]	[ ]	[ ]
(g) [ ] **Two Years of Service** (without an intervening Break in Service). 100% vesting is required. [*Note for 401(k) Plans: Two Years of Service does not apply to Elective Deferrals, Safe Harbor Contributions or SIMPLE Contributions.*]	N/A		N/A	[ ]	[ ]	N/A

(h) [X] __1__ **month(s)** *(not exceeding 12 months for Elective Deferrals, Safe Harbor Contributions and SIMPLE Contributions (401(k) Plans) and not exceeding 24 months for other contributions).* If more than 12 months, 100% vesting is required. Service need not be continuous (no minimum Hours of Service required, and is mere passage of time). [*Note: While satisfying a months of service condition without an Hours of Service requirement involves the mere passage of time, the Plan need not apply the Elapsed Time Method in Election 12(c) above, and still may elect the Actual Method in 12(a) above.*]	[X]	**OR**	[ ]	[ ]	[ ]	[ ]
(i) [ ] _____ **month(s) with at least _____ Hours of Service in each month** *(not exceeding 12 months for Elective Deferrals, Safe Harbor Contributions and SIMPLE Contributions (401(k) Plans) and not exceeding 24 months for other contributions).* If more than 12 months, 100% vesting is required. If the Employee does not complete the designated Hours of Service each month during the specified monthly time period, the Employee is subject to the one Year of Service (or two Years of Service if elect more than 12 months) requirement as defined in Election 16. The months during which the Employee completes the specified Hours of Service *(select one of (1) or (2)):*	[ ]	**OR**	[ ]	[ ]	[ ]	[ ]
(1) [ ] **Consecutive.** Must be consecutive.						
(2) [ ] **Not consecutive.** Need not be consecutive.						
(j) [ ] _____ **Hours of Service within the ____________________ time period following the Employee's Employment Commencement Date** *(not exceeding 12 months for Elective Deferrals, Safe Harbor Contributions and SIMPLE Contributions (401(k) Plans) and not exceeding 24 months for other contributions).* If more than 12 months, 100% vesting is required. If the Employee does not complete the designated Hours of Service during the specified time period (if any), the Employee is subject to the one Year of Service (or two Years of Service if elect more than 12 months) requirement as defined in Election 16.	[ ]	**OR**	[ ]	[ ]	[ ]	[ ]

[*Note: The Employer may leave the time period option blank in Election 14(j) if the Employer wishes to impose an Hour of Service requirement without specifying a time period within which an Employee must complete the required Hours of Service.*]

(k) [ ] **Describe eligibility conditions:** ____

[*Note: The Employer may use Election 14(k) to describe different eligibility conditions as to different Contribution Types or Employee groups (e.g., As to all Contribution Types, no eligibility requirements for Division A Employees and one Year of Service as to Division B Employees). The Employer also may elect different ages for different Contribution Types and/or to specify different months or Hours of Service requirements under Elections 14(h), (i), or (j) as to different Contribution Types. Any election must satisfy Code §410(a).*]

15. <u>SPECIAL ELIGIBILITY EFFECTIVE DATE (DUAL ELIGIBILITY)</u> **(2.01(E))**. The eligibility conditions of Election 14 and the entry date provisions of Election 17 apply to all Employees unless otherwise elected below (choose one or more of (a) or (b) if applicable):

[*Note: Elections 15(a) or (b) may trigger a coverage failure under Code §410(b).*]

(a) [ ] **Waiver of eligibility conditions for certain Employees.** For all Contribution Types, the eligibility conditions and entry dates apply solely to an Eligible Employee employed or reemployed by the Employer after ________________ *(specify date)*. If the Eligible Employee is an Employee on the specified date, the Employee will become a Participant on the latest of: (i) the Effective Date; (ii) the restated Effective Date; (iii) the Employee's Employment Commencement Date or Re-Employment Commencement Date; or (iv) the date the Employee attains age _____ *(not exceeding age 21)*.

[*Note: If the Employer does not wish to impose an age condition under clause (iv) as part of the requirements for the eligibility conditions waiver, leave the age blank.*]

(b) [ ] **Describe special eligibility Effective Date(s):** ________________________________

[*Note: Under Election 15(b), the Employer may describe special eligibility Effective Dates as to a Participant group and/or Contribution Type (e.g., Eligibility conditions apply only as to Nonelective Contributions and solely as to the Eligible Employees of Division B who were hired or reemployed by the Employer after January 1, 2020).*]

16. <u>YEAR OF SERVICE - ELIGIBILITY</u> **(2.02(A))**. *(Choose (a), (b), and (c) if applicable.)*:

[*Note: If the Employer under Election 14 elects a one or two Year(s) of Service condition (including any requirement which defaults to such conditions under Elections 14(i), (j), and (k)) or elects to apply a Year of Service for eligibility under any other Adoption Agreement election, the Employer should complete this Election 16. The Employer should not complete Election 16 if it elects the Elapsed Time Method for eligibility.*]

(a) [X] **Year of Service.** An Employee must complete <u>1,000</u> Hour(s) of Service during the relevant Eligibility Computation Period to receive credit for one Year of Service under Article II. [*Note: The number may not exceed 1,000. If left blank, the requirement is 1,000 Hours of Service.*]

(b) [X] **Subsequent Eligibility Computation Periods.** Unless otherwise elected below, after the Initial Eligibility Computation Period described in Section 2.02(C)(2), the Plan measures Subsequent Eligibility Computation Periods as the Plan Year beginning with the Plan Year which includes the first anniversary of the Employee's Employment Commencement Date *(choose one of (1) or (2) if applicable)*:

(1) [ ] **Anniversary Year.** The Anniversary Year, beginning with the Employee's second Anniversary Year.

(2) [ ] **Split.** The Plan Year as to: ____________________ *(describe Contribution Type(s))* and the Anniversary Year as described in Election 16(b)(1) as to: ________________ *(describe Contribution Type(s))*.

[*Note: To maximize delayed entry under a two Years of Service condition for Nonelective Contributions or Matching Contributions, the Employer should elect to remain on the Anniversary Year for such contributions.*]

(c) [ ] **Describe:** ________________________________
(e.g., Anniversary Year as to Division A and Plan Year as to Division B.)

17. <u>ENTRY DATE</u> **(2.02(D))**. Entry Date means the Effective Date and:

[*Note: Entry as to Prevailing Wage Contributions is on the Employment Commencement Date. See Section 2.02(D)(3).*]

(a) [X] **Entry Date - same for all Contribution Types** *(select one of (c) through (i))*:

(b) [ ] **Entry Date - different entry dates apply** *(select one or more of (c) through (i); select Contribution Type as applicable) (may only be selected with 401(k) Plans)*:

[*Note for 401(k) plans: For this Election 17, unless described otherwise in Election 17(i), Elective Deferrals includes Pre-Tax Deferrals, Roth Elective Deferrals and Employee Contributions, Matching includes all Matching Contributions except (Operational Matches and Operational QMACs) and Nonelective includes all Nonelective Contributions (except Operational QNECs).*]

	(1) Elective Deferrals	(2) Matching	(3) Nonelective
(c) [ ] **Semi-annual.** The first day of the first month and of the seventh month of the Plan Year.	[ ]	[ ]	[ ]
(d) [ ] **First day of Plan Year.**	[ ]	[ ]	[ ]
(e) [ ] **First day of each Plan Year quarter.**	[ ]	[ ]	[ ]
(f) [ ] **The first day of each month.**	[ ]	[ ]	[ ]

(g)	[X]	**Immediate.** Upon Employment Commencement Date or if later, upon satisfaction of eligibility conditions.	[ ]	[ ]	[ ]
(h)	[ ]	**First day of each payroll period.**	[ ]	[ ]	[ ]

(i) [ ] **Describe Entry Date(s):** ______________________________

[Note: Under Election 17(i), the Employer may describe Entry Dates from the elections available under Elections 17(c) through (h), or a combination thereof as to a Participant group and/or Contribution Type or may elect additional Entry Dates (e.g., immediate as to Division A Employees and semi-annual as to Division B Employees OR The earlier of the Plan's semi-annual Entry Dates or the entry dates under the Employer's medical plan).]

18. PROSPECTIVE/RETROACTIVE ENTRY DATE **(2.02(D))**. An Employee after satisfying the eligibility conditions in Election 14 will become a Participant (unless an Excluded Employee under Election 8) on the Entry Date (if employed on that date) *(select one or more from (a) through (f))*: [Choose Contribution Type as applicable].

[Note: Unless otherwise excluded under Election 8, an Employee who remains employed by the Employer on the relevant date must become a Participant by the earlier of: (i) the first day of the Plan Year beginning after the date the Employee completes the age and service requirements of Code §410(a); or (ii) 6 months after the date the Employee completes those requirements. For this Election 18, unless described otherwise in Election 18(f), Elective Deferrals includes Pre-Tax Deferrals, Roth Deferrals and Employee Contributions, Matching includes all Matching Contributions (except Operational Matches and Operational QMACs) and Nonelective includes all Nonelective Contributions and Money Purchase Pension Plan Contributions, (except Operational QNECs).]

			(1) All Contributions		(2) Elective Deferrals	(3) Matching	(4) Nonelective
(a)	[ ]	**Immediately following or coincident with** the date the Employee completes the eligibility conditions.	[ ]	**OR**	[ ]	[ ]	[ ]
(b)	[ ]	**Immediately following** the date the Employee completes the eligibility conditions.	[ ]	**OR**	[ ]	[ ]	[ ]
(c)	[ ]	**Immediately preceding or coincident with** the date the Employee completes the eligibility conditions.	N/A		N/A	[ ]	[ ]
(d)	[ ]	**Immediately preceding** the date the Employee completes the eligibility conditions.	N/A		N/A	[ ]	[ ]
(e)	[ ]	**Nearest** the date the Employee completes the eligibility conditions.	N/A		N/A	[ ]	[ ]

(f) [ ] **Describe retroactive/prospective entry relative to Entry Date:** ______________________________

[Note: Under Election 18(f), the Employer may describe the timing of entry relative to an Entry Date from the elections available under Elections 18(a) through (e), or a combination thereof as to a Participant group and/or Contribution Type (e.g., nearest as to Division A Employees and immediately following as to Division B Employees).]

19. BREAK IN SERVICE - PARTICIPATION **(2.03)**. The one year hold-out rule described in Section 2.03(C) *(select (a) or (b))*:

(a) [X] **Does not apply.**

(b) [ ] **Limited application.** Applies to the Plan, but only to a Participant who has incurred a Severance from Employment.

[Note: The Plan does not apply the rule of parity under Code §410(a)(5)(D) unless the Employer in Appendix B specifies otherwise. See Section 2.03(D).]

ARTICLE III
PLAN CONTRIBUTIONS AND FORFEITURES

20. ELECTIVE DEFERRAL LIMITATIONS; CODA **(3.02(A), (C))**. The following limitations apply to Elective Deferrals under Election 6(b), which are in addition to those limitations imposed under the basic plan document *(select (a) OR select one or more of (b) and (c))*:

(a) [X] **None.** No additional Plan imposed limits *(skip to (d))*.

[Note: The Employer under Election 20 may not impose a lower deferral limit applicable only to Catch-Up Eligible Participants and the Employer's elections must be nondiscriminatory. The elected limits apply to Pre-Tax Deferrals and to Roth Deferrals unless described otherwise. Under a safe harbor plan: (i) NHCEs must be able to defer enough to receive the maximum Safe Harbor Matching and Additional Matching Contribution under the Plan and must be permitted to defer any lesser amount; and (ii) the Employer may limit Elective Deferrals to a whole percentage of Compensation or to a whole dollar amount. See Section 1.57(C) as to administrative limitations on Elective Deferrals.]

(b) [ ] **Additional Plan limit(s).** *(select one or more of (1) and (2)):*

(1) [ ] **Maximum deferral amount.** A Participant's Elective Deferrals may not exceed: __________________ *(specify dollar amount and/or percentage of Compensation).*

(2) [ ] **Minimum deferral amount.** A Participant's Elective Deferrals may not be less than: _______ *(specify dollar amount (not greater than $10,000) and/or percentage of Compensation (not greater than 10%)). [Note: Please see 3.05(C)(2) for restrictions on minimum deferrals if the Plan is a safe harbor 401(k) plan.]*

Application of limitations. The Election 20(b)(1) and (2) limitations apply based on Elective Deferral Compensation described in Elections 9 - 11. If the Employer elects Plan Year/Participating Compensation under column (1) and in Election 10 elects Participating Compensation, in the Plan Years commencing after an Employee becomes a Participant, apply the elected minimum or maximum limitations to the Plan Year. Apply the elected limitation based on such Compensation during the designated time period and only to HCEs as elected below. *(select (3) OR select one or more of (4) and (5); under each of (3) through (5), select one of (1) or (2); choose (3) if applicable):*

	(1) Plan Year/Participating Compensation	(2) Payroll period	(3) HCEs only
(3) [ ] **Both.** Both limits under Elections 20(b)(1) and (2).	[ ]	[ ]	[ ]
(4) [ ] **Maximum limit.** The maximum amount limit under Election 20(b)(1).	[ ]	[ ]	[ ]
(5) [ ] **Minimum limit.** The minimum amount limit under Election 20(b)(2).	[ ]	[ ]	[ ]

(c) [ ] **Describe Elective Deferral limitation(s):** ______________________________

[Note: Under Election 20(c), the Employer may only: (i) describe limitations on Elective Deferrals from the elections available under Elections 20(a) and (b) or a combination thereof as to a Participant group (e.g., No limit applies to Division A Employees. Division B Employees may not defer in excess of 10% of Plan Year Compensation); (ii) elect a different time period to which the limitations apply; and/or (iii) apply a different limitation to Pre-Tax Deferrals and to Roth Deferrals.]

CODA Applies *(leave blank if not applicable)*

(d) [ ] The CODA provisions of Section 3.02(C) apply. For each Plan Year for which the Employer makes a designated CODA contribution under Section 3.02(C), a Participant may elect to receive directly in cash not more than the following portion (or, if less, the Elective Deferral Limit (see 4.10(A)(1)) of his/her proportionate share of that CODA contribution *(select one of (1) or (2)):*

(1) [ ] **All or any portion.**

(2) [ ] _____%

21. <u>AUTOMATIC DEFERRAL (ACA/EACA/QACA)</u> **(3.02(B))**. The Automatic Deferral provisions of Section 3.02(B) *(select one of (a) or (b); also see Election 22 regarding Automatic Escalation of Salary Reduction Agreements):*

(a) [ ] **Do not apply.** The Plan is not an ACA, EACA, or QACA *(skip to Election 22).*

(b) [X] **Apply.** The Automatic Deferral Effective Date is the effective date of automatic deferrals or, as appropriate, any subsequent amendment thereto.

Type of Automatic Deferral Arrangement. The Plan is an *(select one of (1), (2), or (3)):*

(1) [X] **ACA.** The Plan is an Automatic Contribution Arrangement (ACA) under Section 3.02(B)(1).

(2) [ ] **EACA.** The Plan is an Eligible Automatic Contribution Arrangement (EACA) under Section 3.02(B)(2).

(3) [ ] **EACA/QACA.** The Plan is a combination EACA and Qualified Automatic Contribution Arrangement (QACA) under Sections 3.02(B)(3) and 3.05(J).

[Note: If the Employer chooses Election 21(b)(3), the Employer also must choose election 6(e) and complete Election 30 as to the Safe Harbor Contributions under the QACA.]

Participants affected. The Automatic Deferral applies to *(select one of (c) or (d). Choose (e) if applicable.):*

(c) [ ] **All Participants.** All Participants, regardless of any prior Salary Reduction Agreement, unless and until they make a Contrary Election after the Automatic Deferral Effective Date.

(d) [X] **The following Participants** *(select one of (1) through (5)):*

(1) [ ] **Election of at least Automatic Deferral Percentage.** All Participants, except those who have in effect a Salary Reduction Agreement on the Automatic Deferral Effective Date provided that the Elective Deferral amount under the Agreement is at least equal to the Automatic Deferral Percentage.

(2) [ ] **No existing Salary Reduction Agreement.** All Participants, except those who have in effect a Salary Reduction Agreement on the Automatic Deferral Effective Date regardless of the Elective Deferral amount under the Agreement.

(3) [ ] **Election of 0% or No existing Salary Reduction Agreement.** All Participants, except those who have in effect a Salary Reduction Agreement on the Automatic Deferral Effective Date provided that the Elective Deferral amount under the Agreement is greater than 0%.

(4) [X] **New Participants (not applicable to QACA).** Each Employee whose Entry Date is on or following the Automatic Deferral Effective Date or the following date:

Other effective date. *(optional; specify a date other than the Automatic Deferral Effective Date)*

a. [ ] ______________

(5) [ ] **New hires (not applicable to QACA).** Each Employee whose Employment Commencement Date (or Reemployment Commencement Date) is on or following the Automatic Deferral Effective Date or the following date:

Other effective date. *(optional; specify a date other than the Automatic Deferral Effective Date)*

a. [ ] ______________

(e) [ ] **Describe affected Participants (not applicable to QACA):** ____

[*Note: The Employer in Election 21(e) may further describe affected Participants, e.g., non-Collective Bargaining Employees OR Division A Employees. However, all Employees eligible to defer must be Covered Employees to apply the 6-month correction period without excise tax under Code §4979.*]

Automatic Deferral Percentage/Scheduled increases. *(select one of (f), (g), or (h))*:

(f) [X] **Fixed percentage.** The Employer, as to each Participant affected, will withhold as the Automatic Deferral Percentage, 6% from the Participant's Compensation each payroll period unless the Participant makes a Contrary Election.

[*Note: In order to satisfy the QACA requirements, enter an amount between 6% and 10% if no scheduled increase.*]

(g) [ ] **QACA statutory increasing schedule.** The Automatic Deferral Percentage will be the minimum QACA Automatic Deferral Percentage under Section 3.02(B)(3)(b):

(h) [ ] **Other increasing schedule.** The Automatic Deferral Percentage will be:

Plan Year of application to a Participant	Automatic Deferral Percentage
________	_____%
________	_____%
________	_____%
________	_____%
________	_____%

[*Note: The Automatic Deferral Percentage must satisfy the uniformity requirements of Section 3.02(B)(2)(b) if the Plan is a EACA or a QACA. The phrase "Plan Year of application to a Participant" refers to the number of Plan Years Automatic Deferrals have been withheld for the Participant, such that Plan Year 1 is the first Plan Year Automatic Deferrals are withheld for a Participant and Plan Year 2 is the following Plan Year.]*

Scheduled increases to Fixed percentage. The Automatic Deferral Percentage elected in 21(f) will or will not increase in Plan Years following the Plan Year containing the Automatic Deferral Effective Date (or, if later, the Plan Year or partial Plan Year in which the Automatic Deferral first applies to a Participant) as follows: *(select one of (i), (j), or (k); skip if 21(f) not elected)*

(i) [ ] **No scheduled increase.** The Automatic Deferral Percentage applies in all Plan Years.

(j) [X] **Automatic increase.** The Automatic Deferral Percentage will increase by 1% per year up to a maximum of 10% of Compensation.

(k) [ ] **Describe increase:** ____

[*Note: To satisfy the QACA requirements, the Automatic Deferral Percentage must be: (i) a fixed percentage which is at least 6% and not more than 10% of Compensation; (ii) an increasing Automatic Deferral Percentage in accordance with the schedule under Election 21(g); or (iii) an alternative schedule which must require, for each Plan Year, an Automatic Deferral Percentage that is at least equal to the Automatic Deferral Percentage under the schedule in Election 21(g) and which does not exceed 10%. See Section 3.02(B)(3).*]

EACA permissible withdrawal. The permissible withdrawal provisions of Section 3.02(B)(2)(d) *(select one of (l), (m) or (n); skip if not an EACA or an EACA/QACA)*:

(l) [ ] **Do not apply.**

(m) [ ] **90 day withdrawal.** Apply within 90 days of the first Automatic Deferral.

(n) [ ] **30-90 day withdrawal.** Apply within ________ days of the first Automatic Deferral *(may not be less than 30 nor more than 90 days)*.

Contrary Election/Covered Employee. Any Participant who makes a Contrary Election *(select one of (o) or (p); leave blank if an ACA or a QACA not subject to the ACP test.)*:

(o) [ ] **Covered Employee.** Is a Covered Employee and continues to be covered by the EACA provisions. [*Note: Under this Election, the Participant's Contrary Election will remain in effect, but the Participant must receive the EACA annual notice.*]

(p) [ ] **Not a Covered Employee.** Is not a Covered Employee and will not continue to be covered by the EACA provisions. [*Note: Under this Election, the Participant no longer must receive the EACA annual notice, but the Plan cannot use the six-month period for relief from the excise tax of Code §4979(f)(1).*]

Change Date. The Elective Deferrals under Election 21(g), (h), (j), or (k) will increase on the following day each Plan Year *(select one of (q) through (t); skip if 21(g), (h), (j), or (k) not elected)*:

(q) [ ] **First day of the Plan Year.**

(r) [ ] **Anniversary of a Participant's Entry Date.**

(s) [ ] **Anniversary of a Participant's Employment or Reemployment Commencement Date.**

(t) [X] **Other:** July 1 beginning with the July 1 of the Plan Year following the Plan Year in which Automatic Deferral first applies to a Participant.
(must be a specified or definitely determinable date that occurs at least annually)

Optional Provisions: *(choose one or more of (u) and (v) if applicable.)*

(u) [X] **First Year of Increase.** The automatic increase under Election 21(j) or (k) will apply to a Participant beginning with the first Change Date after the Participant first has automatic deferrals withheld, unless otherwise elected below *(select one of (1) or (2))*:

(1) [X] **Second Change Date.** The increase will apply as of the second Change Date thereafter.

(2) [ ] **At least 6 months after.** The increase will apply as of the first Change Date thereafter which is at least 6 months (or 180 days) after the Participant first has automatic deferrals withheld.

