



Nasdaq: DAIO

Anthony Ambrose  
November 2021



# Safe Harbor

The matters that we discuss today will include forward-looking statements that involve risks factors that could cause Data I/O Corporation's results to differ materially from management's current expectations. We encourage you to review the Safe Harbor statement contained in the earnings releases as well as our most recent SEC filings for a complete description.

Additionally, those forward-looking statements are made as of today, and we take no obligation to update them.

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# Data I/O at a Glance



Founded  
in 1972



NASDAQ:  
DAIO



ISO 9001:2015  
Certifications



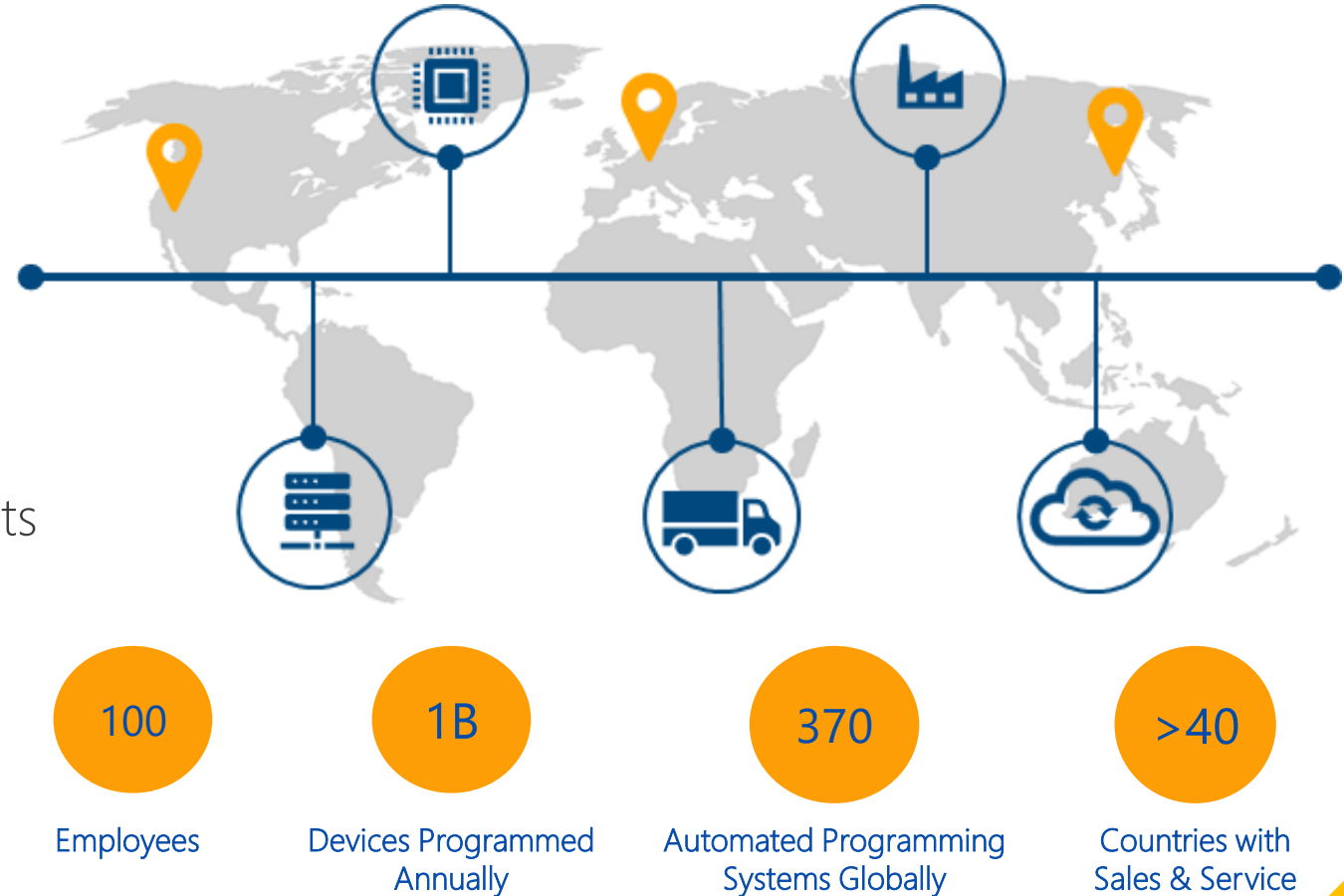
Global Service  
& Support

## What We Do

- Silicon Device Programming Equipment
- Security Deployment as-a-Service

## Solutions

We deliver the most secure and efficient systems to deploy firmware, data and secrets into IoT and automotive devices in high volume electronics manufacturing