(v) [X] **Describe Automatic Deferral:** Regardless of the election above, Participants whose Entry Dates are prior to February 1, 2022, will remain at the Automatic Deferral Percentage they were enrolled at on January 1, 2022, and will continue to have their Automatic Deferral Amount increased based on the automatic increase schedule of this Plan.

[*Note: Under Election 21(v), the Employer may only describe Automatic Deferral provisions from the elections available under Election 21 and/or a combination thereof as to a Participant group (e.g., Automatic Deferrals do not apply to Division A Employees. All Division B Employee/Participants are subject to an Automatic Deferral Amount equal to 3% of Compensation effective as of January 1, 2020). The Automatic Deferral Percentage must satisfy the uniformity requirements of Section 3.02(B)(2)(b) if the Plan is a EACA or a QACA.*]

22. AUTOMATIC ESCALATION **(3.02(G))**. The Automatic Escalation provisions of Section 3.02(G) *(select one of (a) or (b); see Election 21 regarding Automatic Deferrals. Automatic Escalation applies to Participants who have a Salary Reduction Agreement in effect.)*:

(a) [X] **Do not apply.** *(skip to Election 23)*

(b) [ ] **Apply.** If Automatic Escalation applies to a Participant, this constitutes a provision that the Participant's affirmative election will expire annually, as described in the paragraph below.

Under a 401(k) plan, the plan may provide that an affirmative election expires annually. If a participant fails to complete a new affirmative election subsequent to their prior election expiring, the participant becomes subject to the default deferral percentage as outlined in this Election 22 and in Section 3.02(G). Each year, the participant can always complete a new affirmative election and designate a new deferral percentage.

Participants affected. The Automatic Escalation applies to *(select one of (c), (d), or (e))*:

(c) [ ] **All Deferring Participants.** All Participants who have a Salary Reduction Agreement in effect to defer at least ________% of Compensation.

(d) [ ] **New Deferral Elections.** All Participants who file a Salary Reduction Agreement after the effective date of this Election, or, as appropriate, any amendment thereto, to defer at least _____% of Compensation.

(e) [ ] **Describe affected Participants:** ________________________________

[*Note: The Employer in Election 22(e) may further describe affected Participants, e.g., non-Collective Bargaining Employees OR Division A Employees. The group of Participants must be definitely determinable and nondiscriminatory under Code §401(a)(4) and Code §401(k)(3).*]

Automatic Increases. *(Select one of (f) or (g))*

(f) [ ] **Automatic increase.** The Participant's Elective Deferrals will increase by ________% per year up to a maximum of ________% of Compensation unless the Participant has filed a Contrary Election after the effective date of this Election or, as appropriate, any amendment thereto.

(g) [ ] **Describe increase:** ______________________________

[*Note: The Employer in Election 22(g) may define different increases for different groups of Participants or may otherwise limit Automatic Escalation. Any such provisions must be definitely determinable and nondiscriminatory under Code §401(a)(4).*]

Change Date. The Elective Deferrals will increase on the following day each Plan Year *(Select one of (h) through (k))*:

(h) [ ] **First day of the Plan Year.**

(i) [ ] **Anniversary of a Participant's Entry Date.**

(j) [ ] **Anniversary of a Participant's Employment or Reemployment Commencement Date.**

(k) [ ] **Other:** ______________________________ *(must be a specified or definitely determinable date that occurs annually)*

First Year of Increase. The automatic escalation provision will apply to a participant beginning with the first Change Date after the Participant files a Salary Reduction Agreement (or, if sooner, the effective date of this Election, or, as appropriate, any amendment thereto), unless otherwise elected below: *(Choose one of (l) or (m) if applicable)*

(l) [ ] **Second Change Date.** The escalation provision will apply as of the second Change Date thereafter.

(m) [ ] **At least 6 months after.** The escalation provision will apply as of the first Change Date thereafter which is at least 6 months (or 180 days) after the date deferrals begin under the Participant's affirmative election.

23. CATCH-UP DEFERRALS (**3.02(D)**). The Plan permits Catch-Up Deferrals unless the Employer elects otherwise below. *(choose (a) if applicable)*

(a) [ ] **Not Permitted.** May not make Catch-Up Deferrals to the Plan.

24. MATCHING CONTRIBUTIONS (EXCLUDING SAFE HARBOR MATCH AND ADDITIONAL MATCH UNDER SECTION 3.05) (**3.03(A)**). The Employer Matching Contributions under Election 6(c) are subject to the following additional elections regarding type (discretionary/fixed), rate/amount, limitations and time period (collectively, such elections are "the matching formula") and the allocation of Matching Contributions is subject to Section 3.06 except as otherwise provided *(select one or more of (a) through (f); then, for the elected match in (b) through (e), complete (1); choose one or more of (2) and (3) if applicable)*:

[*Note: If the Employer wishes to make any Matching Contributions that satisfy the ADP or ACP safe harbor, the Employer should make these Elections under Election 30, and not under this Election 24.*]

	(1) Matching Rate/Amt [$/% of Elective Deferrals]	(2) Limit on Deferrals Matched [$/% of Compensation]	(3) Limit on Match Amount [$/% of Compensation]
(a) [ ] **Discretionary** – see Section 1.35(B) *(The Employer may, but is not required to complete (a)(1)-(3). See the "Note" following Election 24(f))*	____	____	____

The Discretionary Matching Contribution under this Election 24(a) is a Flexible Discretionary Match unless the Employer elects to use a Rigid Discretionary Match. *(Choose a. if applicable.)*. A Flexible Discretionary Match will be subject to the Instructions and Notice requirement of Section 3.03(A)(2)(c), reproduced below.

a. [ ] **Rigid Discretionary Match.** The Discretionary Matching Contribution is a Rigid Discretionary Match. A Rigid Discretionary Match is not subject to the Instructions and Notice requirement of Section 3.03(A)(2)(c).

Section 3.03(A)(2)(c) provides: **Instructions and Notice.** For any Plan Year beginning after the Plan Year the Employer signs its Adoption Agreement, if the Employer makes a Flexible Discretionary Match to the Plan, the Employer must provide the Plan Administrator (or Trustee, if applicable), written instructions describing (1) how the Flexible Discretionary Match Formula will be allocated to Participants (e.g., a uniform percentage of Elective Deferrals or a flat dollar amount), (2) the computation period(s) to which the Flexible Discretionary Match Formula applies, and (3) if applicable, a description of each business location or business classification subject to separate Flexible Discretionary Match Formulas. Such instructions must be provided no later than the date on which the Flexible Discretionary Match is made to the Plan. A summary of these instructions must be communicated to Participants who receive an allocation of the Flexible Discretionary Match no later than 60 days following the date on which the last Flexible Discretionary Match is made to the Plan for the Plan Year.

(b) [ ] **Fixed** – uniform rate/amount	____	____	____

(c) [X] **Fixed** – tiered

	Elective Deferral %	**Matching Rate**		
(e.g., up to 3)	Up to 2%	100 %	____	____
(e.g., more than 3 up to 5)	more than 2%, but not more than 6%	50 %		
	____	____%		
	____	____%		

(d) [ ] **Fixed** – Years of Service

	Years of Service	**Matching Rate**		
(e.g., up to 2)	____	____%	____	____
(e.g., more than 2 up to 5)	____	____%		

"Years of Service" under this Election 24(d) means *(select one of a. or b)*:

a. [ ] **Eligibility.** Years of Service for eligibility in Election 16.

b. [ ] **Vesting.** Years of Service for vesting in Elections 42 and 43.

(e) [ ] **Fixed** – multiple formulas

Formula 1:	__________	____	____
Formula 2:	__________	____	____
Formula 3:	__________	____	____

(f) [ ] **Describe:** ______________________________

(The Employer may only describe the matching formula from the elections available in this Election 24, and/or a combination thereof, as to a Participant group (e.g., Fixed Match of 50% of elective deferrals of deferrals up to 6% of annual compensation applies to Collective Bargaining Employees; Discretionary Match allocated each payroll period applies to all other Participants). The Group Allocation Limitations of Section 3.14 apply to allocations under this Election 24(f). If the formula is non-uniform, it is not a design-based safe harbor for nondiscrimination purposes.)

[*Note: See Section 1.35(A) as to Fixed Matching Contributions. A Participant's Elective Deferral percentage is equal to the Participant's Elective Deferrals divided by his/her Compensation. The matching rate/amount is the specified rate/amount of match for the corresponding Elective Deferral amount/percentage. Any Matching Contributions apply to Pre-Tax Deferrals and to Roth Deferrals unless described otherwise in Election 24(g). Matching Contributions for nondiscrimination testing purposes are subject to the targeting limitations. See Section 4.10(D). The Employer under Election 24(a) in its discretion may determine the amount of a Discretionary Matching Contribution and the matching contribution formula. Alternatively, the Employer in Election 24(a) may specify elements of the Discretionary Matching Contribution formula.*]

Computation period, true-up. Any Matching Contribution other than a Flexible Discretionary Match will be allocated on the period described below: *(Select one of (g) through (l). Skip if the only Matching Contribution is a Flexible Discretionary Match.)*

(g) [ ] Each payroll period

(h) [ ] Each month

(i) [ ] Each Plan Year quarter

(j) [ ] Each payroll unit (e.g., hour)

(k) [ ] Other (specify): ________________ *[The time period described must be definitely determinable under Treas. Reg. §1.401-1(b). This line may be used to apply different options to different matching contributions (e.g., Discretionary matching contributions will be allocated on a Plan Year period while fixed matching contributions will be allocated on each payroll period)]*

(l) [X] Each Plan Year

Related and Participating Employers *(choose (m) if applicable)*

(m) [ ] If any Related and Participating Employers (or in the case of a Multiple Employer Plan, Participating Employers regardless of whether they are Related Employers) contribute Matching Contributions to the Plan, the following apply:

Matching formula. The matching formula for the Participating Employer(s) *(select one of (1) or (2))*:

(1) [ ] **All the same.** Is (are) the same as for the Signatory Employer under this Election 24.

(2) [ ] **At least one different.** Is (are) as follows: _______.

Allocation sharing. The Matching Contributions will be allocated to all Participants regardless of which Employer directly employs them and regardless of whether their direct Employer made Matching Contributions for the Plan Year unless otherwise elected below or specified in a participation agreement. *(choose (3) if applicable):*

(3) [ ] **Employer by Employer.** The Plan Administrator will allocate the Matching Contributions made by the Signatory Employer and by any Participating Employer only to the Participants directly employed by the contributing Employer.

[*Note: Unless the Plan is a Multiple Employer Plan, the Employer should not elect 24(m) unless there are Related Employers which are also Participating Employers. See Section 1.24(D).*]

25. QMAC (PLAN-DESIGNATED) **(3.03(C)(1))**. The following provisions apply regarding Plan-Designated QMACs *(select one of (a) or (b))*:

(a) [X] **Not applicable.** There are no Plan-Designated QMACs.

(b) [ ] **Applies.** There are Plan-Designated QMACs to which the following provisions apply:

Matching Contributions affected. The following Matching Contributions (as allocated to the designated allocation group under Election 25(b)(2)) are Plan-Designated QMACs *(select one of (1) or (2))*:

(1) [ ] **All.** All Matching Contributions.

(2) [ ] **Designated.** Only the following Matching Contributions under Election 24: ____________________.

Allocation Group. Subject to Section 3.06, allocate the Plan-Designated QMAC *(select one of (3) or (4))*:

(3) [ ] **NHCEs only.** Only to NHCEs who make Elective Deferrals subject to the Plan-Designated QMAC.

(4) [ ] **All Participants.** To all Participants who make Elective Deferrals subject to the Plan-Designated QMAC.

The Plan Administrator will allocate all other Matching Contributions as Regular Matching Contributions under Section 3.03(B), except as provided in Sections 3.03(C)(2) or 3.05.

[*Note: See Section 4.10(D) as to targeting limitations applicable to QMAC nondiscrimination testing. Regardless of its selections under this Election 25, the Employer may elect for any Plan Year where the Plan is using Current Year Testing to make Operational QMACs which the Plan Administrator will allocate only to NHCEs for purposes of correction of an ADP or ACP test failure.*]

26. MATCHING CATCH-UP DEFERRALS **(3.03(D))**. If a Participant makes a Catch-Up Deferral, the Employer *(select one of (a) or (b); skip if Election 23(a) is selected)*:

(a) [X] **Match.** Will apply to the Catch-Up Deferral *(select one of (1) or (2))*:

(1) [X] **All.** All Matching Contributions.

(2) [ ] **Designated.** The following Matching Contributions in Election 24: ______________________________.

(b) [ ] **No Match.** Will not match any Catch-Up Deferrals.

[*Note: Election 26 does not apply to a safe harbor 401(k) plan unless the Employer will apply the ACP test. See Elections 37(b)(2). In this case, Election 26 applies only to Additional Matching, if any. A safe harbor 401(k) Plan will apply the Basic Match, QACA Basic Match or Enhanced Match to Catch-Up Deferrals. If the Employer elects to apply the ACP test safe harbor under Election 37(b)(1), Election 26 does not apply and the Plan also will apply any Additional Match to Catch-Up Deferrals.*]

27. NONELECTIVE CONTRIBUTIONS (TYPE/AMOUNT) INCLUDING PREVAILING WAGE CONTRIBUTIONS AND MONEY PURCHASE PENSION PLAN CONTRIBUTIONS **(3.04(A))**. The Employer Nonelective Contributions under Election 6(d) are subject to the following additional elections as to type and amount *(select one or more of (a) through (d); choose (e) if applicable)*:

(a) [X] **Discretionary.** An amount the Employer in its sole discretion may determine. [*Note: This election is not available if this Plan is a Money Purchase Pension Plan.*]

(b) [ ] **Fixed.** *(Choose one or more of (1) through (3) as applicable.)*:

(1) [ ] **Uniform %.** ____% of each Participant's Compensation, per ______________ *(e.g., Plan Year, month).*

(2) [ ] **Fixed dollar amount.** $_____, per ______________ *(e.g., Plan Year, month, HOS, per Participant per month).*

(3) [ ] **Describe:** ______________________________
(The formula described must satisfy the definitely determinable requirement under Treas. Reg. §1.401-1(b). If the formula is non-uniform, it is not a design-based safe harbor for nondiscrimination purposes.)

[*Note: The Employer under Election 27(b)(3) may specify any Fixed Nonelective Contribution formula not described under Elections 27(b)(1) or (2) (e.g., For each Plan Year, 2% of net profits exceeding $50,000, or The cash value of unused paid time off, as described in Section 3.04(A)(2)(a) and the Employer's Paid Time Off Plan) and/or the Employer may describe different Fixed Nonelective Contributions as applicable to different Participant groups (e.g., A Fixed Nonelective Contribution equal to 5% of Plan Year Compensation applies to*

Division A Participants and a Fixed Nonelective Contribution equal to $500 per Participant each Plan Year applies to Division B Participants).]

(c) [ ] **Prevailing Wage Contribution.** The Prevailing Wage Contribution amount(s) specified for the Plan Year or other applicable period in the Employer's Prevailing Wage Contract(s). The Employer will make a Prevailing Wage Contribution only to Participants covered by the Contract and only as to Compensation paid under the Contract. The Employer must specify the Prevailing Wage Contribution by attaching an appendix to the Adoption Agreement that indicates the contribution rate(s) applicable to the prevailing wage employment/job classification(s). If the Participant accrues an allocation of Employer Contributions (including forfeitures) under the Plan or any other Employer plan in addition to the Prevailing Wage Contribution, the Plan Administrator will *(select one of (1) or (2))*:

(1) [ ] **No offset.** Not reduce the Participant's Employer Contribution allocation by the amount of the Prevailing Wage Contribution.

(2) [ ] **Offset.** Reduce the Participant's Employer Contribution allocation by the amount of the Prevailing Wage Contribution.

(d) [ ] **Describe:** ____________________
(The formula described must satisfy the definitely determinable requirement under Treas. Reg. §1.401-1(b). If the formula is non-uniform, it is not a design-based safe harbor for nondiscrimination purposes.)

[*Note: Under Election 27(d), the Employer may describe the amount and type of Nonelective Contributions from the elections available under Election 27 and/or a combination thereof as to a Participant group (e.g., A Discretionary Nonelective Contribution applies to Division A Employees. A Fixed Nonelective Contribution equal to 5% of Plan Year Compensation applies to Division B Employees).*]

Related and Participating Employers *(choose (e) if applicable)*

(e) [ ] If any Related and Participating Employers (or in the case of a Multiple Employer Plan, Participating Employers regardless of whether they are Related Employers) contribute Nonelective Contributions to the Plan, the contribution formula(s) *(select one of (1) or (2))*:

(1) [ ] **All the same.** Is (are) the same as for the Signatory Employer under this Election 27.

(2) [ ] **At least one different.** Is (are) as follows: ____________________.

[*Note: Unless the Plan is a Multiple Employer Plan, the Employer should not elect 27(e) unless there are Related Employers which are also Participating Employers. See Section 1.24(D). The Employer electing 27(e) also must complete Election 28(h) as to the allocation methods which apply to the Participating Employers.*]

28. <u>NONELECTIVE AND MONEY PURCHASE PENSION PLAN CONTRIBUTION ALLOCATION</u> **(3.04(B))**. The Plan Administrator, subject to Section 3.06, will allocate to each Participant any Nonelective Contribution (excluding QNECs, but including Prevailing Wage Contributions and Money Purchase Plan Contributions) under the following contribution allocation formula *(select one or more of (a) through (g))*:

(a) [X] **Uniform allocation.** *(select one of (1) or (2))*

(1) [X] **Percentage.** As a uniform percentage of Participant Compensation (Pro rata).

(2) [ ] **Dollar amount.** As a uniform dollar amount, without regard to Compensation.

(b) [ ] **Permitted disparity.** In accordance with the permitted disparity allocation provisions of Section 3.04(B)(2), under which the following permitted disparity formula and definition of "Excess Compensation" apply:

Formula *(select one of (1), (2), or (3))*:

(1) [ ] **Two-tiered.**

(2) [ ] **Four-tiered.**

(3) [ ] **Two-tiered**, except that the four-tiered formula will apply in any Plan Year for which the Plan is top-heavy.

Excess Compensation. For purposes of Section 3.04(B)(2), "Excess Compensation" means Compensation in excess of the integration level provided below *(select one of (4) or (5))*:

(4) [ ] **Percentage amount.** ____% *(not exceeding 100%)* of the Taxable Wage Base in effect on the first day of the Plan Year, rounded to the next highest $_____ *(not exceeding the Taxable Wage Base)*.

(5) [ ] **Dollar amount.** The following amount: $______ *(not exceeding the Taxable Wage Base in effect on the first day of the Plan Year)*.

(c) [ ] **Incorporation of contribution formula.** The Plan Administrator will allocate any Fixed Nonelective Contribution under Elections 27(b)(1) or 27(b)(2), or any Prevailing Wage Contribution under Election 27(c), in accordance with the contribution formula the Employer adopts under those Elections.

(d) [ ] **Classifications of Participants.** [*This is not a safe harbor allocation method. Do not elect 28(d) if this is a Money Purchase Pension Plan*] In accordance with the classifications allocation provisions of Section 3.04(B)(3).

Description of the classifications. The classifications are *(select one of (1), (2), or (3))*:

[*Note: Typically, the Employer would elect 28(d) where it intends to satisfy nondiscrimination requirements using "cross-testing" under Treas. Reg. §1.401(a)(4)-8. However, choosing this election does not necessarily require application of cross-testing and the Plan may be able to satisfy nondiscrimination as to its classification-based allocations by testing allocation rates.*]

(1) [ ] **Each in own classification.** Each Participant constitutes a separate classification.

(2) [ ] **NHCEs/HCEs.** Nonhighly Compensated Employee/Participants and Highly Compensated Employee/Participants.

(3) [ ] **Describe the classifications:** ____________________

[*Note: The Group Allocation Limitations of Section 3.14 apply to allocations and elections under this Election 28(d).*]

Allocation method within each classification. Allocate the Nonelective Contribution within each classification as follows *(select one of (4) or (5); skip if 28(d)(1) is elected)*:

(4) [ ] **Pro rata.** As a uniform percentage of Compensation of each Participant within the classification.

(5) [ ] **Flat dollar.** The same dollar amount to each Participant within the classification.

(e) [ ] **Age-based.** [*This is not a safe harbor allocation method.*] In accordance with the age-based allocation provisions of Section 3.04(B)(5). The Plan Administrator will use the Actuarial Factors based on the following assumptions:

Interest rate. *(Select one of (1), (2), or (3))*:

(1) [ ] **7.5%** (2) [ ] **8.0%** (3) [ ] **8.5%**

Mortality table. *(Select one of (4) or (5))*:

(4) [ ] **UP-1984.** See Appendix C.

(5) [ ] **Alternative:** ____________________ *(Specify 1983 GAM, 1983 IAM, 1971 GAM or 1971 IAM and attach applicable tables using such mortality table and the specified interest rate as replacement Appendix C.)*

(f) [ ] **Uniform points.** In accordance with the uniform points allocation provisions of Section 3.04(B)(6). Under the uniform points allocation formula, a Participant receives *(select one or more of (1) and (2); choose (3) if applicable)*:

(1) [ ] **Years of Service.** ____________________ point(s) for each Year of Service. The maximum number of Years of Service counted for points is ____________________.

"Year of Service" under this Election *28*(f) means *(select one of a. or b)*:

a. [ ] **Eligibility.** Years of Service for eligibility in Election 16.

b. [ ] **Vesting.** Years of Service for vesting in Elections 42 and 43.

[*Note: A Year of Service must satisfy Treas. Reg. §1.401(a)(4)-11(d)(3) for the uniform points allocation to qualify as a safe harbor allocation under Treas. Reg. §1.401(a)(4)-2(b)(3).*]

(2) [ ] **Age.** ____________________ point(s) for each year of age attained during the Plan Year.

Compensation *(choose (3) if applicable)*

(3) [ ] ____________________ point(s) for each $_____ *(not to exceed $200)* increment of Plan Year Compensation.

(g) [ ] **Describe:** ____________________

(The Employer may only describe the nonelective allocation formula from the elections available in this Election 28, and/or a combination thereof, as to a Participant group or contribution type (e.g., Participants in the Employer's Chicago office will receive a uniform percentage of Participant Compensation; contributions to all other Participants will be allocated in accordance with the classifications allocation provisions of Section 3.04(B)(3)). The Group Allocation Limitations of Section 3.14 apply to allocations and elections under this Election 28(g).)

Optional Provisions *(choose one or more of (h) or (i) if applicable)*

(h) [ ] **Related and Participating Employers.** If any Related and Participating Employers (or in the case of a Multiple Employer Plan, Participating Employers regardless of whether they are Related Employers) contribute Nonelective Contributions to the Plan, the Plan Administrator will allocate the Nonelective Contributions made by the Participating Employer(s) under Election *27*(e):

Allocation Method. *(select one of (1) or (2))*:

(1) [ ] **All the same.** Using the same allocation method as applies to the Signatory Employer under this Election 28.

(2) [ ] **At least one different.** Under the following allocation method(s): ____________________.

Allocation sharing. The Nonelective Contributions will be allocated to all Participants regardless of which Employer directly employs them and regardless of whether their direct Employer made Nonelective Contributions for the Plan Year unless otherwise elected below or specified in a participation agreement. *(choose (3) if applicable):*

(3) [ ] **Employer by Employer.** The Plan Administrator will allocate the Nonelective Contributions made by the Signatory Employer and by any Participating Employer only to the Participants directly employed by the contributing Employer.

[*Note: Unless the Plan is a Multiple Employer Plan, the Employer should not elect 28(h) unless there are Related Employers which are also Participating Employers. See Section 1.24(D) and Election 27(e). Election 28(h)(3) does not apply to Safe Harbor Nonelective Contributions.*]

(i) [ ] **Allocation computation period.** Allocations will be computed and allocated on an annual basis unless otherwise specified below *(select one of (1) through (4); selecting this option means that the plan is not a design-based safe harbor for nondiscrimination purposes)*:

(1) [ ] **Each payroll period.**

(2) [ ] **Each month.**

(3) [ ] **Each Plan Year quarter.**

(4) [ ] **Describe:** ______________________________

29. QNEC (PLAN-DESIGNATED) **(3.04(C)(1))**. The following provisions apply regarding Plan-Designated QNECs *(select one of (a) or (b). 401(k) Plans)*:

(a) [X] **Not applicable.** There are no Plan-Designated QNECs *(skip to Election 30)*.

(b) [ ] **Applies.** There are Plan-Designated QNECs to which the following provisions apply:

Nonelective Contributions affected. The following Nonelective Contributions (as allocated to the designated allocation group under Election 29(b)(2)) are Plan-Designated QNECs *(select one of (1) or (2))*:

(1) [ ] **All.** All Nonelective Contributions.

(2) [ ] **Designated.** Only the following Nonelective Contributions under Election 27: __________.

Allocation Group. Subject to Section 3.06, allocate the Plan-Designated QNEC *(select one of (3) or (4))*:

(3) [ ] **NHCEs only.** Only to NHCEs under the method elected in Election 29(b)(5), (6), (7) or (8).

(4) [ ] **All Participants.** To all Participants under the method elected in Election 29(b)(5), (6), (7) or (8).

Allocation Method. The Plan Administrator will allocate a Plan-Designated QNEC using the following method (*select one of (5) through (8))*:

(5) [ ] **Pro rata.**

(6) [ ] **Flat dollar.**

(7) [ ] **Reverse.** See Section 3.04(C)(3).

(8) [ ] **Classification allocation method.** See Section 3.04(C)(6). *[Note: The Group Allocation Limitations of Section 3.14 apply to allocations and elections under this Election 28(d).]*

[*Note: See Section 4.10(D) as to targeting limitations applicable to QNEC nondiscrimination testing.*]

30. SAFE HARBOR 401(k) PLAN (SAFE HARBOR CONTRIBUTIONS/ADDITIONAL MATCHING CONTRIBUTIONS) **(3.05)**. The Employer under Election 6(e) will (or in the case of the Safe Harbor Nonelective Contribution may) contribute the following Safe Harbor Contributions described in Section 3.05(E) and will or may contribute Additional Matching Contributions described in Section 3.05(F) *(select one of (a) through (e))*:

(a) [ ] **Safe Harbor Nonelective Contribution (including QACA).** The Safe Harbor Nonelective Contribution equals _____% of a Participant's Compensation [*Note: The amount in the blank must be at least 3%. The Safe Harbor Nonelective Contribution applies toward (offsets) most other Employer Nonelective Contributions. See Section 3.05(E)(12).*]

(b) [ ] **Safe Harbor Nonelective Contribution (including QACA)/delayed year-by-year election (maybe and supplemental notices).** In connection with the Employer's provision of the maybe notice under Section 3.05(I)(1), the Employer elects into safe harbor status by giving the supplemental notice and by making this Election 30(b) to provide for a Safe Harbor Nonelective Contribution equal to _____% *(specify amount at least equal to 3%)* of a Participant's Compensation. This Election 30(b) and safe harbor status applies for the Plan Year ending: ____________________ *(specify Plan Year end)*, which is the Plan Year to which the Employer's maybe and supplemental notices apply.

[*Note: An Employer distributing the maybe notice can use election 30(b) without completing the year. Doing so requires the Plan to perform Current Year Testing unless the Employer decides to elect safe harbor status. If the Employer wishes to elect safe harbor status for a single year, the Employer must amend the Plan to enter the Plan Year end above.*]

(c) [ ] **Basic Matching Contribution.** A Matching Contribution equal to 100% of each Participant's Elective Deferrals not exceeding 3% of the Participant's Compensation, plus 50% of each Participant's Elective Deferrals in excess of 3% but not in excess of 5% of the Participant's Compensation. See Sections 1.35(E) and 3.05(E)(4).

(d) [ ] **QACA Basic Matching Contribution.** A Matching Contribution equal to 100% of a Participant's Elective Deferrals not exceeding 1% of the Participant's Compensation, plus 50% of each Participant's Elective Deferrals in excess of 1% but not in excess of 6% of the Participant's Compensation. [*Note: This election is available only if the Employer has elected the QACA automatic deferrals provisions under Election 21.*]

(e) [ ] **Enhanced Matching Contribution (including QACA).** See Sections 1.35(F) and 3.05(E)(6). *(Select one of (1) or (2).)*:

(1) [ ] **Uniform percentage.** A Matching Contribution equal to ______% of each Participant's Elective Deferrals but not as to Elective Deferrals exceeding ____% of the Participant's Compensation.

(2) [ ] **Tiered formula.** A Matching Contribution equal to the specified matching rate for the corresponding level of each Participant's Elective Deferral percentage. A Participant's Elective Deferral percentage is equal to the Participant's Elective Deferrals divided by his/her Compensation.

Elective Deferral Percentage	Matching Rate
____%	____%
____%	____%
____%	____%

[*Note: The matching rate may not increase as the Elective Deferral percentage increases and the Enhanced Matching formula otherwise must satisfy the requirements of Code §§401(k)(12)(B)(ii) and (iii) (taking into account Code §401(k)(13)(D)(ii) in the case of a QACA). If the Employer elects to satisfy the ACP safe harbor under Election 38(b)(1), the Employer also must limit Elective Deferrals taken into account for the Enhanced Matching Contribution to a maximum of 6% of Plan Year Compensation.*]

Time period for safe harbor matching contribution. For purposes of Election 30(c), (d), or (e), "Compensation" and "Elective Deferrals" mean Compensation and Elective Deferrals determined: *(select one of (f) through (j); skip if 30(a) or 30(b) elected)*

(f) [ ] Each payroll period

(g) [ ] Each month

(h) [ ] Each Plan Year quarter

(i) [ ] Each Plan Year

(j) [ ] Other *(Specify uniform, nondiscretionary time period)*: ____________________

Participants who will receive Safe Harbor Contributions. The allocation of Safe Harbor Contributions *(select one of (k) or (l))*:

(k) [ ] **Applies to all Participants.** Applies to all Participants except as may be limited under Election 30(m).

(l) [ ] **Applies to the following Participants:** *(select one of (1) or (2); and/or choose (3) if applicable)*

(1) [ ] **NHCEs only.** Is limited to NHCE Participants only and may be limited further under Election 30(m). No HCE will receive a Safe Harbor Contribution allocation, unless the Employer exercises its discretion under Section 3.05(E)(9)(a).

(2) [ ] **NHCEs and designated HCEs.** Is limited to NHCE Participants and to the following HCE Participants and may be limited further under Election 30(m): ____________________.

[*Note: Any HCE allocation group the Employer describes under Election 30(l)(2) must be definitely determinable. (e.g., Division "A" HCEs OR HCEs who own more than 5% of the Employer without regard to attribution rules).*]

(3) [ ] **Applies to all Participants except Collective Bargaining Employees.** Notwithstanding Elections 30(l)(1) or (2), the Safe Harbor Contributions are not allocated to Collective Bargaining (union) Employees and may be further limited under Election 30(m).

Optional Provisions *(choose one or more of (m) or (n) if applicable)*

(m) [ ] **Early Elective Deferrals/delay of Safe Harbor Contribution.** The Employer may elect this Election 30(m) only if the Employer in Election 14 elects eligibility requirements for Elective Deferrals of less than age 21 and/or one Year of Service but elects greater age and/or service requirements for Safe Harbor Matching or for Safe Harbor Nonelective Contributions. The Employer under this Election 30(m) applies the rules of Section 3.05(D) to limit the allocation of any Safe Harbor Contribution under Election 30 for a Plan Year to those Participants who the Plan Administrator in applying the OEE rule described in Section 4.06(C), treats as benefiting in the disaggregated plan covering the Includible Employees.

(n) [ ] **Another plan.** The Employer will make the Safe Harbor Contribution to the following plan: ____________________.

Additional Matching Contributions. See Sections 1.35(G) and 3.05(F). *(select one of (o) or (p))*:

(o) [ ] **No Additional Matching Contributions.** The Employer will not make any Additional Matching Contributions to its safe harbor Plan.

(p) [ ] **Additional Matching Contributions.** The Employer will or may make the following Additional Matching Contributions to its safe harbor Plan. *(select one or more of (1) through (3)):*

(1) [ ] **Fixed Additional Matching Contribution.** The following Fixed Additional Matching Contribution *(select one or more of a. and b.):*

a. [ ] **Uniform percentage.** A Matching Contribution equal to ____% of each Participant's Elective Deferrals but not as to Elective Deferrals exceeding ____% of the Participant's Compensation.

b. [ ] **Tiered formula.** A Matching Contribution equal to the specified matching rate for the corresponding level of each Participant's Elective Deferral percentage. A Participant's Elective Deferral percentage is equal to the Participant's Elective Deferrals divided by his/her Compensation.

Elective Deferral Percentage	Matching Rate
___%	___%
___%	___%
___%	___%

Time period. For purposes of this Election 30(p)(1), "Compensation" and "Elective Deferrals" mean Compensation and Elective Deferrals determined for: *(select one of c. through g.)*

c. [ ] Each payroll period

d. [ ] Each month

e. [ ] Each Plan Year quarter

f. [ ] Each Plan Year

g. [ ] Other *(Specify uniform, nondiscretionary time period):* ____________________

(2) [ ] **Discretionary Additional Matching Contribution.** The Employer may make a Discretionary Additional Matching Contribution. If the Employer makes a Discretionary Matching Contribution, the Discretionary Matching Contribution will not apply as to Elective Deferrals exceeding ______% of the Participant's Compensation *(complete the blank if applicable or leave blank).*

Time period. For purposes of this Election 30(p)(2), "Compensation" and "Elective Deferrals" mean Compensation and Elective Deferrals determined for: *(select one of a. through e.)*

a. [ ] Each payroll period

b. [ ] Each month

c. [ ] Each Plan Year quarter

d. [ ] Each Plan Year

e. [ ] Other *(Specify uniform, nondiscretionary time period):* ____________________

[*Note: If the Employer elects to satisfy the ACP safe harbor under Election 38(b)(1) then as to any and all Matching Contributions, including Fixed Additional Matching Contributions and Discretionary Additional Matching Contributions: (i) the matching rate may not increase as the Elective Deferral percentage increases; (ii) no HCE may be entitled to a greater rate of match than any NHCE; (iii) the Employer must limit Elective Deferrals taken into account for the Additional Matching Contributions to a maximum of 6% of Plan Year Compensation; (iv) the Plan must apply all Matching Contributions to Catch-Up Deferrals; and (v) in the case of a Discretionary Additional Matching Contribution, the contribution amount may not exceed 4% of the Participant's Plan Year Compensation.*]

(3) [ ] **Additional non-safe harbor match.** The Plan will not use the ACP Safe Harbor. Additional Matching Contributions will be made as follows: ____________________

[*Note: The Employer in Election 30(p)(3) may specify any matching contribution formula or formulas which could be specified in Election 24 and may specify different formulas for different groups of Participants (i.e., The Employer will make a Discretionary Matching Contribution for Participants in its Chicago office, and a Fixed Matching Contribution of 33% of Elective Deferrals up to 12% of Compensation for all other Participants). If the Employer elects 30(p)(3), the Plan will not qualify for the ACP Safe Harbor and the Employer should elect, at Election 37(b)(2), the ACP testing method. The Group Allocation Limitations of Section 3.14 apply to allocations and elections under this Election 30(p)(3).]*

Multiple Safe Harbor Contributions in disaggregated Plan *(Choose (q) if applicable)*

(q) [ ] The Employer elects to make different Safe Harbor Contributions and/or Additional Matching Contributions to disaggregated parts of its Plan under Treas. Reg. §1.401(k)-1(b)(4) as follows: ____________________
[Note: The Employer in Election 30(q) may specify any matching contribution formula or formulas which could be specified in Election 24 and may specify different formulas for different groups of Participants (i.e., The Employer will make a Fixed

Matching Contribution of 33% of Elective Deferrals up to 12% of Compensation for Collective Bargaining Employees, and a Discretionary Additional Matching Contribution as described in Election 30(p)(2) for all other Participants). Allocation formulas, such as a fixed match based on years of service, which permit an HCE in a disaggregated plan to receive a higher rate of match than any NHCE in that plan at the same level of elective deferrals will not satisfy Treas. Reg. §1.401(m)-3(d)(4) and will not qualify for the ACP Safe Harbor. The Group Allocation Limitations of Section 3.14 apply to allocations under this Election 30(q).]

31. ALLOCATION CONDITIONS **(3.06(B)/(C))**. The Plan does not apply any allocation conditions to: (i) Employee Contributions; (ii) Rollover Contributions; (iii) Designated IRA Contributions; or (iv) Prevailing Wage Contributions. In addition, for 401(k) plans, the Plan does not apply any allocation conditions to: (i) Elective Deferrals; (ii) Safe Harbor Contributions; (iii) Additional Matching Contributions which will satisfy the ACP test safe harbor; or (iv) SIMPLE Contributions. To receive an allocation of Matching Contributions, Nonelective Contributions or Participant forfeitures, a Participant must satisfy the following allocation condition(s) *(select one of (a) or (b))*:

(a) [ ] **No conditions.** No allocation conditions apply to Matching Contributions, to Nonelective Contributions or to forfeitures *(skip to Election 33)*.

(b) [X] **Conditions.** The following allocation conditions apply to the designated Contribution Type and/or forfeitures *(select one or more of (1) through (7). Select Contribution Type as applicable. If more than one allocation condition elected, the Participant must satisfy each condition to receive the allocation.)*:

[Note for 401(k) plans: For this Election 31, except as the Employer describes otherwise in Election 31(b)(7) or as provided in the Plan regarding Operational Matches, Operational QMACs, and Operational QNECs, Matching includes all Matching Contributions and Nonelective includes all Nonelective Contributions to which allocation conditions may apply. The Employer under Election 31(b)(7) may not impose an Hour of Service condition exceeding 1,000 Hours of Service in a Plan Year. Elections (4) or (6) for nonelective contributions will subject the plan to the general nondiscrimination test.]

			(1) Matching, Nonelective and Forfeitures		(2) Matching	(3) Nonelective	(4) Forfeitures
(1)	[ ]	**None.**	N/A (See Election 31(a))		[ ]	[ ]	[ ]
(2)	[ ]	**501 HOS/terminees** (91 consecutive days if Elapsed Time). See Section 3.06(B)(1)(b).	[ ]	OR	[ ]	[ ]	[ ]
(3)	[X]	**Last day of the Plan Year.**	[X]	OR	[ ]	[ ]	[ ]
(4)	[ ]	**Last day of the Election 31(c) time period.**	[ ]	OR	[ ]	[ ]	[ ]
(5)	[ ]	**1,000 HOS in the Plan Year** (182 consecutive days in Plan Year if Elapsed Time).	[ ]	OR	[ ]	[ ]	[ ]
(6)	[ ]	_____ **(specify) HOS within the Election 31(c) time period,** (but not exceeding 1,000 HOS in a Plan Year).	[ ]	OR	[ ]	[ ]	[ ]

(7) [ ] **Describe conditions:** ____________________
(e.g., Last day of the Plan Year as to Nonelective Contributions for Participating Employer "A" Participants. No allocation conditions for Participating Employer "B" Participants.)

Time period *(choose (c) if applicable; skip if 31(b)(4), (b)(6), or (b)(7) not selected)*

(c) [ ] Under Section 3.06(C), apply Elections 31(b)(4), (b)(6), or (b)(7) to the specified contributions/forfeitures based on each *(Choose one or more of (1) through (5). Choose Contribution Type as applicable.)*:

			(1)		(2)	(3)	(4)
(1)	[ ]	**Plan Year.**	[ ]	OR	[ ]	[ ]	[ ]
(2)	[ ]	**Plan Year quarter.**	[ ]	OR	[ ]	[ ]	[ ]
(3)	[ ]	**Calendar month.**	[ ]	OR	[ ]	[ ]	[ ]
(4)	[ ]	**Payroll period.**	[ ]	OR	[ ]	[ ]	[ ]

(5) [ ] **Describe time period:** ____________________

[Note: If the Employer elects 31(b)(4) or (b)(6), the Employer must choose (c). If the Employer elects 31(b)(7), choose (c) if applicable.]

32. <u>ALLOCATION CONDITIONS - APPLICATION/WAIVER/SUSPENSION</u> (3.06(D)/(F)). Under Section 3.06(D), in the event of Severance from Employment as described below, apply or do not apply Election 31(b) allocation conditions to the specified contributions/forfeitures as follows:

Application/Waiver *(Select one of (a) or (b))*

(a) [X] **Total waiver or application.** If a Participant incurs a Severance from Employment on account of or following death, Disability or attainment of Normal Retirement Age or Early Retirement Age *(select one of (1) or (2))*:

(1) [X] **Allocation conditions are waived.** Do not apply elected allocation conditions to Matching Contributions, to Nonelective Contributions or to forfeitures.

(2) [ ] **Allocation conditions apply.** Apply elected allocation conditions to Matching Contributions, to Nonelective Contributions and to forfeitures.

(b) [ ] **Application/waiver as to Contribution Types events.** If a Participant incurs a Severance from Employment, apply allocation conditions *except* such conditions are waived if Severance from Employment is on account of or following death, Disability or attainment of Normal Retirement Age or Early Retirement Age as specified, and as applied to the specified Contribution Types/forfeitures *(select one or more of (1) through (4). Select Contribution Type as applicable.)*:

[*Note for 401(k) Plans: For this Election 32(b), except as the Employer describes otherwise in Election 31(b)(7) or as provided in in the Plan regarding Operational Matches, Operational QMACs, or Operational QNECs, Matching includes all Matching Contributions and Nonelective includes all Nonelective Contributions to which allocation conditions may apply.*]

	(1) Matching, Nonelective and Forfeitures		(2) Matching	(3) Nonelective	(4) Forfeitures
(1) [ ] **Death.**	[ ]	OR	[ ]	[ ]	[ ]
(2) [ ] **Disability.**	[ ]	OR	[ ]	[ ]	[ ]
(3) [ ] **Normal Retirement Age.**	[ ]	OR	[ ]	[ ]	[ ]
(4) [ ] **Early Retirement Age.**	[ ]	OR	[ ]	[ ]	[ ]

Suspension. The suspension of allocation conditions of Section 3.06(F) *(select one of (c) or (d))*:

(c) [X] **Suspension applies.**

For 401(k) plans, applies as follows *(select one of (1), (2), or (3))*:

(1) [X] **Both.** Applies both to Nonelective Contributions and to Matching Contributions.

(2) [ ] **Nonelective.** Applies only to Nonelective Contributions.

(3) [ ] **Match.** Applies only to Matching Contributions.

(d) [ ] **Suspension does not apply.**

33. <u>FORFEITURE ALLOCATION METHOD</u> (3.07). *(select one of (a) or (b).)*:

[*Note: Even if the Employer elects immediate vesting, the Employer should complete Election 33. See Section 7.07. Election can be omitted if the plan is frozen or the plan is a 401(k) plan with no employer contributions*]

(a) [ ] **Safe harbor/top-heavy exempt.** Apply all forfeitures to Safe Harbor Contributions and Plan expenses in accordance with Section 3.07(A)(4). *(may only be selected with 401(k) plans)*

(b) [X] **Apply to Contributions.** The Plan Administrator will allocate a Participant forfeiture as follows: *(select one or more of (1) through (7). Select Contribution Type as applicable)*:

	(1) All Forfeitures		(2) Nonelective Forfeitures	(3) Matching Forfeitures
(1) [ ] **All.** Use as described in (2) through (6). *((1) may not be selected with (2) through (6))*	[ ]	OR	[ ]	[ ]
(2) [ ] **Additional Nonelective.** Added to Nonelective Contributions and allocated in the same manner.	[ ]	OR	[ ]	[ ]
(3) [ ] **Additional Match.** Added to Matching Contributions and allocated in the same manner.	[ ]	OR	[ ]	[ ]
(4) [X] **Reduce Nonelective.** Apply to reduce Nonelective Contribution.	[X]	OR	[ ]	[ ]

(5)	[X]	**Reduce Match.** Apply to reduce Matching Contribution.	[X]	OR	[ ]	[ ]
(6)	[X]	**Plan expenses.** Pay reasonable Plan expenses. (See Section 7.04(C).) *(must be selected with another election)*	[X]	OR	[ ]	[ ]

(7) [ ] **Describe:** ______________________________
(must satisfy the definitely determinable requirement under Treas. Reg. §1.401-1(b) and be applied in a uniform and nondiscriminatory manner; e.g., Forfeitures attributable to transferred balances from Plan X are allocated only to former Plan X participants.)

34. IN-PLAN ROTH ROLLOVER CONTRIBUTION **(3.08(E))**. The following provisions apply regarding In-Plan Roth Rollover Contributions *(Choose one of (a) or (b); also see Appendix B, Election (g)(2); leave blank if Election 6(b)(1) is not selected.)*:

(a) [ ] **Not Applicable.** The Plan does not permit In-Plan Roth Rollover Contributions *(skip to Election 35)*.

(b) [X] **Applies.** The Plan permits In-Plan Roth Rollover Contributions with regard to the following amounts and subject to the following limitations. *(select one or more of (1) and (2))*

(1) [X] **IRR.** This provision is effective with regard to IRRs (see Section 1.55(A)(1)) the later of September 28, 2010, or the Plan or Restatement Effective Date unless other date entered below.

a. [X] or July 1, 2015 *(enter later effective date if applicable)*

(2) [X] **IRT.** This provision is effective with regard to IRTs (see Section 1.55(A)(2)) the later of January 1, 2013, or the Plan or Restatement Effective Date unless other date entered below.

a. [X] or July 1, 2015 *(enter later effective date if applicable)*

Limitations. The following restrictions apply to In-Plan Roth Rollovers (*choose one or more of (c) through (h) if applicable*)

			(1) IRR	(2) IRT
(c)	[ ]	**In-Plan Roth Rollovers limited to In-Service only.** Only Participants who are Employees may elect to make an In-Plan Roth Rollover Contribution.	[ ]	[ ]
(d)	[X]	**Vested In-Plan Roth Rollovers.** In-Plan Roth Rollovers may only be made from accounts which are fully Vested.	[X]	[X]
(e)	[X]	**No transfer of loans.** Loans may not be distributed as part of an In-Plan Roth Rollover Contribution.	[X]	[X]
(f)	[ ]	**Minimum amount.** The minimum amount that may be rolled over is _______ *(may not exceed $1,000)*.	[ ]	[ ]
(g)	[ ]	**Number of Transfers.** No more than _____ transfer(s) may be made during a Plan Year.	[ ]	[ ]

(h) [ ] **Describe transfer provisions.** Transfers may be made subject to the following provisions:

______________ *(must be definitely determinable and not subject to Employer or Administrator discretion; specify different provisions for IRR and IRT if desired)*.

Source of In-Plan Roth Rollover Contributions *(Select one or more of (i) or (j))*:			1.	2.
(i)	[X]	**All Sources.** (select one or both of columns (1) – (2))	[X]	[X]

(j) [ ] **Limited Sources.** The Plan permits an In-Plan Roth Rollover only from the following qualifying sources (*select one or more of (1) through (7))*:

			(1) IRR	(2) IRT
(1)	[ ]	**Elective Deferrals**	[ ]	[ ]
(2)	[ ]	**Matching Contributions** (including any Safe Harbor Matching Contributions and Additional Matching Contributions)	[ ]	[ ]
(3)	[ ]	**Nonelective Contributions**	[ ]	[ ]
(4)	[ ]	**QNECS** (including any Safe Harbor Nonelective Contributions)	[ ]	[ ]
(5)	[ ]	**Rollovers**	[ ]	[ ]
(6)	[ ]	**Transfers**	[ ]	[ ]

(7) [ ] **Other:** _____________ *(specify account(s) and conditions in a manner that is definitely determinable and not subject to Employer discretion; specify different sources for IRR and IRT if desired)*

35. EMPLOYEE (AFTER-TAX) CONTRIBUTIONS **(3.09)**. The following additional elections apply to Employee Contributions under Election 6(f).

After-tax contribution limits. *(choose (a) and (b) as applicable.)*:

(a) **[ ]** **Maximum amount.** A Participant's Employee Contributions may not exceed: *(complete (1) and (2))*

(1) **[ ]** **NHCE.** _________ *(specify dollar amount and/or percentage of Compensation) for NHCEs*

(2) **[ ]** **HCE.** ___________ *(specify dollar amount and/or percentage of Compensation) for HCEs. The limit for HCEs cannot exceed the limit for NHCEs)*

(b) **[ ]** **Minimum amount.** A Participant's Employee Contributions may not be less than: ____________*(specify dollar amount (not greater than $10,000) and/or percentage of Compensation (not greater than 10%))*.

Apply Matching Contribution. For each Plan Year, the Employer's Matching Contribution made with regard to Employee Contributions is *(leave blank if there are no Matching Contributions made with regard to Employee Contributions; otherwise, choose one of (c) or (d).)*:

(c) **[ ]** **Same as Elective Deferrals.** Employee Contributions will be treated the same as Elective Deferrals for purposes of calculating the Matching Contributions under Election 24.

(d) **[ ]** **Discretionary.** See Section 1.35(B). This contribution will be computed as a Flexible Discretionary Match under Section 3.03(A)(2)(b) as though the Employee Contributions were Elective Deferrals.

36. DESIGNATED IRA CONTRIBUTIONS **(3.12)**. Under Election 6(h), a Participant may make Designated IRA Contributions.

Type of IRA contribution. A Participant's Designated IRA Contributions will be *(select one of (a), (b), or (c))*:

(a) **[ ]** **Traditional.**

(b) **[ ]** **Roth.**

(c) **[ ]** **Traditional/Roth.** As the Participant elects at the time of contribution.

Type of Account. A Participant's Designated IRA Contributions will be held in the following form of Account(s) *(select one of (d), (e), or (f))*:

(d) **[ ]** **IRA.**

(e) **[ ]** **Individual Retirement Annuity.**

(f) **[ ]** **IRA/Individual Retirement Annuity.** As the Participant elects at the time of contribution.

ARTICLE IV
LIMITATIONS AND TESTING

37. ANNUAL TESTING ELECTIONS **(4.06(B))**. The Employer makes the following Plan specific annual testing elections under Section 4.06(B):

Nondiscrimination testing. *(Select one or more of (a), (b), and (c). Plans other than 401(k) plans should skip except select (a)(4) or (5) if the Plan permits Employee Contributions.)*:

(a) **[X]** **Traditional 401(k) Plan/ADP/ACP test.** The following testing method(s) apply

[*Note: The Plan may "split test". For Current Year Testing, See Section 4.11(E). For Prior Year Testing, see Section 4.11(H) and, as to the first Plan Year, see Sections 4.10(B)(4)(f)(iv) and 4.10(C)(5)(e)(iv).*]

ADP Test *(Select one of (1) or (2))*

(1) **[ ]** **Current Year Testing.**

(2) **[X]** **Prior Year Testing.**

ACP Test *(Select one of (3), (4), or (5))*

(3) **[ ]** **Not applicable.** The Plan does not permit Matching Contributions or Employee Contributions and the Plan Administrator will not recharacterize Elective Deferrals as Employee Contributions for testing.

(4) **[ ]** **Current Year Testing.**

(5) **[X]** **Prior Year Testing.**

(b) [ ] **Safe Harbor Plan/No testing or ACP test only.** *(select one of (1) or (2))*:

(1) [ ] **No testing.** ADP test safe harbor applies and if applicable, ACP test safe harbor applies. If the Plan permits Employee Contributions, current year ACP testing will apply to Employee Contributions unless otherwise elected below *(Choose a. if applicable.)*.

a. [ ] **Prior Year Testing applies to Employee Contributions.**

(2) [ ] **ACP test only.** ADP test safe harbor applies, but Plan will perform ACP test as follows *(select one of a. or b.)*:

a. [ ] **Current Year Testing.**

b. [ ] **Prior Year Testing.**

(c) [ ] **Maybe notice (Election 30(b)).** See Section 3.05(I).

[*Note: When maintaining a traditional 40 l(k) plan, select (a); when maintaining a safe harbor 401(k) plan, select (b). Skip if SIMPLE 401(k) plan. The Employer may make elections under both the Traditional 401(k) Plan and Safe Harbor Plan elections, in order to accommodate a Plan that applies both testing elections (e.g., Safe Harbor Includible Employees group and tested Otherwise Excludible Employees group). In the absence of an election regarding ADP or ACP tested contributions, Current Year Testing applies.*]

HCE determination. The Top-Paid Group election and the calendar year data election are not used unless elected below *(choose one or more of (d) and (e) if applicable)*:

(d) [ ] **Top-paid group election applies.**

(e) [ ] **Calendar year data election (fiscal year Plan only) applies.**

ARTICLE V
VESTING

38. <u>NORMAL RETIREMENT AGE</u> **(5.01)**. A Participant attains Normal Retirement Age under the Plan on the following date *(select one of (a) or (b))*:

(a) [X] **Specific age.** The date the Participant attains age _65_. [*Note: The age may not exceed age 65.*]

(b) [ ] **Age/participation.** The later of the date the Participant attains age _____ or the _____ anniversary of the first day of the Plan Year in which the Participant commenced participation in the Plan. [*Note: The age may not exceed age 65 and the anniversary may not exceed the 5th.*]

[*Note for Money Purchase Pension Plans: The Normal Retirement Age specified must generally be at least age 62; however, a lower age, but not lower than age 55, may be specified if that age is reasonably representative of the typical retirement age for the industry in which the covered workforce is employed. No reliance will be afforded on the Opinion Letter issued to the Plan that (if the Plan is a Money Purchase Pension Plan) an age less than 62 is reasonably representative of the typical retirement age for the industry in which the participants work.*]

39. <u>EARLY RETIREMENT AGE</u> **(5.01)**. *(select one of (a) or (b))*:

(a) [X] **Not applicable.** The Plan does not provide for an Early Retirement Age.

(b) [ ] **Early Retirement Age.** Early Retirement Age is the later of: (i) the date a Participant attains age ______; (ii) the date a Participant reaches his/her _____ anniversary of the first day of the Plan Year in which the Participant commenced participation in the Plan; or (iii) the date a Participant completes _____ Years of Service.

[*Note: The Employer should leave blank any of clauses (i), (ii), and (iii) which are not applicable.*]

"Years of Service" under this Election 39 means *(select one of (1) or (2); skip if (b)(iii) NOT elected)*:

(1) [ ] **Eligibility.** Years of Service for eligibility in Election 16.

(2) [ ] **Vesting.** Years of Service for vesting in Elections 42 and 43.

[*Note: Election of an Early Retirement Age does not affect the time at which a Participant may receive a Plan distribution. However, a Participant becomes 100% vested at Early Retirement Age.*]

40. <u>ACCELERATION ON DEATH OR DISABILITY</u> **(5.02)**. Under Section 5.02, if a Participant incurs a Severance from Employment as a result of death or Disability *(select one of (a), (b), or (c))*:

(a) [X] **Applies.** Apply 100% vesting.

(b) [ ] **Not applicable.** Do not apply 100% vesting. The Participant's vesting is in accordance with the applicable Plan vesting schedule.

(c) [ ] **Limited application.** Apply 100% vesting, but only if a Participant incurs a Severance from Employment as a result of *(select one of (1) or (2))*:

(1) [ ] **Death.**

(2) [ ] **Disability.**

41. VESTING SCHEDULE **(5.03)**. A Participant has a 100% Vested interest at all times in his/her Accounts attributable to: (i) Elective Deferrals; (ii) Employee Contributions; (iii) QNECs; (iv) QMACs; (v) Safe Harbor Contributions (other than QACA Safe Harbor Contributions); (vi) SIMPLE Contributions; (vii) Rollover Contributions; (viii) Prevailing Wage Contributions; (ix) DECs; and (x) Designated IRA Contributions. The following vesting schedule applies to Regular Matching Contributions, to Additional Matching Contributions (irrespective of ACP testing status), to Nonelective Contributions (other than Prevailing Wage Contributions) and to QACA Safe Harbor Contributions. *(select (a) or (b))*:

(a) [ ] **Immediate vesting.** 100% Vested at all times in all Accounts.

[Note: Unless all Contribution Types are 100% Vested, the Employer should not elect 41(a). If the Employer elects immediate vesting under 41(a), the Employer should not complete the balance of Election 41 or Elections 42 and 43 (except as noted therein). For 401(k) plans: (i) The Employer must elect 41(a) if the eligibility Service condition under Election 14 as to all Contribution Types (except Elective Deferrals and Safe Harbor Contributions) exceeds one Year of Service or more than 12 months; (ii) The Employer must elect 41(b)(1) as to any Contribution Type where the eligibility service condition exceeds one Year of Service or more than 12 months; and (iii) The Employer should elect 41(b) if any Contribution Type is subject to a vesting schedule. For Money Purchase Pension Plans and Profit Sharing Plans, the Employer must elect 41(a) if the eligibility Service condition exceeds one Year of Service or more than 12 months.]

(b) [X] **Vesting schedules:** Apply the following vesting schedules *(Select one or more of (1) through (6). Select Contribution Type as applicable.)*:

			(1) All Contributions		(2) Nonelective	(3) Regular Matching	(4) Additional Matching (See Section 3.05(F))	(5) QACA Safe Harbor
(1)	[ ]	**Immediate vesting.**	N/A (See Election 41(a))		[ ]	[ ]	[ ]	[ ]
(2)	[ ]	**6-year graded.**	[ ]	OR	[ ]	[ ]	[ ]	N/A
(3)	[X]	**3-year cliff.**	[X]	OR	[ ]	[ ]	[ ]	N/A
(4)	[ ]	**Modified schedule:**	[ ]	OR	[ ]	[ ]	[ ]	N/A
(5)	[ ]	**2-year cliff.**	[ ]	OR	[ ]	[ ]	[ ]	[ ]
(6)	[ ]	**Modified 2-year schedule:**	[ ]	OR	[ ]	[ ]	[ ]	[ ]

Modified schedule (4):

Years of Service	Vested %	Not Less Than
Less than 1	a. _____	0%
1	b. _____	0%
2	c. _____	20%
3	d. _____	40%
4	e. _____	60%
5	f. _____	80%
6 or more	100%	

Modified 2-year schedule (6):

Years of Service	Vested %
Less than 1	a. _____
1	b. _____
2	100%

[Note: If the Employer does not elect 41(a), the Employer under 41(b) must elect immediate vesting or must elect one of the specified alternative vesting schedules. The modified schedule of Election 41(b)(4) must satisfy Code §411(a)(2)(B).]

[Note for 401(k) plans: The Employer must elect either 41(b)(5) or (6) as to QACA Safe Harbor Contributions. If the Employer elects Additional Matching under Election 30(p), the Employer should elect vesting under the Additional Matching column in this Election 41(b). That election applies to the Additional Matching even if the Employer has given the maybe notice but does not give the supplemental notice for any Plan Year and as to such Plan Years, the Plan is not a safe harbor plan and the Matching Contributions are not Additional Matching Contributions.]

Special vesting provisions *(choose c. if applicable)*

(c) [ ] **Describe:** ______________________________

[Note: The Employer under Election 41(c) may describe special vesting provisions from the elections available under Election 41 and/or a combination thereof as to a: (i) Participant group (e.g., Full vesting applies to Division A Employees OR to Employees hired on/before "x" date. 6-year graded vesting applies to Division B Employees OR to Employees hired after "x" date.); and/or (ii) Contribution Type (e.g.,

Full vesting applies as to Discretionary Nonelective Contributions. 6-year graded vesting applies to Fixed Nonelective Contributions). Any special vesting provision must satisfy Code §411(a) and must be nondiscriminatory.]

42. YEAR OF SERVICE - VESTING **(5.05)**. *(choose (a) and/or (b) if applicable)*

[*Note: If the Employer elects the Elapsed Time Method for vesting the Employer should not complete this Election 42. If the Employer elects immediate vesting, the Employer should not complete Election 42 or Election 43 unless it elects to apply a Year of Service for vesting under any other Adoption Agreement election.*]

(a) [X] **Year of Service.** An Employee must complete at least 1,000 Hours of Service during a Vesting Computation Period to receive credit for a Year of Service under Article V. [*Note: The number may not exceed 1,000. If left blank, the requirement is 1,000 Hours of Service.*]

(b) [ ] **Vesting Computation Period- Anniversary Year.** The Plan measures a Year of Service based on the Plan Year unless this option is elected.

43. EXCLUDED YEARS OF SERVICE - VESTING **(5.05(C))**. *(select (a) or (b))*:

(a) [X] **None.** None other than as specified in Section 5.05(C)(1).

(b) [ ] **Exclusions.** The Plan excludes the following Years of Service for purposes of vesting *(select one or more of (1) through (4))*:

(1) [ ] **Age 18.** Any Year of Service before the Vesting Computation Period during which the Participant attained the age of 18.

(2) [ ] **Prior to Plan establishment.** Any Year of Service during the period the Employer did not maintain this Plan or a predecessor plan.

(3) [ ] **Rule of Parity.** Any Year of Service excluded under the rule of parity. See Plan Section 5.06(C).

(4) [ ] **Additional exclusions.** The following Years of Service: ____________________

[*Note: The Employer under Election 43(b)(4) may describe vesting service exclusions provisions available under Election 43 and/or a combination thereof as to a: (i) Participant group (e.g., No exclusions apply to Division A Employees OR to Employees hired on/before "x" date. The age 18 exclusion applies to Division B Employees OR to Employees hired after "x" date.); or (ii) Contribution Type (e.g., No exclusions apply as to Discretionary Nonelective Contributions. The age 18 exclusion applies to Fixed Nonelective Contributions). Any exclusion specified under Election 43(b)(4) must comply with Code §411(a)(4). Any exclusion must be nondiscriminatory.*]

ARTICLE VI
DISTRIBUTION OF ACCOUNT BALANCE

44. MANDATORY DISTRIBUTION **(6.01(A)(1)/6.08(D))**. The Plan provides or does not provide for Mandatory Distribution of a Participant's Vested Account Balance following Severance from Employment, as follows *(select one of (a) or (b))*:

(a) [ ] **No Mandatory Distribution.** The Plan will not make a Mandatory Distribution following Severance from Employment.

(b) [X] **Mandatory Distribution.** The Plan will make a Mandatory Distribution following Severance from Employment.

Amount limit. As to a Participant who incurs a Severance from Employment and who will receive distribution before attaining the later of age 62 or Normal Retirement Age, the Mandatory Distribution maximum amount is equal to *(select one of (1), (2), or (3))*:

(1) [X] **$5,000.**

(2) [ ] **$1,000.**

(3) [ ] **Specify amount: $_______** *(may not exceed $5,000).*

[*Note: This election only applies to the Mandatory Distribution maximum amount. For other Plan provisions subject to a $5,000 limit, see Appendix B, Election (g)(7).*]

Application of Rollovers to amount limit. In determining whether a Participant's Vested Account Balance exceeds the Mandatory Distribution dollar limit in Election 44(b)(1), the Plan will include amounts in the Rollover Contribution Account (if any) unless otherwise elected below *(choose (4) if applicable)*:

(4) [X] **Disregard Rollover Contribution Account.**

Amount of Mandatory Distribution subject to Automatic Rollover. A Mandatory Distribution to a Participant before attaining the later of age 62 or Normal Retirement Age is subject to Automatic Rollover under Section 6.08(D) *(choose one of (5) or (6) unless the Employer elects under Elections 44(b)(2) to limit Mandatory Distributions to $1,000 (including Rollover Contributions)*:

(5) [X] **Only if exceeds $1,000.** Only if the amount of the Mandatory Distribution exceeds $1,000, which for this purpose must include any Rollover Contributions Account.

(6) [ ] **Specify lesser amount.** Only if the amount of the Mandatory Distribution is at least: $__________ *(specify $1,000 or less)*, which for this purpose must include any Rollover Contributions Account.

Required distribution at Normal Retirement Age *(choose (c) if applicable)*

(c) [ ] A severed Participant may not elect to delay distribution beyond the later of age 62 or Normal Retirement Age.

45. <u>SEVERANCE DISTRIBUTION TIMING</u> (**6.01**). Subject to the timing limitations of Section 6.01(A)(1) in the case of a Mandatory Distribution, or in the case of any Distribution Requiring Consent under Section 6.01(A)(2), for which consent is received, the Plan Administrator will instruct the Trustee to distribute a Participant's Vested Account Balance as soon as is administratively practical following the time specified below *(select one or more of (a) through (i))*:

[*Note: If a Participant dies after Severance from Employment but before receiving distribution of all of his/her Account, the elections under this Election 45 no longer apply. See Section 6.01(B) and Election 49.*]

			(1) Mandatory Distribution	(2) Distribution Requiring Consent
(a)	[X]	**Immediate.** Immediately following Severance from Employment.	[X]	[X]
(b)	[ ]	**Next Valuation Date.** After the next Valuation Date following Severance from Employment.	[ ]	[ ]
(c)	[ ]	**Plan Year.** In the _____ Plan Year following Severance from Employment *(e.g., next or fifth)*.	[ ]	[ ]
(d)	[ ]	**Plan Year quarter.** In the _____ Plan Year quarter following Severance from Employment *(e.g., next or fifth)*.	[ ]	[ ]
(e)	[ ]	**Contribution Type Accounts.** __________________ *(specify timing)* as to the Participant's __________________ Account(s) and __________________ *(specify timing)* as to the Participant's __________________ Account(s) *(e.g. for 401(k) plans, as soon as is practical following Severance from Employment as to the Participant's Elective Deferral Account and as soon as is practical in the next Plan Year following Severance from Employment as to the Participant's Nonelective and Matching Accounts)*.	[ ]	[ ]
(f)	[ ]	**Vesting controlled timing.** If the Participant's total Vested Account Balance exceeds $_____, distribute __________________ *(specify timing)* and if the Participant's total Vested Account Balance does not exceed $_____, distribute ________________ *(specify timing)*.	[ ]	[ ]
(g)	[ ]	**Distribute at Normal Retirement Age.** As to a Mandatory Distribution, distribute not later than 60 days after the beginning of the Plan Year following the Plan Year in which the previously severed Participant attains the earlier of Normal Retirement Age or age 65. [*Note: An election under column (2) only will have effect if the Plan's NRA is less than age 62.*]	[ ]	[ ]
(h)	[ ]	**No buy-back/vesting controlled timing.** Distribute as soon as is practical following Severance from Employment if the Participant is fully Vested. Distribute as soon as is practical following a Forfeiture Break in Service if the Participant is not fully Vested.	[ ]	[ ]

(i) [ ] **Describe Severance from Employment distribution timing:** ____

[*Note: The Employer under Election 45(i) may describe Severance from Employment distribution timing provisions from the elections available under Election 45 and/or a combination thereof as to any: (i) Participant group (e.g., Immediate distribution after Severance from Employment applies to Division A Employees OR to Employees hired on/before "x" date. Distribution after the next Valuation Date following Severance from Employment applies to Division B Employees OR to Employees hired after "x" date.); (ii) Contribution Type and Participant group (e.g., As to Division A Employees, immediate distribution after Severance from Employment applies as to Elective Deferral Accounts and distribution after the next Valuation Date following Severance from Employment applies to Nonelective Contribution Accounts); and/or (iii) merged plan account now held in the Plan (e.g., The accounts from the X plan merged into this Plan continue to be distributable in accordance with the X plan terms [supply terms] and not in accordance with the terms of this Plan). An Employer's election under Election 45(i) must: (i) be objectively determinable; (ii) not be subject to Employer discretion; (iii) comply with Code §401(a)(14) timing requirements; (iv) be nondiscriminatory and (v) preserve Protected Benefits as required.*]

Acceleration. Notwithstanding any later specified distribution date in Election 45, a Participant may elect an earlier distribution following Severance from Employment *(Choose (j) and/or (k) if applicable.)*:

(j) [ ] **Disability.** If Severance from Employment is on account of Disability or if the Participant incurs a Disability following Severance from Employment.

(k) [ ] **Hardship.** If the Participant incurs a hardship under Section 6.07(B) following Severance from Employment.

46. <u>IN-SERVICE DISTRIBUTIONS/EVENTS</u> **(6.01(C))**. A Participant may elect an In-Service Distribution of the designated Contribution Type Accounts based on any of the following events in accordance with Section 6.01(C) *(Choose one of (a) or (b).)*:

[*Note: Prevailing Wage Contributions are treated as Nonelective Contributions. See Section 6.01(C)(4)(d) if the Employer elects to use Prevailing Wage Contributions to offset other contributions.*

(a) [ ] **None.** The Plan does not permit any In-Service Distributions except as to any of the following (if applicable): (i) RMDs under Section 6.02; (ii) Protected Benefits; and (iii) Designated IRA Contributions. Also see Section 6.01(C)(4)(e) with regard to Rollover Contributions, Employee Contributions and DECs.

(b) [X] **Permitted.** In-Service Distributions are permitted as follows (*For Money Purchase Pension Contributions, select one or more of (1), (2), (3) and (9). For Profit Sharing Plans, select one or more of (1) through (6), (8) and (9). For 401(k) Plans, select one or more of (1) through (9). Select Contribution Type as applicable.)*:

[*Note for 401(k) plans: Unless the Employer elects otherwise in Election (b)(9) below, Elective Deferrals under Election 46(b) includes Pre-Tax and Roth Deferrals and Matching Contributions includes Additional Matching Contributions (irrespective of the Plan's ACP testing status).*]

			(1) All Contrib.	(2) Elective Deferrals	(3) Safe Harbor Contrib.	(4) QNECs	(5) QMACs	(6) Matching Contrib.	(7) Nonelective/ SIMPLE
(1)	[ ]	**None.** Except for Election 46(a) exceptions.	N/A (See Election 46(a))	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
(2)	[X]	**Age** *(select one or more of a. through d.)*:							
	a.	[X] **Age** <u>59 1/2</u> *(must be at least 59 1/2).*	[X] OR	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
	b.	[ ] **Age** _____ *(may be less than 59 1/2).*	N/A	N/A	N/A	N/A	N/A	[ ]	[ ]
	c.	[ ] **Normal Retirement Age.**	[ ] OR	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
	d.	[ ] **Early Retirement Age.**	[ ] OR	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

[*Note: In a 401(k) plan, Elections c. and d. do not apply to Elective Deferrals, Safe Harbor Contributions, QNECs, or QMACs unless the Participant has attained age 59 1/2.*]

[*Note for Money Purchase Pension Contributions: None of the elections a. though d. applies to a Money Purchase Pension Contribution unless the Participant has attained the earlier of age 62 or Normal Retirement Age*]

			(1) All Contrib.	(2) Elective Deferrals	(3) Safe Harbor Contrib.	(4) QNECs	(5) QMACs	(6) Matching Contrib.	(7) Nonelective/ SIMPLE
(3)	[X]	**Disability.**	[X] OR	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
(4)	[X]	**Hardship** *(Choose one or both of a. and b.)*:							
	a.	[X] **Hardship (safe harbor).** See Section 6.07(A).	N/A	[X]	N/A	N/A	N/A	[X]	[X]
	b.	[ ] **Hardship (non-safe harbor).** See Section 6.07(B).	N/A	[ ]	N/A	N/A	N/A	[ ]	[ ]
(5)	[ ]	_____ **year contributions.** *(specify minimum of two years)* See Section 6.01(C)(4)(a)(i).	N/A	N/A	N/A	N/A	N/A	[ ]	[ ]

(6)	[ ]	_____ **months of participation.** *(specify minimum of 60 months)* See Section 6.01(C)(4)(a)(ii).	N/A	N/A	N/A	N/A	N/A	[ ]	[ ]
(7)	[ ]	**Qualified Reservist Distribution.** See Section 6.01(C)(4)(b)(iii). *(may only be selected with 401(k) plans)*	N/A	[ ]	N/A	N/A	N/A	N/A	N/A
(8)	[X]	**Deemed Severance Distribution.** See Section 6.11.	[X]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

[*Note for Money Purchase Pension Contributions: Elections (4) through (8) do not apply.*]

(9) [ ] **Describe:** ______________________________

[*Note: The Employer under Election 46(b)(9) may describe In-Service Distribution provisions from the elections otherwise available under Election 46 and/or a combination thereof as to any: (i) Participant group (e.g., Division A Employee Accounts are distributable at age 59 1/2 OR Accounts of Employees hired on/before "x" date are distributable at age 59 1/2. No In-Service Distributions apply to Division B Employees OR to Employees hired after "x" date.); (ii) Contribution Type (e.g., Discretionary Nonelective Contribution Accounts are distributable on Disability. Fixed Nonelective Contribution Accounts are distributable on Disability or Hardship (non-safe harbor)); and/or (iii) merged plan account now held in the Plan (e.g., The accounts from the X plan merged into this Plan continue to be distributable in accordance with the X plan terms [supply terms] and not in accordance with the terms of this Plan). An Employer's election under Election 46(b)(9) must: (i) be objectively determinable; (ii) not be subject to Employer discretion; (iii) preserve Protected Benefits as required; (iv) be nondiscriminatory; and (v) not permit an "early" distribution of any Restricted 401(k) Accounts or Restricted Pension Accounts. See Sections 6.01(C)(4) and 11.02(C)(3).*]

47. <u>IN-SERVICE DISTRIBUTIONS/ADDITIONAL CONDITIONS</u> **(6.01(C))**. Unless otherwise elected below, a Participant may elect to receive an In-Service Distribution upon any Election *46*(b) event without further condition, provided that the amount distributed may not exceed the Vested amount in the distributing Account *(choose one or more of (a) through (f) if applicable)*:

(a) [X] **100% vesting required.** A Participant may not receive an In-Service Distribution unless the Participant is 100% Vested in the distributing Account. This restriction applies to *(select one or more of (1), (2), or (3))*:

(1) [X] **Hardship distributions.** Distributions based on hardship. *(does not apply for Money Purchase Pension Plans)*

(2) [ ] **Deemed Severance.** Distributions based on Deemed Severance under Section 6.11.

(3) [X] **Other In-Service.** In-Service distributions other than distributions based on hardship or Deemed Severance.

(b) [ ] **Minimum amount.** A Participant may not receive an In-Service Distribution in an amount which is less than: $__________ *(specify amount not exceeding $1,000)*. This restriction applies to *(Select one or more of (1), (2), or (3))*:

(1) [ ] **Hardship distributions.** Distributions based on hardship. *(does not apply for Money Purchase Pension Plans)*

(2) [ ] **Deemed Severance.** Distributions based on Deemed Severance under Section 6.11.

(3) [ ] **Other In-Service.** In-Service distributions other than distributions based on hardship or Deemed Severance.

(c) [ ] **Roth In-Service.** A Participant may not receive an In-Service Distribution from the Participant's Roth Deferral Account unless it is a qualified distribution as defined in Code §402A(d)(2). *(may only be selected with 401(k) plans)*

(d) [ ] **Maximum Number.** The maximum number of In-Service Distributions a Participant may receive during a Plan Year is

_______ *(Specify a number at least equal to 1. If (d) is not elected, the Plan Administrator, by policy, can impose a limitation).*

(e) [ ] **Beneficiary's hardship need.** A Participant's hardship does not include an immediate and heavy financial need of the Participant's primary Individual Beneficiary under the Plan, as described in Section 6.07(G).

(f) [ ] **Describe other conditions:** ______________________________

[*Note: An Employer's election under Election 47(f) must: (i) be objectively determinable; (ii) not be subject to Employer discretion; (iii) preserve Protected Benefits as required; (iv) be nondiscriminatory; and (v) not permit an "early" distribution of any Restricted 401(k) Accounts or Restricted Pension Accounts. See Section 6.01(C)(4).*]

48. POST-SEVERANCE AND LIFETIME RMD DISTRIBUTION METHODS **(6.03)**. A Participant whose Vested Account Balance exceeds $5,000 (or any lesser amount elected in Appendix B, Election (g)(7)): (i) who has incurred a Severance from Employment and will receive a distribution; or (ii) who remains employed but who must receive lifetime RMDs, may elect distribution under one of the following method(s) of distribution described in Section 6.03 and subject to any Section 6.03 limitations. *(Select one or more of (a) through (g).):*

[*Note: If a Participant dies after Severance from Employment but before receiving distribution of all of his/her Account, the elections under this Election 48 no longer apply. See Section 6.01(B) and Election 49.*]

(a) [X] **Lump-Sum.** See Section 6.03(A)(3).

(b) [X] **Installments.** See Section 6.03(A)(4).

(c) [ ] **Installments only if Participant subject to lifetime RMDs.** A Participant who is required to receive lifetime RMDs may receive installments payable in monthly, quarterly, semi-annual or annual installments equal to or exceeding the annual RMD amount. See Sections 6.02(A) and 6.03(A)(4)(a).

(d) [ ] **Alternative Annuity:** ______________________________. See Section 6.03(A)(5).

[*Note: Under a Plan which is subject to the joint and survivor annuity distribution requirements of Section 6.04 (Election 50(b)), the Employer may elect under 48(d) to offer one or more additional annuities (Alternative Annuity) to the Plan's QJSA, QPSA or QOSA. The Alternative Annuity could be a QLAC, described in Section 6.02(E)(6)(b)*]

(e) [ ] **Partial distributions.** See Section 6.03(A)(6). Also known as Ad-Hoc distributions.

(f) [ ] **Partial distributions only if Participant subject to lifetime RMDs.** A Participant who is required to receive lifetime RMDs may receive Partial Distributions equal to or exceeding the annual RMD amount. See Sections 6.02(A) and 6.03(A)(6)(a).

(g) [X] **Describe distribution method(s):** Ad-Hoc distributions in an amount not less than $1,000.

[*Note: The Employer under Election 48(g) may describe Severance from Employment distribution methods from the elections available under Election 48 and/or a combination thereof as to any: (i) Participant group (e.g., Division A Employee Accounts are distributable in a Lump-Sum OR Accounts of Employees hired after "x" date are distributable in a Lump-Sum. Division B Employee Accounts are distributable in a Lump-Sum or in Installments OR Accounts of Employees hired on/before "x" date are distributable in a Lump-Sum or in Installments.); (ii) Contribution Type (e.g., Discretionary Nonelective Contribution Accounts are distributable in a Lump-Sum. Fixed Nonelective Contribution Accounts are distributable in a Lump-Sum or in Installments); and/or (iii) merged plan account now held in the Plan (e.g., The accounts from the X plan merged into this Plan continue to be distributable in accordance with the X plan terms [supply terms] and not in accordance with the terms of this Plan). An Employer's election under Election 48(g) must: (i) be objectively determinable; (ii) not be subject to Employer, Plan Administrator or Trustee discretion; (iii) be nondiscriminatory; and (iv) preserve Protected Benefits as required.*]

49. BENEFICIARY DISTRIBUTION ELECTIONS **(6.01(B))**. Distributions following a Participant's death will be made or begin as follows:

5-year; Life Expectancy (6.02(B)(1)(e)). If the Participant dies before the DCD and the Beneficiary is a designated Beneficiary, the deadline to commence RMDs will be determined as follows *(Select one of (a) through (d).):*

(a) [X] **Beneficiary election.** The Designated Beneficiary may elect application of the 5-year rule or the Life Expectancy rule. If the Beneficiary does not make a timely election *(Select one of (1) or (2)):*

  (1) [ ] **5-year rule.** The 5-year rule applies to the Beneficiary.

  (2) [X] **Life Expectancy Rule.** The Life Expectancy rule applies to the Beneficiary.

(b) [ ] **5-year rule.** The 5-year rule applies to the Beneficiary.

(c) [ ] **Life Expectancy rule.** The Life Expectancy rule applies to the Beneficiary.

(d) [ ] **Other:** __________ *(Describe, e.g., the 5-year rule applies to all Beneficiaries other than a surviving spouse Beneficiary.)*

Commencement of distributions to Beneficiary. (6.01(B)) Distributions to a Beneficiary will commence at such time as the Beneficiary may elect, consistent with Section 6.02, or if earlier, the time elected below. *(Choose one of (e), (f), or (g) if applicable):*

(e) [ ] **Immediate.** As soon as practical following the Participant's death and the determination of the Beneficiary.

(f) [ ] **Next Calendar Year.** On or before the last day of the calendar year which next follows the calendar year of the Participant's death.

(g) [ ] **Describe:** ______________________________

[*Note: The Employer under Election 49(g) may describe an alternative distribution timing or afford the Beneficiary an election which is narrower than that otherwise permitted under this election), or include special provisions related to certain beneficiaries. However, any election under Election 49(g) must require distribution to commence no later than the Section 6.02 required date.*]

50. JOINT AND SURVIVOR ANNUITY REQUIREMENTS **(6.04)**. The joint and survivor annuity distribution requirements of Section 6.04 *(Unless this is a Money Purchase Pension Plan, select one of (a) or (b). If this is a Money Purchase Pension Plan, select (b))*:

(a) [X] **Profit sharing exception.** Do not apply to an Exempt Participant, as described in Section 6.04(G)(1), but apply to any other Participants (or to a portion of their Account as described in Section 6.04(G)).

One-year marriage rule. Under Section 7.05(A)(3) relating to an Exempt Participant's Beneficiary designation under the profit sharing exception *(select one of (1) or (2))*:

(1) [ ] **Applies.** The one-year marriage rule applies.

(2) [X] **Does not apply.** The one-year marriage rule does not apply.

(b) [ ] **Joint and survivor annuity applicable.** Section 6.04 applies to all Participants.

One-year marriage rule. Under Section 6.04(B) relating to the QPSA *(select one of (1) or (2))*:

(1) [ ] **Applies.** The one-year marriage rule applies.

(2) [ ] **Does not apply.** The one-year marriage rule does not apply.

ARTICLE XII
MULTIPLE EMPLOYER PLAN

51. MULTIPLE EMPLOYER PLAN **(12.01/12.02/12.03)**. The Employer makes the following elections regarding the Plan's Multiple Employer Plan status and the application of Article XII *(select one of (a) or (b))*:

(a) [X] **Not applicable.** The Plan is not a Multiple Employer Plan and Article XII does not apply.

(b) [ ] **Applies.** The Plan is a Multiple Employer Plan and the Article XII Effective Date is: ____________. The Employer makes the following additional elections *(choose (1) and/or (2) if applicable)*:

(1) [ ] **Participating Employer may modify.** See Section 12.03. A Participating Employer in the Participation Agreement may modify Adoption Agreement elections applicable to each Participating Employer (including electing to not apply Adoption Agreement elections) as follows *(select one of a. or b.; choose c. if applicable)*:

a. [ ] **All.** May modify all elections.

b. [ ] **Specified elections.** May modify the following elections: ____________ *(specify by election number)*.

c. [ ] **Restrictions.** May modify subject to the following additional restrictions: ____________ *(Specify restrictions. Any restrictions must be definitely determinable and may not violate Code §412 or the regulations thereunder.)*.

(2) [ ] **Lead Employer will not participate.** See Section 12.02(B). The Lead Employer is not a Participating Employer. The Employees of the Lead Employer, in their capacity as such, will be Excluded Employees.

[*Note: If Election (b)(1) above is not chosen, Participating Employers may not modify any Adoption Agreement elections. The Participation Agreement must be consistent with this Election 51(b)(1). Any Participating Employer election in the Participation Agreement which is not permitted under this Election 51(b)(1) is of no force or effect and the applicable election in the Adoption Agreement applies.*]

EXECUTION PAGE

The Employer, by executing this Adoption Agreement, hereby agrees to the provisions of this Plan.

Employer: Data I/O Corporation

Date: 1/25/2022

Signed: R Jackman

Rachel Jackman, HR Director

[print name/title]

Use of Adoption Agreement. Failure to complete properly the elections in this Adoption Agreement may result in disqualification of the Employer's Plan. The Employer only may use this Adoption Agreement in conjunction with the basic plan document referenced by its document number on Adoption Agreement page one. A Money Purchase Pension Plan must be a separate plan (with a separate Adoption Agreement) from a Profit Sharing Plan or 401(k) Plan.

Execution for Page Substitution Amendment Only. If this paragraph is completed, this Execution Page documents an amendment to Adoption Agreement Election(s) ___________ effective __________, by substitute Adoption Agreement page number(s) _____. The Employer should retain all Adoption Agreement Execution Pages and amended pages. [*Note: The Effective Date may be retroactive or may be prospective.*]

Provider. The Provider, Great-West Trust Company, LLC will notify all adopting Employers of any amendment to this Pre-approved Plan or of any abandonment or discontinuance by the Provider of its maintenance of this Pre-approved Plan. For inquiries regarding the adoption of the Pre-approved Plan, the Provider's intended meaning of any Plan provisions or the effect of the Opinion Letter issued to the Provider, please contact the Provider or the Provider's representative

Provider Name: Great-West Trust Company, LLC

Address: 8515 East Orchard Road, Greenwood Village, Colorado, 80111

Telephone Number: (877) 694-4015

Email address (optional): ____________________

Reliance on Provider Opinion Letter. The Provider has obtained from the IRS an Opinion Letter specifying the form of this Adoption Agreement and the basic plan document satisfy, as of the date of the Opinion Letter, Code §401. An adopting Employer may rely on the Provider's IRS Opinion Letter *only* to the extent provided in Rev. Proc. 2017-41. The Employer may not rely on the Opinion Letter in certain other circumstances or with respect to certain qualification requirements, which are specified in the Opinion Letter and in Rev. Proc. 2017-41 or subsequent guidance. In order to have reliance in such circumstances or with respect to such qualification requirements, the Employer must apply for a determination letter to Employee Plans Determinations of the IRS.

APPENDIX A
SPECIAL RETROACTIVE OR PROSPECTIVE EFFECTIVE DATES

SPECIAL EFFECTIVE DATES (1.20). The Employer elects or does not elect Appendix A special Effective Date(s) as follows. *(select (a) or select one or more of (b) through (r) as applicable.)*:

[*Note: If the Employer elects (a), do not complete the balance of this Appendix A.*]

(a) [X] **Not applicable.** The Employer does not elect any Appendix A special Effective Dates.

[*Note: The Employer may use this Appendix A to specify an Effective Date for one or more Adoption Agreement elections which does not correspond to the Plan's new Plan or Restated Plan Effective Date under Election 4. As to Restated Plans, for periods prior to: (i) the below-specified special Effective Date(s); or (ii) the Restated Plan's general Effective Date under Election 4, as applicable, the Plan terms in effect prior to its restatement under this Adoption Agreement control for purposes of the designated provisions.*]

(b) [ ] **Plan and Contribution Types (1.12).** The Contribution Types under Election(s) 5 and 6 ____________ are effective: ____________.

(c) [ ] **Disability (1.16).** The Disability definition under Election 7 ____________ is effective: ____________.

(d) [ ] **Excluded Employees (1.22(D)).** The Excluded Employee provisions under Election(s) 8 ____________ are effective: ____________.

(e) [ ] **Compensation (1.11).** The Compensation definition under Election(s) ____________ *(specify 9-11 as applicable)* are effective: ____________.

(f) [ ] **Hour of Service/Elective Service Crediting (1.32/1.59(C)).** The Hour of Service and/or elective Service crediting provisions under Election(s) ____________ *(specify 12-13 as applicable)* are effective: ____________.

(g) [ ] **Eligibility (2.01-2.03).** The eligibility provisions under Election(s) ____________ *(specify 14-19 as applicable)* are effective: ____________.

(h) [ ] **Elective Deferrals (3.02(A)-(D)).** The Elective Deferral provisions under Election(s) ____________ *(specify 20-23 as applicable)* are effective: ____________. *(only applies to 401(k) plans)*

(i) [ ] **Matching Contributions (3.03).** The Matching Contribution provisions under Election(s) ____________ *(specify 24-26 as applicable)* are effective: ____________. *(only applies to 401(k) plans)*

(j) [ ] **Nonelective And Money Purchase Pension Plan Contributions (3.04).** The Nonelective And Money Purchase Pension Plan Contribution provisions under Election(s) ____________ *(specify 27-29 as applicable)* are effective: ____________.

(k) [ ] **401(k) safe harbor (3.05).** The 401(k) safe harbor provisions under Election(s) 30 ____________ are effective: ____________. *(only applies to 401(k) plans)*

(l) [ ] **Allocation conditions (3.06).** The allocation conditions under Election(s) ____________ *(specify 31-32 as applicable)* are effective: ____________.

(m) [ ] **Forfeitures (3.07).** The forfeiture allocation provisions under Election(s) 33 ____________ are effective: ____________.

(n) [ ] **Employee Contributions (3.09).** The Employee Contribution provisions under Election(s) 35 ____________ are effective: ____________.

(o) [ ] **Testing elections (4.06(B)).** The testing elections under Election(s) 37 ____________ are effective: ____________.

(p) [ ] **Vesting (5.03).** The vesting provisions under Election(s) ____________ *(specify 38-43 as applicable)* are effective: ____________.

(q) [ ] **Distributions (6.01, 6.03 and 6.04).** The distribution elections under Election(s) ____________ *(specify 44-50 as applicable)* are effective: ____________.

(r) [ ] **Special Effective Date(s) for other elections** *(specify elections and dates)*: ____________.

APPENDIX B
BASIC PLAN DOCUMENT OVERRIDE ELECTIONS

BASIC PLAN OVERRIDES. The Employer elects or does not elect to override various basic plan provisions as follows *(select (a) or select one or more of (b) through (m) as applicable)*:

[*Note: If the Employer elects (a), do not complete the balance of this Appendix B.*]

(a) [ ] **Not applicable.** The Employer does not elect to override any basic plan provisions.

[*Note: The Employer at the time of restating its Plan with this Adoption Agreement may make an election on Appendix A (Election 55(s)) to specify a special Effective Date for any override provision the Employer elects in this Appendix B. If the Employer, after it has executed this Adoption Agreement, later amends its Plan to change any election on this Appendix B, the Employer should document the Effective Date of the Appendix B amendment on the Execution Page or otherwise in the amendment.*]

(b) [X] **Definition (Article I) overrides.** *(choose one or more of (1) through (9) as applicable)*:

(1) [ ] **W-2 Compensation exclusion of paid/reimbursed moving expenses (1.11(B)(1)).** W-2 Compensation excludes amounts paid or reimbursed by the Employer for moving expenses incurred by an Employee, but only to the extent that, at the time of payment, it is reasonable to believe that the Employee may deduct these amounts under Code §217.

(2) [ ] **Alternative (general) 415 Compensation (1.11(B)(4)).** The Employer elects to apply the alternative (general) 415 definition of Compensation in lieu of simplified 415 Compensation.

(3) [ ] **Inclusion of Deemed 125 Compensation (1.11(C)).** Compensation under Section 1.11 includes Deemed 125 Compensation.

(4) [ ] **Inclusion of Deemed Disability Compensation (1.11(K)).** Include Deemed Disability Compensation. *(select one of a. or b.)*:

a. [ ] **NHCEs only.** Apply only to disabled NHCEs.

b. [ ] **All Participants.** Apply to all disabled Participants. The Employer will make Employer Contributions for such disabled Participants for: ____________________
(specify a fixed or determinable period).

(5) [ ] **Treatment of Differential Wage Payments (1.11(L)).** In lieu of the provisions of Section 1.11(L), the Employer elects the following *(select one or more of a., b., c., and d.)*:

a. [ ] **Effective date.** The inclusion is effective for Plan Years beginning after ____________________ *(may not be earlier than December 31, 2008)*.

b. [ ] **Elective Deferrals only.** The inclusion only applies to Compensation for purposes of Elective Deferrals. *(only applies to 401(k) plans)*

c. [ ] **Not included.** The inclusion does not apply to Compensation for purposes of any Contribution Type.

d. [ ] **Other:** ____________________
(specify other Contribution Type Compensation which includes Differential Wage Payments)

(6) [ ] **Leased Employees (1.22(B)).** *(select one or both of a. and b.)*:

a. [ ] **Inclusion of Leased Employees (1.22(B)).** The Employer for purposes of the following Contribution Types, does not exclude Leased Employees: ____________________
(specify Contribution Types).

b. [ ] **Offset if contributions to leasing organization plan (1.22(B)(2)).** The Employer will reduce allocations to this Plan for any Leased Employee to the extent that the leasing organization contributes to or provides benefits under a leasing organization plan to or for the Leased Employee and which are attributable to the Leased Employee's services for the Employer. The amount of the offset is as follows: ____________________

[*Note: The election of an offset under this Election (b)(6)b. may require that the Employer aggregate its plan with the leasing organization's plan for coverage and nondiscrimination testing.*]

(7) [ ] **Inclusion of Reclassified Employees (1.22(D)(3)).** The Employer for purposes of the following Contribution Types, does not exclude Reclassified Employees (or the following categories of Reclassified Employees): ____________________
(specify Contribution Types and/or categories of Reclassified Employees).

(8) [X] **Inclusion of Coverage Transition Employees (1.22(D)(6)).** Coverage Transition Employees are not Excluded Employees.

(9) [X] **Part-time/Temporary/Seasonal Employee Specification.** The exclusion in Election 8(k) is limited to Employees the Employer categorizes on its payroll records as *(select one or more of a., b. or c.)*:

a. [ ] **Part-time.**

b. [X] **Temporary.**

c. [X] **Seasonal.**

(c) [ ] **Rule of parity - participation (Article II) override (2.03(D)).** For purposes of Plan participation, the Plan applies the "rule of parity" under Code §410(a)(5)(D).

(d) [ ] **Contribution/allocation (Article III) overrides.** *(choose one or more of (1) through (9) as applicable.)*:

(1) [ ] **Elective Deferral overrides.** *(select one or more of a. or b.) (only applies to 401(k) plans)*

a. [ ] **Deferral limit on bonuses.** If the Plan Administrator provides a separate deferral election form for bonuses and/or other irregular compensation (see Section 1.11(G)), notwithstanding Election 20, the maximum amount of such compensation that may be deferred is ______%. (*specify percentage limit.*). This limit applies to *(select one of 1. or 2.)*:

1. [ ] **All Participants**

2. [ ] **HCEs**

b [ ] **Treatment of Automatic Deferrals as Roth Deferrals (3.02(B)).** The Employer elects to treat Automatic Deferrals as Roth Deferrals in lieu of treating Automatic Deferrals as Pre-Tax Deferrals.

(2) [ ] **No offset of Safe Harbor Contributions to other allocations (3.05(E)(12)).** Any Safe Harbor Nonelective Contributions allocated to a Participant's account will *not* be applied toward (offset) any allocation to the Participant of a non-Safe Harbor Nonelective Contribution. *(only applies to 401(k) plans)*

(3) [ ] **Short Plan Year or allocation period (3.06(B)(1)(c)).** The Plan Administrator *(select one of a. or b.)*:

a. [ ] **No pro-ration.** Will *not* pro-rate Hours of Service in any short allocation period.

b. [ ] **Pro-ration based on months.** Will pro-rate any Hour of Service requirement based on the number of months in the short allocation period.

(4) [ ] **Limited waiver of allocation conditions for rehired Participants (3.06(G)).** The allocation conditions the Employer has elected in the Adoption Agreement do not apply to rehired Participants in the Plan Year they resume participation, as described in Section 3.06(G).

(5) [ ] **Matching overrides.** *(select one or more of a., b., or c.) (only applies to 401(k) plans)*

a. [ ] **Matching on Pre-entry Deferrals (3.03(A)).** Instead of disregarding pre-entry deferrals, the Plan Administrator will take Elective Deferrals into account in computing Matching Contributions, even if the deferrals were made before the Participant became eligible for the match.

b. [ ] **Associated Match forfeiture timing (3.07(A)(1)(c)).** Forfeiture of associated matching contributions occurs in the Testing Year.

c. [ ] **403(b) plans (3.03(A)(6)).** The Plan will match Elective Deferrals to the Employer's 403(b) plan or plans, as though they were Elective Deferrals to this Plan.

d. [ ] **Operational QNECs (3.04(C)(2)).** Operational QNECs will be allocated: *(select one of 1., 2., or 3. if applicable; select 4. if applicable)*.

1. [ ] **Pro rata in relation to Compensation.**

2. [ ] **In the same dollar amount without regard to Compensation (flat dollar).**

3. [ ] **Under the classification allocation method described in Section 3.06(C)(6), subject to the Group Allocation Limitations of Section 3.14.**

4. [ ] **To NHCE ACP Participants.**

(6) [ ] **Forfeiture overrides.** *(select one or both of a. or b.) (only applies to 401(k) plans)*

a. [ ] **Safe Harbor top-heavy exempt fail-safe (3.07(A)(4)).** In lieu of ordering forfeitures as (a), (b), and (c) under Section 3.07(A)(4), the Employer establishes the following forfeiture ordering rules *(specify the ordering rules, for example, (b), (c), and (a).)*: ____________________.

b. [ ] **QNEC Restriction (3.07(A)(7)).** The QNEC Restriction will expire on: ____________ *(may not be earlier than the first Plan Year ending after January 17, 2017.)*

(7) [ ] **HEART Act continued benefit accrual (3.11(K)).** The Employer elects to apply the benefit accrual provisions of Section 3.11(K). The provisions are effective as of *(select one or both of a. or b.)*:

a. [ ] **Effective Date.** ___________ *(may not be earlier than the first day of the 2007 Plan Year).*

b. [ ] **No longer effective.** The provisions no longer apply effective as of __________________.

(8) [ ] **Classifications allocation formula (3.04(B)(3)).** If a Participant shifts from one classification to another during a Plan Year, the Plan Administrator will apportion the Participant's allocation during that Plan Year *(select one of a., b., or c.)*:

a. [ ] **Months in each classification.** Pro rata based on the number of months the Participant spent in each classification.

b. [ ] **Days in each classification.** Pro rata based on the number of days the Participant spent in each classification.

c. [ ] **One classification only.** The Employer in a nondiscriminatory manner will direct the Plan Administrator to place the Participant in only one classification for the entire Plan Year during which the shift occurs.

(9) [ ] **Suspension (3.06(F)(3)).** The Plan Administrator in applying Section 3.06(F) will *(select one or more of a., b., and c.)*:

a. [ ] **Re-order tiers.** Apply the suspension tiers in Section 3.06(F)(2) in the following order: __________________ *(specify order).*

b. [ ] **Hours of Service tie-breaker.** Apply the greatest Hours of Service as the tie-breaker within a suspension tier in lieu of applying the lowest Compensation.

c. [ ] **Additional/other tiers.** Apply the following additional or other tiers: __________________ *(specify suspension tiers and ordering).* [Note: The Opinion Letter provides no reliance on the language specified at this option.]

(e) [ ] **Testing (Article IV) overrides.** *(choose one or both of (1) and (2) as applicable)*:

(1) [ ] **First few weeks rule for Code §415 testing Compensation (4.05(F)(1)).** The Plan applies the first few weeks rule in Section 4.05(F)(1).

(2) [ ] **Post-Severance Compensation for Code §415 testing Compensation (4.05(F)).** The Employer elects the following adjustments to Post-Severance Compensation for purposes of determining 415 testing Compensation *(select one or more of a. through d.)*:

[*Note: Under the basic plan document, if the Employer does not elect any adjustments, post-severance compensation includes leave cash-outs and deferred compensation, and excludes military and disability continuation payments.*]

a. [ ] **Exclude leave cash-outs.** See Section 1.11(I)(1)(b).

b. [ ] **Exclude deferred compensation.** See Section 1.11(I)(1)(c).

c. [ ] **Include salary continuation for military service.** See Section 1.11(I)(2).

d. [ ] **Include salary continuation for disabled Participants.** See Section 1.11(I)(3). *(select one of 1. or 2.)*:

1. [ ] **For Nonhighly Compensated Employees only.**

2. [ ] **For all Participants.** In which case the salary continuation will continue for the following fixed or determinable period: ______________________________.

(f) [ ] **Vesting (Article V) overrides.** *(choose one or more of (1) through (6) as applicable)*:

(1) [ ] **Early Retirement Age (5.01).** Full vesting does not apply when an Employee attains Early Retirement Age.

(2) [ ] **Alternative "grossed-up" vesting formula (5.03(C)(2)).** The Employer elects the alternative vesting formula described in Section 5.03(C)(2).

(3) [ ] **Source of Cash-Out forfeiture restoration (5.04(B)(5)).** To restore a Participant's Account Balance as described in Section 5.04(B)(5), the Plan Administrator, to the extent necessary, will allocate from the following source(s) and in the following order *(specify, in order, one or more of the following: Forfeitures, Earnings, and/or Employer Contribution)*: ______________________________.

(4) [ ] **Deemed Cash-Out of 0% Vested Participant (5.04(C)).** The deemed cash-out rule of Section 5.04(C) does not apply to the Plan.

(5) [ ] **Accounting for Cash-Out repayment; Contribution Type (5.04(D)(2)).** In lieu of the accounting described in Section 5.04(D)(2), the Plan Administrator will account for a Participant's Account Balance attributable to a Cash-Out repayment *(select one of a. or b.)*:

a. [ ] **Nonelective rule.** Under the nonelective rule.

b. [ ] **Rollover rule.** Under the rollover rule.

(6) [ ] **One-year hold-out rule - vesting (5.06(D)).** The one-year hold-out Break in Service rule under Code §411(a)(6)(B) applies.

(g) [X] **Distribution (Article VI) overrides.** *(choose one or more of (1) through (7) as applicable)*:

(1) [ ] **Restriction on In-Service Rollover Distributions (6.01(C)).** A Participant will be entitled to receive a distribution of Rollover Contributions, Employee Contributions and DECs *(Select one or more of a. through d.)*:

a. [ ] **Deferrals.** Under the same provisions which apply to Elective Deferrals. *(only applies to 401(k) plans)*

b. [ ] **Match.** Under the same provisions which apply to Matching Contributions. *(only applies to 401(k) plans)*

c. [ ] **Nonelective.** Under the same provisions which apply to Nonelective Contributions.

d. [ ] **Other:** ______________________________

[Note: *The Employer under Election (g)(1)d. may describe In-Service Rollover Distribution restrictions using the options available for In-Service Distributions under Election 46 and/or a combination thereof as to all Participants or as to any Participant group (e.g., Division A Rollover Accounts are distributable at age 59 1/2 OR Rollover Accounts of Employees hired on/before "x" date are distributable at age 59 1/2. No In-Service Rollover Distributions apply to Division B Employees OR to Employees hired after "x" date). An Employer's election under Election (g)(1)d. must: (i) be objectively determinable; (ii) not be subject to Employer discretion; (iii) preserve Protected Benefits as required; (iv) be nondiscriminatory; and (v) not permit an "early" distribution of any Restricted 401(k) Accounts or Restricted Pension Accounts. See Sections 6.01(C)(4) and 11.02(C)(3).*]

(2) [ ] **In-Service IRR events.** The Employer elects to permit In-Service Distributions under the following conditions solely for purposes of making IRRs *(choose one or more of a. through d.; select e. if applicable.)*: *(only applies to 401(k) plans)*

a. [ ] **Age.** The Participant has attained age _______.

b. [ ] **Participation.** The Participant has _________ months of participation *(specify minimum of 60 months)*. Section 6.01(C)(4)(a)(ii).

c. [ ] **Seasoning.** The amounts being distributed have accumulated in the Plan for at least _______ years *(at least 2)*. See Section 6.01(C)(4)(a)(i).

d. [ ] **Other** (describe):______________________ *(must be definitely determinable and not subject to Employer discretion (e.g., age 50, but only with respect to Nonelective Contributions, and not Matching Contributions))*

[*Note: Regardless of any election above to the contrary, In-Service Distributions are not permitted for the purpose of making IRRs from a Participant's Elective Deferral Account, Qualified Matching Contribution Account, Qualified Nonelective Contribution Account and accounts attributable to Safe Harbor Contributions prior to age 59 1/2.*]

e. [ ] **Distribution for withholding.** A Participant may elect to have a portion of the amount that may be distributed as IRR distributed solely for purposes of federal or state income tax withholding related to the IRR.

(3) [ ] **Elections related to Required Minimum Distributions.** *(select one or more of a. or b.)*:

a. [ ] **Spousal override. (6.02(B)(1)(a)).** The special RMD timing rule for spouses will not apply.

b. [ ] **RBD definition (6.02(E)(7)(c)).** In lieu of the RBD definition in Section 6.02(E)(7)(a) and (b), the Plan Administrator *(select one of 1. or 2.)*:

1. [ ] **SBJPA definition indefinitely.** Indefinitely will apply the pre-SBJPA RBD definition.

2. [ ] **SBJPA definition to specified date.** Will apply the pre-SBJPA definition until _____________ *(the stated date may not be earlier than January 1, 1997)*, and thereafter will apply the RBD definition in Sections 6.02(E)(7)(a) and (b).

(4) [X] **Distribution Methods** *(select one or both of a. and b.)*

a. [X] **Default Distribution Methods (6.03(B)(2)).** If a Participant or Beneficiary does not make a timely election as to distribution method and timing the Plan Administrator will direct the Trustee to distribute using the following method and timing: Installments sufficient to satisfy RMD beginning at the Required Beginning Date
(Describe, e.g., Installments sufficient to satisfy RMD beginning at the Required Beginning Date. The selected method and timing must not be discriminatory and must be an option the plan makes available to participants and/or beneficiaries.)

b. [ ] **Beneficiary Distribution Methods (6.03(A)(2)).** The Plan will distribute to the Beneficiary under the following distribution method(s). If more than one method is elected, the Beneficiary may choose the method of distribution *(select one or more of 1. through 4.)*:

1. [ ] **Lump-Sum.** See Section 6.03(A)(3).

2. [ ] **Installments sufficient to satisfy RMD.** See Section 6.03(A)(4)(a).

3. [ ] **Partial Distributions sufficient to satisfy RMD.** See Section 6.03(A)(6).

4. [ ] **Other:** ____________________
(Describe, e.g., Lump-Sum or Installments for surviving spouse Beneficiaries, Lump-Sum only for all other Beneficiaries.)

(5) [ ] **Annuity Distributions (6.04).** *(select one or both of a. and b.)*:

a. [ ] **Modification of QJSA (6.04(A)(3)).** The Survivor Annuity percentage will be _____%. *(specify a percentage between 50% and 100%.)*

b. [ ] **Modification of QPSA (6.04(B)(2)).** The QPSA percentage will be _____%. *(specify a percentage between 50% and 100%.)*

(6) [X] **Hardship Distributions (6.07).** *(select one or both of a. and b.)*:

a. [X] **Restriction on hardship source; grandfathering (6.07(E)).** The hardship distribution limit includes grandfathered amounts. *(only applies to 401(k) plans)*

b. [ ] **Hardship acceleration.** The existence of a hardship occurring after Separation from Service/Severance from Employment will be determined under the non-safe harbor rules of Section 6.07(B).

(7) [ ] **Replacement of $5,000 amount (6.09).** All Plan references (except in Sections 3.10 and 3.12(C)(2)) to "$5,000" will be $________. *(specify an amount less than $5,000.)*

(h) [ ] **Administrative overrides (Article VII).** *(choose one or more of (1) through (8) as applicable)*:

(1) [ ] **Contributions prior to accrual or precise determination (7.04(B)(5)(b)).** The Plan Administrator will allocate Earnings described in Section 7.04(B)(5)(b) as follows *(select one of a., b., or c.)*:

a. [ ] **Treat as contribution.** Treat the Earnings as an Employer Matching or Nonelective Contribution and allocate accordingly.

b. [ ] **Balance forward.** Allocate the Earnings using the balance forward method described in Section 7.04(B)(4)(b).

c. [ ] **Weighted average.** Allocate the Earnings on Matching Contributions using the weighted average method in a manner similar to the method described in Section 7.04(B)(4)(d).

(2) [ ] **Automatic revocation of spousal designation (7.05(A)(1)).** The automatic revocation of a spousal Beneficiary designation in the case of divorce does not apply.

(3) [ ] **Limitation on frequency of Beneficiary designation changes (7.05(A)(4)).** Except in the case of a Participant incurring a major life event, a period of at least ____________________ must elapse between Beneficiary designation changes. *(specify a period of time, e.g., 90 days OR 12 months.)*

(4) [ ] **Definition of "spouse" (7.05(A)(5)).** The following definition of "spouse" applies: ____________________ *(specify a definition.)*

[*Note: Definition of "spouse" will apply for all Plan purposes other than Section 3.08(E) related to In-Plan Roth Rollover Contributions, Section 6.02 related to required minimum distributions, and Sections 6.04 and 7.05(A)(3) related to QJSAs, QPSAs, and related spousal rights. For example, the elected definition will apply to the determination of default beneficiary designations.*]

(5) [ ] **Administration of default provision; default Beneficiaries (7.05(C)).** The following list of default Beneficiaries will apply: ____________________ *(specify, in order, one or more Beneficiaries who will receive the interest of a deceased Participant.)*

(6) [ ] **Subsequent restoration of forfeiture-sources and ordering (7.07(A)(3)).** Restoration of forfeitures will come from the following sources, in the following order ____________________ *(specify, in order, one or more of the following: Forfeitures, Employer Contribution, Trust Fund Earnings.)*

(7) [ ] **State law (7.10(H)).** The law of the following state will apply: ____________________ *(specify one of the 50 states or the District of Columbia, or other appropriate legal jurisdiction, such as a territory of the United States or an Indian tribal government.)*

(8) [ ] **Fee Recapture Account (7.04(D)).** The Plan Administrator will allocate excess funds in the Fee Recapture Account as follows: *(select one of a., b., or c.)*:

a. [ ] Each Participant Account will receive an allocation based on the funds in which that Account was invested and the revenue sharing rates associated with those funds.

b. [ ] The excess funds will be allocated pro rata based on account balance.

c. [ ] The excess funds will be allocated per capita among Participants with Account Balances greater than zero, without regard to the amount of the Account Balance.

(i) [ ] **Trust and insurance overrides (Articles VIII and IX).** *(choose one or more of (1) through (2) if applicable)*:

(1) [ ] **Employer securities/real property in Profit Sharing Plans/401(k) Plans (8.05(A)).** The Plan limit on investment in qualifying Employer securities/real property is ____%. *(specify a percentage which is less than 100%.)*

(2) [ ] **Provisions relating to insurance and insurance company (9.08).** The following provisions apply: ________________ *(specify such language as necessary to accommodate life insurance Contracts the Plan holds.)*

[*Note: The provisions in this Election (i)(2) may override provisions in Article IX of the Plan but must be consistent with all other provisions of the Plan.*]

(j) [ ] **Top-heavy override (Article X) overrides.**

(1) [ ] **Key Employee allocations (10.02(A)).** Top-heavy minimum allocations will be made to Key Employees, as well as Non-Key Employees.

(2) [ ] **Collective Bargaining Agreement (10.02(A).** Employees subject to the following collective bargaining agreements are eligible to receive top-heavy minimum allocations notwithstanding Code §41(i)(4): ____________________________.

(k) [ ] **Code Section 415 (Article XI) override (11.02(A)(1), 4.02(F)).** Because of the required aggregation of multiple plans, to satisfy Code §415, the following overriding provisions apply: ____ *(specify such language as necessary to satisfy §415, e.g., the Employer will reduce Additional Additions to this plan before reducing Annual Additions to other plans.)*

(l) [ ] **Code Section 416 (Article XI) override (11.02(A)(1), 10.03(D)).** Because of the required aggregation of multiple plans, to satisfy Code §416, the following overriding provisions apply: ____ *(specify such language as necessary to satisfy §416, e.g., If an Employee participates in this Plan and another Plan the Employer maintains, the Employer will satisfy any Top-Heavy Minimum Allocation in this Plan and not the other plan.)*

(m) [ ] **Multiple Employer Plan (Article XII) overrides.** *(choose (1) if applicable)*:

(1) [ ] **No involuntary termination for Participating Employer (12.11).** The Lead Employer may not involuntarily terminate the participation of any Participating Employer under Section 12.11.

APPENDIX C
TABLE I: ACTUARIAL FACTORS
UP-1984
Without Setback

Number of years from attained age at the end of Plan Year until Normal Retirement Age	7.50%	8.00%	8.50%
0	8.458	8.196	7.949
1	7.868	7.589	7.326
2	7.319	7.027	6.752
3	6.808	6.506	6.223
4	6.333	6.024	5.736
5	5.891	5.578	5.286
6	5.480	5.165	4.872
7	5.098	4.782	4.491
8	4.742	4.428	4.139
9	4.412	4.100	3.815
10	4.104	3.796	3.516
11	3.817	3.515	3.240
12	3.551	3.255	2.986
13	3.303	3.014	2.752
14	3.073	2.790	2.537
15	2.859	2.584	2.338
16	2.659	2.392	2.155
17	2.474	2.215	1.986
18	2.301	2.051	1.831
19	2.140	1.899	1.687
20	1.991	1.758	1.555
21	1.852	1.628	1.433
22	1.723	1.508	1.321
23	1.603	1.396	1.217
24	1.491	1.293	1.122
25	1.387	1.197	1.034
26	1.290	1.108	0.953
27	1.200	1.026	0.878
28	1.116	0.950	0.810
29	1.039	0.880	0.746
30	0.966	0.814	0.688
31	0.899	0.754	0.634
32	0.836	0.698	0.584
33	0.778	0.647	0.538
34	0.723	0.599	0.496
35	0.673	0.554	0.457
36	0.626	0.513	0.422
37	0.582	0.475	0.389
38	0.542	0.440	0.358
39	0.504	0.407	0.330
40	0.469	0.377	0.304
41	0.436	0.349	0.280
42	0.406	0.323	0.258
43	0.377	0.299	0.238
44	0.351	0.277	0.219
45	0.327	0.257	0.202

Note: A Participant's Actuarial Factor under Table I is the factor corresponding to the number of years until the Participant reaches his/her Normal Retirement Age under the Plan. A Participant's age as of the end of the current Plan Year is his/her age on his/her last birthday. For any Plan Year beginning on or after the Participant's attainment of Normal Retirement Age, the factor for "zero" years applies.

APPENDIX C
TABLE II: ADJUSTMENT TO ACTUARIAL FACTORS FOR NORMAL RETIREMENT AGE OTHER THAN 65
UP-1984
Without Setback

Normal Retirement Age	7.50%	8.00%	8.50%
55	1.2242	1.2147	1.2058
56	1.2043	1.1959	1.1879
57	1.1838	1.1764	1.1694
58	1.1627	1.1563	1.1503
59	1.1411	1.1357	1.1305
60	1.1188	1.1144	1.1101
61	1.0960	1.0925	1.0891
62	1.0726	1.0700	1.0676
63	1.0488	1.0471	1.0455
64	1.0246	1.0237	1.0229
65	1.0000	1.0000	1.0000
66	0.9752	0.9760	0.9767
67	0.9502	0.9518	0.9533
68	0.9251	0.9274	0.9296
69	0.8998	0.9027	0.9055
70	0.8740	0.8776	0.8810
71	0.8478	0.8520	0.8561
72	0.8214	0.8261	0.8307
73	0.7946	0.7999	0.8049
74	0.7678	0.7735	0.7790
75	0.7409	0.7470	0.7529
76	0.7140	0.7205	0.7268
77	0.6874	0.6942	0.7008
78	0.6611	0.6682	0.6751
79	0.6349	0.6423	0.6494
80	0.6090	0.6165	0.6238

Note: Use Table II only if the Normal Retirement Age for any Participant is not 65. If a Participant's Normal Retirement Age is not 65, adjust Table I by multiplying *all* factors applicable to that Participant in Table I by the appropriate Table II factor.

PPD ADOPTION AGREEMENT
ADMINISTRATIVE CHECKLIST
February 1, 2022

This Administrative Checklist ("AC") is not part of the Adoption Agreement or Plan but is for the use of the Plan Administrator in administering the Plan. Relius software also uses the AC and the following Supporting Forms Checklist ("SFC") in preparing the Plan's SPD and some administrative forms, such as the Loan Policy, if applicable.

The plan document preparer need not complete the AC but may find it useful to do so. However, without the AC, the Summary Plan Description and perhaps other documents will not be complete. The preparer may modify the AC, including adding items, without affecting reliance on the Plan's opinion or advisory letter since the AC is not part of the approved Plan. Any change to this AC is not a Plan amendment and is not subject to any Plan provision or to Applicable Law regarding the timing or form of Plan amendments. However, the Plan Administrator's administration of any AC item must be in accordance with applicable Plan terms and with Applicable Law.

The AC reflects the Plan policies and operation as of the date set forth above and may also reflect Plan policies and operation pre-dating the specified date.

AC1. PLAN LOANS **(7.06)**. The Plan permits or does not permit Participant Loans as follows *(select one of (a) or (b))*:
- (a) [ ] **Does not permit.** *(skip to AC2.)*
- (b) [X] **Permitted pursuant to the Loan Policy.** See below to complete Loan Policy.

Complete the following questions to provide information on the Loan Policy *(optional)*
- (c) [ ] **Borrower qualification** *(choose one)*
  - (1) [ ] No investigation
  - (2) [ ] Must be creditworthy

Loan limitations *(choose one or more)*
- (d) [ ] Minimum amount. May not borrow less than $1,000 in any single loan.
- (e) [ ] Maximum number of loans. May not have more than _______ loan(s) outstanding.
- (f) [ ] Refinancing *(select one of (1) or (2))*
  - (1) [ ] Not permitted
  - (2) [ ] Permitted. A refinance for purposes of the limit on number of loans is: *(select one of a. or b.)*
    - a. [ ] Not treated as an additional loan
    - b. [ ] Treated as an additional loan
- (g) [ ] Purpose *(select one of (1) or (2))*
  - (1) [ ] Any reasonable purpose
  - (2) [ ] May not borrow except for: ______________
- (h) [ ] Account ordering. Loan will come first from (Roth, pre-tax deferrals or other accounts): *(select one of (1), (2) or (3))*
  - (1) [ ] Participant's choice
  - (2) [ ] Plan Administrator's choice
  - (3) [ ] As follows: *(select one of more of a., b. or c.)*
    - a. [ ] first: ______________________
    - b. [ ] second: ______________________
    - c. [ ] third: ______________________

Loan terms *(choose one or more)*
- (i) [ ] Interest *(select one of (1), (2) or (3))*
  - (1) [ ] 2% over USA Today prime
  - (2) [ ] __%
  - (3) [ ] Plan Administrator establishes
- (j) [ ] Home loan term *(select one of (1) or (2))*
  - (1) [ ] ___ years
  - (2) [ ] Plan Administrator establishes
- (k) [ ] Directed/general Trust investment *(select one of (1) or (2))*
  - (1) [ ] Directed
  - (2) [ ] General
- (l) [ ] Charges *(select one of (1) or (2))*
  - (1) [ ] apply to borrower's account
  - (2) [ ] apply to overall Trust or Employer pays
- (m) [ ] Loan acceleration. Upon the following: *(select one or more of (1) or (2))*
  - (1) [ ] Separation/severance. Not applicable to parties in interest.
  - (2) [ ] Plan termination

(n) [ ] Leave of absence *(select one or more of (1) or (2))*
  (1) [ ] Military *(select one of a. or b.)*
    a. [ ] Suspend payments
    b. [ ] Not suspend
  (2) [ ] Non-military *(select one of a. or b.)*
    a. [ ] Suspend payments
    b. [ ] Not suspend

Additional loan provisions *(choose one or more)*
(o) [ ] Grace period *(select one of (1) or (2))*
  (1) [ ] Maximum grace period applies
  (2) [ ] No grace period
(p) [ ] Includes false statements
(q) [ ] No new loan if: *(select one of (1) or (2))*
  (1) [ ] Current default
  (2) [ ] Current or prior default

AC2. PARTICIPANT DIRECTION OF INVESTMENT **(7.03(B))**. The Plan permits Participant direction of investment or does not permit Participant direction of investment as to some or all Accounts as follows *(select one of (a) or (b))*:
(a) [ ] **Does not permit.** The Plan does not permit Participant direction of investment of any Account. *(skip to AC3.)*
(b) [X] **Permitted as follows.** The Plan permits Participant direction of investment. *(Complete the following)*:

Accounts affected. *(select one of (c) or (d))*:
(c) [X] **All Accounts.**
(d) [ ] **The following accounts:**
  (1) [ ] **Elective Deferral Accounts (Pre-tax and Roth) and Employee Contributions.**
  (2) [ ] **All Nonelective Contribution Accounts.**
  (3) [ ] **All Matching Contribution Accounts.**
  (4) [ ] **All Rollover Contribution and Transfer Accounts.**
  (5) [ ] **Specify Accounts:** ______________

Restrictions on Participant direction *(select one of (e) or (f))*:
(e) [ ] **None.** Provided the investment does not result in a prohibited transaction, give rise to UBTI, create administrative problems or violate the Plan terms or Applicable Law.
(f) [ ] **Restrictions:** ______________

ERISA §404(c). *(select one of (g) or (h))*:
(g) [X] **Applies.**
(h) [ ] **Does not apply.**

QDIA (Qualified Default Investment Alternative). *(select one of (i) or (j))*:
(i) [X] **Applies.** See SFC Election 122 for details.
(j) [ ] **Does not apply.**

AC3. ROLLOVER CONTRIBUTIONS **(3.08)**. The Plan permits or does not permit Rollover Contributions as follows *(select one of (a) or (b).)*:
(a) [ ] **Does not permit.** (skip to AC4.)
(b) [X] **Permits.** Subject to approval by the Plan Administrator and as further described below *(complete the following)*:

Who may roll over. *(select one of (c) or (d))*:
(c) [ ] **Participants only.**
(d) [X] **Eligible Employees or Participants.**

Sources/Types. The Plan will accept a Rollover Contribution *(select one of (e) or (f))*:
(e) [X] **All.** From any Eligible Retirement Plan and as to all Contribution Types eligible to be rolled into this Plan.
(f) [ ] **Limited.** Only from the following types of Eligible Retirement Plans and/or as to the following Contribution Types: ________________.

AC4. PLAN EXPENSES **(7.04(C))**. The Employer will pay or the Plan will be charged with non-settlor Plan expenses as follows *(select one of (a) or (b).)*:
(a) [ ] **Employer pays.** Employer pays all expenses except those intrinsic to Trust assets which the Plan will pay *(e.g., brokerage commissions)*.
(b) [X] **Plan pays.** Plan pays some or all non-settlor expenses. See SFC Election 119 for details.

AC5. RELATED AND PARTICIPATING EMPLOYERS/MULTIPLE EMPLOYER PLAN (**1.24(C)/(D)**). There are Related Employers and Participating Employers as follows (choose one or more if applicable):

(a) [ ] **Related Employers.** Name(s) of Related Employers: ____________

(b) [ ] **Participating Employers.** Name(s) of Participating Employers: ____________ See SFC Election 76 for details.

(c) [ ] **Former Participating Employers.** Name(s) of former Participating Employers

Name(s)	**Date of cessation**
____________	____________
____________	____________

(d) [ ] **Multiple Employer Plan status.** The Signatory Employer is the Lead Employer and at least one Participating Employer is not a Related Employer. *(complete (1))*

(1) [ ] **Name(s) of Participating Employers** (other than Related Employers described above): ____________. See SFC Election 76 for details.

AC6. TOP-HEAVY MINIMUM-MULTIPLE PLANS (**10.03**). If the Employer maintains another plan, this Plan provides that the Plan Administrator operationally will determine in which plan the Employer will satisfy the Top-Heavy Minimum Contribution (or benefit) requirement as to Non-Key Employees who participate in such plans and who are entitled to a Top-Heavy Minimum Contribution (or benefit). This Election documents the Plan Administrator's operational election. *(select (a) or select one of (b) or (c).)*:

(a) [X] **Does not apply.**

(b) [ ] **If only another Defined Contribution Plan.** Make the Top-Heavy Minimum Allocation *(choose one of (1) or (2).)*:

(1) [ ] **To this Plan.**

(2) [ ] **To another Defined Contribution Plan:** ____________ (plan name)

(c) [ ] **If one or more Defined Benefit Plans.** Make the Top-Heavy Minimum Allocation or provide the top-heavy minimum benefit *(choose one of (1), (2), or (3).)*:

(1) [ ] **To this Plan.** Increase the Top-Heavy Minimum Allocation to 5%.

(2) [ ] **To another Defined Contribution Plan.** Increase the Top-Heavy Minimum Allocation to 5% and provide under the: ____________ (name of other Defined Contribution Plan).

(3) [ ] **To a Defined Benefit Plan.** Provide the 2% top-heavy minimum benefit under the: ____________ (name of Defined Benefit Plan) and applying the following interest rate and mortality assumptions: ____________.

AC7. SELF-EMPLOYED PARTICIPANTS (**1.22(A)**). There is one or more self-employed Participants with Earned Income benefits in the Plan as follows *(choose (a) if applicable)*:

(a) [X] **Applies.**

AC8. PROTECTED BENEFITS (**11.02(C)**). The following Protected Benefits no longer apply to all Participants or do not apply to designated amounts/Participants as indicated, having been eliminated by a Plan amendment *(select one of (a) or (b).)*:

(a) [X] **Does not apply.** No Protected Benefits have been eliminated.

(b) [ ] **Applies.** Protected Benefits have been eliminated as follows *(select one or more of rows (1) through (4) as applicable; select one of columns (1), (2), or (3), and complete column (4).)*:

	(1) All Participants/ Accounts	**(2) Post-E.D. Contribution Accounts only**	**(3) Post-E.D. Participants only**	**(4) Effective Date (E.D.)**
(1) [ ] **QJSA/QPSA distributions**	[ ]	[ ]	[ ]	____________
(2) [ ] **Installment distributions**	[ ]	[ ]	[ ]	____________
(3) [ ] **In-kind distributions**	[ ]	[ ]	[ ]	____________
(4) [ ] **Specify:** ____________				

AC9. LIFE INSURANCE (**9.01**). The Trust invests or does not invest in life insurance Contracts as follows *(select one of (a) or (b).)*:

(a) [X] **Does not apply.**

(b) [ ] **Applies.** Subject to the limitations and other provisions in Article IX and/or Appendix B.

AC10. DISTRIBUTION OF CASH OR PROPERTY (**6.12**). The Plan provides for distribution in the form of *(select one of (a) or (b).)*:

(a) [X] **Cash only.** Except where property distribution is required or permitted under Section 6.12.

(b) [ ] **Cash or property.** At the distributee's election and consistent with any Plan Administrator policy under Section 6.12.

AC11. EMPLOYER SECURITIES/EMPLOYER REAL PROPERTY (**8.05**). The Trust invests in qualifying Employer securities and/or qualifying Employer real property as follows *(choose (a) if applicable)*:

(a) [ ] **Applies.** Such investments are subject to the limitations of Section 8.05 and/or Appendix B.

AC12. TRUSTEE(S) OR INSURER(S). Information regarding Trustee(s)/Insurer(s) *(required for the Summary Plan Description and, if requested, the Trust Agreement)* (NOTE: Select a. if not using provided trust. MUST select b and following questions as applicable):

(a) [ ] Do not produce the trust agreement
(b) [X] Complete the following UNLESS not selecting supporting forms:

Trustee/Insurer *(select (c) OR one or more of (d) - (e))*
(c) [ ] **Insurer.** This Plan is funded exclusively with Contracts *(select (1) – (4) below as applicable):*
Name of Insurer(s)
(1) [ ] ______
(2) [ ] ______
(3) [ ] Use Employer address/telephone number/email
(4) [ ] Use following address/telephone number/email
(a) Street: ______
(b) City: ______
(c) State: ______
(d) Zip: ______
(e) Telephone: ______
(f) Email: ______

(d) [ ] Individual Trustee(s)
(e) [X] Corporate Trustee

Name of Trust
(f) [X] Specify name of Trust Data I/O Corporation Tax Deferral Retirement Trust

Individual Trustees *(if d. selected above, complete (g) - (j))*
Directed/Discretionary Trustees. The individual Trustee(s) executing this Adoption Agreement are *(select (g) or (h))*
(g) [ ] Select for each individual Trustee *(skip to next question)*
(h) [ ] The following selections apply to all individual Trustee(s) *(select 1. or 2. OR all that apply of 3. and 4.)*
1. [ ] A discretionary Trustee over all plan assets *(may not be selected with 2. - 4.)*
2. [ ] A nondiscretionary (directed) Trustee over all plan assets *(may not be selected with 1., 3. or 4.)*
3. [ ] The individual Trustee(s) will serve as a discretionary Trustee over the following assets: ______ *(may not be selected with 1. or 2.)*
4. [ ] The individual Trustee(s) will serve as a nondiscretionary (directed) Trustee over the following assets: ______ *(may not be selected with 1. or 2.)*

Individual Trustee(s)
(i) [ ] Individual Trustee(s) are *(select one or more of (a) - (j); enter address at (j) below)*
(a) **Name** ______
Title/Email:
(1) Title ______
(2) Email ______ *(optional)*
Trustee is: *(complete if (g) selected above; select (3) or (4) OR all that apply of (5) and (6))*
(3) [ ] Discretionary Trustee over all plan assets
(4) [ ] A discretionary Trustee over the following plan assets: ______
(5) [ ] Nondiscretionary Trustee over all plan assets
(6) [ ] A nondiscretionary (directed) Trustee or Custodian over the following plan assets ______

(b) **Name** ______
Title/Email:
(1) Title ______
(2) Email ______ *(optional)*
Trustee is: *(complete if (g) selected above; select (3) or (4) OR all that apply of (5) and (6))*
(3) [ ] Discretionary Trustee over all plan assets
(4) [ ] A discretionary Trustee over the following plan assets: ______
(5) [ ] Nondiscretionary Trustee over all plan assets
(6) [ ] A nondiscretionary (directed) Trustee or Custodian over the following plan assets ______

(c) **Name** ______
Title/Email:
(1) Title ______
(2) Email ______ *(optional)*
Trustee is: *(complete if (g) selected above; select (3) or (4) OR all that apply of (5) and (6))*
(3) [ ] Discretionary Trustee over all plan assets
(4) [ ] A discretionary Trustee over the following plan assets: ______

(5) [ ] Nondiscretionary Trustee over all plan assets
(6) [ ] A nondiscretionary (directed) Trustee or Custodian over the following plan assets ____________________

(d) **Name** ______________________________
Title/Email:
(1) Title ______________________________
(2) Email ______________________________ *(optional)*
Trustee is: *(complete if (g) selected above; select (3) or (4) OR all that apply of (5) and (6))*
(3) [ ] Discretionary Trustee over all plan assets
(4) [ ] A discretionary Trustee over the following plan assets: ____________________
(5) [ ] Nondiscretionary Trustee over all plan assets
(6) [ ] A nondiscretionary (directed) Trustee or Custodian over the following plan assets ____________________

(e) **Name** ______________________________
Title/Email:
(1) Title ______________________________
(2) Email ______________________________ *(optional)*
Trustee is: *(complete if (g) selected above; select (3) or (4) OR all that apply of (5) and (6))*
(3) [ ] Discretionary Trustee over all plan assets
(4) [ ] A discretionary Trustee over the following plan assets: ____________________
(5) [ ] Nondiscretionary Trustee over all plan assets
(6) [ ] A nondiscretionary (directed) Trustee or Custodian over the following plan assets ____________________

(f) **Name** ______________________________
Title/Email:
(1) Title ______________________________
(2) Email ______________________________ *(optional)*
Trustee is: *(complete if (g) selected above; select (3) or (4) OR all that apply of (5) and (6))*
(3) [ ] Discretionary Trustee over all plan assets
(4) [ ] A discretionary Trustee over the following plan assets: ____________________
(5) [ ] Nondiscretionary Trustee over all plan assets
(6) [ ] A nondiscretionary (directed) Trustee or Custodian over the following plan assets ____________________

(g) **Name** ______________________________
Title/Email:
(1) Title ______________________________
(2) Email ______________________________ *(optional)*
Trustee is: *(complete if (g) selected above; select (3) or (4) OR all that apply of (5) and (6))*
(3) [ ] Discretionary Trustee over all plan assets
(4) [ ] A discretionary Trustee over the following plan assets: ____________________
(5) [ ] Nondiscretionary Trustee over all plan assets
(6) [ ] A nondiscretionary (directed) Trustee or Custodian over the following plan assets ____________________

(h) **Name** ______________________________
Title/Email:
(1) Title ______________________________
(2) Email ______________________________ *(optional)*
Trustee is: *(complete if (g) selected above; select (3) or (4) OR all that apply of (5) and (6))*
(3) [ ] Discretionary Trustee over all plan assets
(4) [ ] A discretionary Trustee over the following plan assets: ____________________
(5) [ ] Nondiscretionary Trustee over all plan assets
(6) [ ] A nondiscretionary (directed) Trustee or Custodian over the following plan assets ____________________

(i) **Name** ______________________________
Title/Email:
(1) Title ______________________________
(2) Email ______________________________ *(optional)*
Trustee is: *(complete if (g) selected above; select (3) or (4) OR all that apply of (5) and (6))*
(3) [ ] Discretionary Trustee over all plan assets
(4) [ ] A discretionary Trustee over the following plan assets: ____________________
(5) [ ] Nondiscretionary Trustee over all plan assets
(6) [ ] A nondiscretionary (directed) Trustee or Custodian over the following plan assets ____________________

(j) **Name** ______________________________
Title/Email:

(1) Title ______________________
(2) Email ______________________ *(optional)*
Trustee is: *(complete if (g) selected above; select (3) or (4) OR all that apply of (5) and (6))*
(3) [ ] Discretionary Trustee over all plan assets
(4) [ ] A discretionary Trustee over the following plan assets: ______________________
(5) [ ] Nondiscretionary Trustee over all plan assets
(6) [ ] A nondiscretionary (directed) Trustee or Custodian over the following plan assets ______________________

(j) [ ] **Individual Trustee Address** *(complete if d. selected above)*
(1) [ ] Use Employer address/telephone number/email
(2) [ ] Use following address/telephone number/email
a. Street: ______________________
b. City: ______________________
c. State: ______________________
d. Zip: ______________________
e. Telephone: ______________________
f. Email: ______________________

Corporate Trustee Name/Type/Address *(complete if (e) selected above)*
(k) [X] **Name** Great-West Trust Company, LLC
Address/telephone number/email
(1) [ ] Use Employer address/telephone number/email
(2) [X] Use following address/telephone number/email
a. Street: 8515 East Orchard Road
b. City: Greenwood Village
c. State: Colorado
d. Zip: 80111
e. Telephone: (877) 694-4015
f. Email: ______________________
Directed/Discretionary. The Corporate Trustee is *(select 1. or 2. OR all that apply of 3. and 4.)*
(3) [ ] A discretionary Trustee over all plan assets
(4) [X] A nondiscretionary (directed) Trustee over all plan assets
(5) [ ] A discretionary Trustee over the following plan assets: ______________
(6) [ ] A nondiscretionary (directed) Trustee over the following plan assets ______________
Signee *(optional)*:
(7) [ ] Name of person signing on behalf of the corporate Trustee ______________
(8) [ ] Email address of person signing on behalf of the corporate Trustee ______________

Special Trustee for collection of contributions. The Employer appoints the following Special Trustee with the responsibility to collect delinquent contributions *(optional)*
(l) [ ] **Name** ______________
Title:
(1) ______________________
Address/telephone number/email
(2) [ ] Use Employer address/telephone number/email
(3) [ ] Use following address/telephone number/email
a. Street: ______________________
b. City: ______________________
c. State: ______________________
d. Zip: ______________________
e. Telephone: ______________________
f. Email: ______________________

Custodian(s) Name/Address. The Custodian(s) are *(optional)*
(m) [ ] **Name(s)** ______________
Address/telephone number/email
(1) [ ] Use Employer address/telephone number/email
(2) [ ] Use following address/telephone number/email
a. Street: ______________________
b. City: ______________________
c. State: ______________________
d. Zip: ______________________
e. Telephone: ______________________
f. Email: ______________________

Investment in common, collective or pooled trust funds. The nondiscretionary Trustee, as directed or the discretionary Trustee acting without direction (and in addition to the discretionary Trustee's authority to invest in its own funds), may invest in any of the following trust funds: *(optional)*
(n) [ ] ________________ *(specify the names of one or more trust funds in which the Plan can invest)*

Choice of law
(o) **[X]** This trust will be governed by the laws of the state of:
  (1) [ ] State in which the Employer's principal office is located
  (2) **[X]** State in which the corporate trustee or insurer is located
  (3) [ ] Other ________________________________

AMENDMENT TO IMPLEMENT HARDSHIP DISTRIBUTION PROVISIONS OF THE BIPARTISAN BUDGET ACT OF 2018

DATA I/O CORPORATION TAX DEFERRAL RETIREMENT PLAN

ARTICLE I
PREAMBLE

1.1 **Adoption and effective date of Amendment.** The Document Provider, on behalf of the Employer, hereby adopts this Amendment to the Employer's Plan. Except as otherwise specified in this Amendment, this Amendment is effective ("the Effective Date") on the first day of the first Plan Year beginning after December 31, 2018, or as soon as administratively feasible thereafter, and in no event later than the Latest Effective Date. If the Plan, prior to this Amendment, does not provide for hardship distributions, then this Amendment will be void and of no effect.

1.2 **Superseding of inconsistent provisions.** This Amendment supersedes the provisions of the Plan to the extent those provisions are inconsistent with the provisions of this Amendment. Except as otherwise provided in this Amendment, terms defined in the Plan will have the same meaning in this Amendment.

1.3 **Construction.** Except as otherwise provided in this Amendment, any "Section" reference in this Amendment refers only to this Amendment and is not a reference to the Plan. The Article and Section numbering in this Amendment is solely for purposes of this Amendment, and does not relate to the Plan article, section, or other numbering designations.

1.4 **Effect of restatement of Plan.** If the Employer restates the Plan using the Document Provider's pre-approved plan based on The Cumulative List of Changes in Plan Qualification Requirements for Pre-approved Defined Contribution Plans for 2017 (Notice 2017-37) or any earlier Cumulative List, then this Amendment shall remain in effect after such restatement unless the provisions in this Amendment are restated or otherwise become obsolete (e.g., if the Plan is restated onto a plan document which incorporates these provisions).

1.5 **Adoption by Document Provider.** The Document Provider hereby adopts this Amendment on behalf of all of the Document Provider's plans adopted by its adopting employers. The adoption by the Document Provider becomes applicable with respect to an Employer's Plan on the Effective Date (or, if later, the Effective Date of the Plan), unless the Employer individually adopts this Amendment, or an alternative amendment, prior to the expiration of the remedial amendment period relating to this Amendment.

ARTICLE II
ELECTIONS

Instructions: Complete the elections at Sections 2.1 and 2.2. Unless this Amendment is signed by the Employer, the default elections in Section 2.3 will apply. If the Employer is satisfied with those defaults and the Document Provider's elections in Sections 2.1 and 2.2, the Employer does not need to execute this Amendment. Otherwise, the Employer must complete the elections at Sections 2.1 and 2.2, may complete one or more of Sections 2.4 through 2.7 in order to override the default elections in Amendment Section 2.3, and must execute the amendment.

2.1 **Termination of deferral suspension.** Hardship distributions made on or after the Effective Date will not trigger a suspension of Elective Deferrals, pursuant to Section 3.1(c). If a Participant received a hardship distribution before the Effective Date, and therefore Elective Deferrals were suspended, will the Participant be able to resume deferrals as soon as practical after the Effective Date?

a. [ ] **YES.** Beginning on the Effective Date, Elective Deferrals will not be suspended on account of a hardship distribution, regardless of the date of the distribution.
b. [X] **NO.** The Participant's suspension of Elective Deferrals begun before the Effective Date will continue as originally scheduled.

2.2 Expansion of sources available for a hardship distribution. Pursuant to Amendment Section 3.2, are QNECs and QMACs available for hardship distributions?

a. [ ] **YES.** QNECs and QMACs are available for hardship distributions.
b. [X] **NO.** QNECs and QMACs are not available for hardship distributions.

2.3 **Default Provisions.** The following provisions apply except to the extent the Employer makes a different election in one or more of Sections 2.4 through 2.7 and executes the Amendment.

a. After the Effective Date, Participants do not need to take plan loans before taking hardship distributions.
b. After the Effective Date, earnings on Elective Deferrals may be withdrawn on account of a hardship.
c. Hardship needs include residential casualty losses (without regard to whether the casualty was in a federally declared disaster area) and Disaster Losses, effective January 1, 2018 or as soon as practical thereafter.

d. The Effective Date is the first day of the first Plan Year beginning after December 31, 2018, or as soon as administratively feasible thereafter, and in no event later than the Latest Effective Date.

Skip Sections 2.4 through 2.7 if you accept the default provisions listed in Section 2.3. Any entry in Sections 2.4 through 2.7 will override those defaults.

2.4 **Loan Requirement.** The provisions of Amendment Section 3.1(b), requiring recipients of hardship distributions to take available nontaxable loans, will NOT apply unless selected below:

a. [ ] Amendment Section 3.1(b) APPLIES (i.e., Participants are required to obtain a Plan loan) indefinitely, unless and until the Plan is further amended.

2.5 **Expansion of sources available for a hardship distribution.** Earnings on amounts attributable to Elective Deferrals are available for hardship distribution, unless selected below:

a. [ ] Earnings on amounts attributable to Elective Deferrals are NOT available for hardship distributions.

2.6 **Hardship needs/events.** The provisions of Amendment Sections 3.3 (relating to residential casualty losses) and 3.4 (relating to Disaster Losses) apply as of January 1, 2018, or as soon as practical thereafter, unless otherwise elected below.

a. [ ] Amendment Section 3.3 will NOT apply (and so casualty losses are limited to federally declared disasters, pursuant to Code §165(h)).

b. [ ] Amendment Section 3.4 will NOT apply (and so the Plan will not make hardship distributions on account of Disaster Losses).

2.7 **Effective Dates.** Unless otherwise selected below, the Effective Date is the first day of the first Plan Year beginning after December 31, 2018, or as soon as administratively feasible thereafter, and in no event later than the Latest Effective Date. Except as otherwise specified in this Amendment, all provisions are effective on the Effective Date.

a. [ ] Other general Effective Date: __________ (may not be earlier than the first day of the first Plan Year beginning on or after January 1, 2019 or after the Latest Effective Date).

b. [ ] Special Effective Date for Amendment Section 2.2a: __________ *[Enter a special effective date, no sooner than the first day of the 2019 Plan Year.]*

c. [ ] Special Effective Date for Amendment Section 2.3a: __________ *[Enter a special effective date, no sooner than the first day of the 2019 Plan Year.]*

d. [ ] Special Effective Date for Amendment Section 2.3b: __________ *[Enter a special effective date no sooner than the first day of the 2019 Plan Year.]*

e. [ ] Special Effective Date for Amendment Section 2.3c: ____________ *[Enter a special effective date for the expansion of hardship needs/events, no sooner than January 1, 2018.]*

ARTICLE III
DISTRIBUTION BASED ON HARDSHIP

3.1 **Modification of hardship necessity provisions.**

a. The Necessity Provisions of the Plan are repealed. Except as otherwise provided in this Section 3.1, the Plan will not make a hardship distribution to a Participant unless the Participant has obtained all other currently available distributions (including distributions of ESOP dividends under section Code §404(k), but not hardship distributions) under the plan and all other plans of deferred compensation, whether qualified or nonqualified, maintained by the Employer. In addition, for a distribution that is made on or after the Latest Effective Date (or such earlier date as the Plan Administrator has implemented the procedure), the Participant must certify (in writing, by an electronic medium as defined in Treas. Reg. §1.401(a)-21(e)(3), or in such other form as authorized in IRS guidance) that he or she has insufficient cash or other liquid assets reasonably available to satisfy the need.

b. If and only if elected in Amendment Section 2.4, before a hardship distribution may be made, a Participant must obtain all nontaxable loans (determined at the time a loan is made) available under the plan and all other plans maintained by the Employer.

c. The Plan will not suspend the Participant from making Elective Deferrals on account of receipt of a hardship distribution. This provision will apply to hardship distributions made after the Effective Date. Under Amendment Section 2.1, it may also apply, as of the Effective Date, to certain suspensions of Elective Deferrals on account of receipt of a hardship distribution prior to the Effective Date.

3.2 **Modification of amounts that may be withdrawn on account of a hardship.** Except as otherwise elected in Amendment Sections 2.2 and 2.5, earnings on Elective Deferrals, QNECs, and QMACs (and the earnings thereon) may be withdrawn on account of a hardship. The hardship provisions set forth in the Plan, except as modified by this Amendment, continue to apply.

3.3 **Residential casualty loss.** Except as otherwise provided in Amendment Section 2.6, effective January 1, 2018 or as soon as practical thereafter, to the extent the Plan permits hardship distributions for expenses to repair damage to the Participant's principal residence that would qualify for a casualty loss deduction under Code §165, such amounts will be determined without regard to Code §165(h)(5).

3.4 **Disaster loss.** If the Plan is a Deemed Need Plan, then except as otherwise provided in Amendment Section 2.6, effective January 1, 2018 or as soon as practical thereafter, the financial needs which can justify a hardship distribution to a Participant are expanded to include Disaster Losses.

ARTICLE IV
DEFINITIONS

4.1 **Suspensions of Elective Deferrals.** Any reference to suspension of Elective Deferrals means and includes a suspension of Elective Deferrals and/or Employee Contributions to this Plan or any other qualified plan, a 403(b) plan, or an eligible governmental plan (described in Treas. Reg. §1.457-2(f)) of the Employer.

4.2 **QNECs.** A "QNEC" is a Qualified Nonelective Contribution, described in Code §401(m)(4)(C) or a safe harbor nonelective contribution described in Code §401(k)(12)(C). For purposes of this Amendment only, a QACA nonelective contribution described in Code §401(k)(13)(D)(i)(II) will also be treated as though it were a QNEC.

4.3 **QMACs.** A "QMAC" is a Qualified Matching Contribution, described in Code §401(k)(3)(D)(ii)(I), or a safe harbor matching contribution described in Code §401(k)(12)(B). For purposes of this Amendment only, a QACA matching contribution described in Code §401(k)(13)(D)(i)(I) will also be treated as though it were a QMAC.

4.4 **Necessity Provisions.** The "Necessity Provisions" of the Plan are those provisions which implement the provisions of Treas. Reg. §1.401(k)-1(d)(3)(iv)(B), (C), (D), and (E), as in effect prior to April 1, 2019. These provisions may either reflect the safe harbor "deemed necessary" standards of subparagraph (E) of that regulation, or the non-safe harbor "no alternative means" standards of subparagraphs (B), (C), and (D) of that regulation.

4.5 **Deemed Need Plan.** The Plan is a "Deemed Need Plan" to the extent the Plan limits eligibility for a hardship distribution to the deemed immediate and heavy financial needs described in Treas. Reg. §1.401(k)-1(d)(3)(ii)(B), (as revised effective April 1, 2019).

4.6 **Disaster Losses.** Disaster Losses are expenses and losses (including loss of income) incurred by the Participant on account of a disaster declared by the Federal Emergency Management Agency (FEMA) under the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Pub. L. 100-707, provided that the Participant's principal residence or principal place of employment at the time of the disaster was located in an area designated by FEMA for individual assistance with respect to the disaster.

4.7 **Document Provider.** The Document Provider means the Sponsor of a Prototype Plan or VS Practitioner of a Volume Submitter Plan as defined in Rev. Proc. 2015-36, or the Provider of a Pre-approved Plan, as defined in Rev. Proc. 2017-41. References to the Document Provider's plans or to pre-approved plans refer to the Prototype Plans, Volume Submitter Plans, and/or Pre-approved Plans sponsored by the Document Provider for use by adopting employers, as the case may be.

4.8 **Latest Effective Date.** The "Latest Effective Date" is the latest of January 1, 2020, the Effective Date of the Plan, or the effective date of any amendment adding hardship distributions to the Plan.

Except with respect to any election made by the employer in Article II, this Amendment is hereby adopted by the prototype sponsor/volume submitter practitioner on behalf of all adopting employers.

Signature and date on file
(signature and date)

Sponsor/Practitioner Name: Great-West Trust Company, LLC

NOTE: The Employer only needs to execute this Amendment if an election has been made in one or more of Sections 2.4 through 2.7, or the Employer has made a different selection from the Document Provider's selection in Sections 2.1 or 2.2.

This Amendment has been executed this ________________ day of ____________________, ________.

Name of Plan: Data I/O Corporation Tax Deferral Retirement Plan

Name of Employer: Data I/O Corporation

By: ______________________________
EMPLOYER

EXHIBIT 21.1

DATA I/O CORPORATION
SUBSIDIARIES OF THE REGISTRANT

The following table indicates the name, jurisdiction of incorporation and basis of ownership of each of Data I/O's subsidiaries:

Name of Subsidiary	State or Jurisdiction of Organization	Percentage of Voting Securities Owned
Data I/O International, Inc.	Washington	100%
RTD, Inc.	Washington	100%
Data I/O FSC International, Inc.	Territory of Guam	100%
Data I/O GmbH	Germany	100%
Data I/O Electronics (Shanghai) Co., Ltd.	China	100%

EXHIBIT 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our report dated March 29, 2022, with respect to the consolidated financial statements included in the Annual Report of Data I/O Corporation on Form 10-K for the year ended December 31, 2021. We consent to the incorporation by reference of said report in the Registration Statements of Data I/O Corporation on Forms S-3 (333-121566) and on Forms S-8 (File Nos. 002-76164, 002-86785, 002-98115, 002-78394, 33-95608, 33-66824, 33-42010, 33-26472, 33-54422, 333-20657, 333-55911, 33-02254, 33-03958, 333-107543, 333-81986, 333-48595, 333-121861, 333-151006, 333-166730, 333-175840, and 333-224971).

/s/ GRANT THORNTON LLP

Bellevue, Washington

March 29, 2022

EXHIBIT 31.1

Certification by Chief Executive Officer
Pursuant to 18 U.S.C. Section 1350
As Adopted Pursuant to
Section 302(a) of the Sarbanes-Oxley Act of 2002

I, Anthony Ambrose, certify that:

1) I have reviewed this annual report on Form 10-K of Data I/O Corporation;

2) Based upon my knowledge, this annual report does not contain any untrue statement of material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;

3) Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;

4) The registrant’s other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f)0 for the registrant and we have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant’s disclosure controls and procedures and presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this annual report based on such evaluation; and

   d) Disclosed in this annual report any change in the registrant’s internal control over financial reporting that occurred during the registrant’s most recent fiscal quarter (the registrant’s fourth fiscal quarter in the case of an annual report) that has materially affected or is reasonably likely to materially affect, the registrant’s internal control over financial reporting.

5) The registrant’s other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant’s auditors and the audit committee of registrant’s board of directors (or persons performing the equivalent functions):

   a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant’s ability to record, process, summarize and report financial information; and

   b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant’s internal controls over financial reporting.

Date: March 29, 2022

/s/ Anthony Ambrose
Anthony Ambrose
Chief Executive Officer
(Principal Executive Officer)

EXHIBIT 31.2

Certification by Chief Financial Officer
Pursuant to 18 U.S.C. Section 1350
As Adopted Pursuant to
Section 302(a) of the Sarbanes-Oxley Act of 2002

I, Joel S. Hatlen, certify that:

1) I have reviewed this annual report on Form 10-K of Data I/O Corporation;

2) Based upon my knowledge, this annual report does not contain any untrue statement of material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual report;

3) Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this annual report;

4) The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f)0 for the registrant and we have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this annual report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purpose in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this annual report based on such evaluation; and

   d) Disclosed in this annual report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected or is reasonably likely to materially affect, the registrant's internal control over financial reporting.

5) The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):

   a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal controls over financial reporting.

Date: March 29,2022

/s/ Joel S. Hatlen
Joel S. Hatlen
Chief Financial Officer
(Principal Financial Officer)

EXHIBIT 32.1

Certification by Chief Executive Officer
Pursuant to 18 U.S.C. Section 1350
As Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the annual report of Data I/O Corporation (the “Company”) on Form 10-K for the period ended December 31, 2021as filed with the Securities and Exchange Commission on the date hereof (the “Report”), I, Anthony Ambrose, Chief Executive Officer of the Company, certify, that pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of § 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Anthony Ambrose
Anthony Ambrose
Chief Executive Officer
(Principal Executive Officer)

Date: March 29, 2022

EXHIBIT 32.2

Certification by Chief Financial Officer
Pursuant to 18 U.S.C. Section 1350
As Adopted Pursuant to
Section 906 of the Sarbanes-Oxley Act of 2002

In connection with the annual report of Data I/O Corporation (the "Company") on Form 10-K for the period ended December 31, 2021 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, Joel S. Hatlen, Chief Financial Officer of the Company, certify, that pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Joel S. Hatlen
Joel S. Hatlen
Chief Financial Officer
(Principal Financial Officer)

Date: March 29, 2022