# Company Snapshot

## Recent Achievements and Trends

- Strong growth in first half 2021 with bookings at highest level in nearly 4 years. Consumable demand remains strong but silicon shortages impacted equipment demand in Q3.
- Strong momentum in Automotive for long term growth
  - 8 of top 9 and 17 of top 20 Automotive Electronics companies are customers. ~58% of YTD orders from Automotive Electronics customers.
  - Industry Analysts and Customers forecasting 10-15% CAGR for Automotive Semiconductors for a decade.
- Over 370 PSV systems sold. Over 1 billion units/year capacity in the installed base. Installed base growth drives increase in recurring revenue over time.
- Traction for SentiX Security Provisioning Platform; Release of Next Generation SentiX® Security Deployment Platform and SentiX Product Creator™ Software Tool Suite. First wins in Automotive sector and first booking of capital equipment sale. Field conversions now possible for PSV5000 and PSV7000

## Committed to Growing Shareholder Value

- Focusing programmable core competencies on higher growth, higher margin vertical markets with greater recurring/consumable sales. Target is 50% recurring revenue within 5 years.
- Differentiated market position through technology leadership and global support
- Approx. 13% of stock (fully diluted) held or managed by insiders so that management and Board are aligned with shareholders
- 3 buybacks since 2012 for \$8.1 million returned to shareholders



CONFIDENTIAL

## Company Snapshot <sup>(1)(2)</sup>

NASDAQ:	DAIO
Headquarters:	Redmond, WA
Established:	1972
Stock Price:	\$5.35
Market Cap:	\$47M
Diluted Shares:	8.7M
3-M Daily Avg. Volume:	87,000 shares
Sales <sub>(TTM)</sub> :	\$24.3M
Net Income <sub>(TTM)</sub> :	\$(1.9)M
Diluted EPS <sub>(TTM)</sub> :	\$(0.24)
Adj. EBITDA <sup>(3)</sup> <sub>(TTM)</sub> :	\$1.1M
Cash & Sec. (9/30/21):	\$14.2M (\$1.63/share)
Debt (9/30/21):	\$0.0

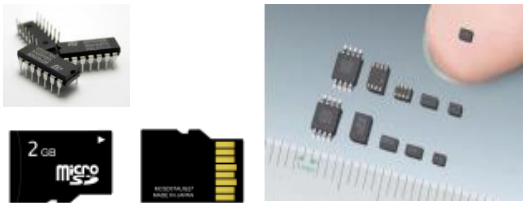
(1) Stock price, market cap and volume as of 10/29/21; Source: Yahoo

(2) Financials for the TTM period ended 9/30/21 or as noted

(3) Adj. EBITDA is a non-GAAP financial measure. A reconciliation is provided in this presentation

# Supporting the Secure Digital World

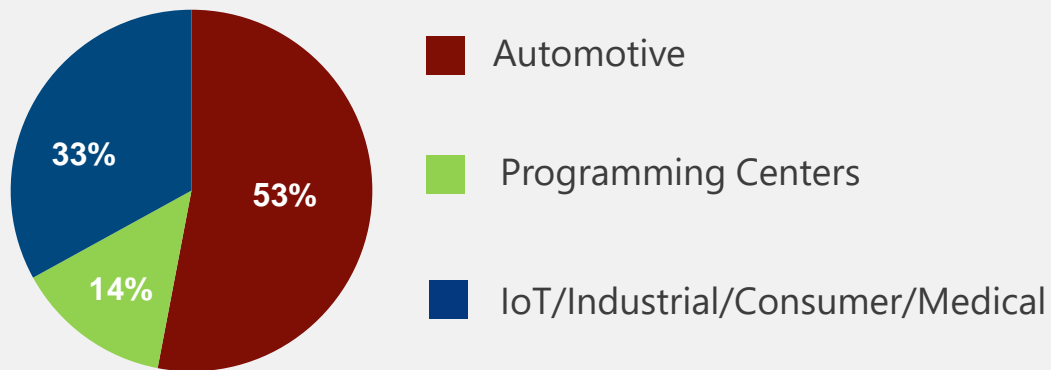
*Data I/O's programming systems are used by the world's leading manufacturers, programming centers, and contract manufacturers, to securely program integrated circuits and bring their devices to life.*



# Serving Customers Globally in Growing Markets

- The largest programming company in the world, 2-3 times larger than the next programming company
- Trusted supplier to 8 out of the top 9 and 17 of the top 20 automotive electronics suppliers
- Providing mission critical medical applications for Class I and Class II devices
- Global footprint with headquarters in Redmond, WA, USA and subsidiary offices in Shanghai, China and Munich, Germany

2020 Annual Orders by End Markets



# How Data I/O Markets Grow

## Market Forces

### IoT and Automotive Growth

- More Semiconductor Content
- Devices Get Smaller
- Move Towards Automation

Products will increase their code size as customers want more features

Products will be more secure, creating new opportunities

## Programming Impact

Unit Growth

Bit Growth

Added Complexity + Security Requirements



$$\text{Programming Demand} = \text{Units} \times \text{Bits} \times \text{Security}$$

# Market Outlook

Bringing Devices to Life

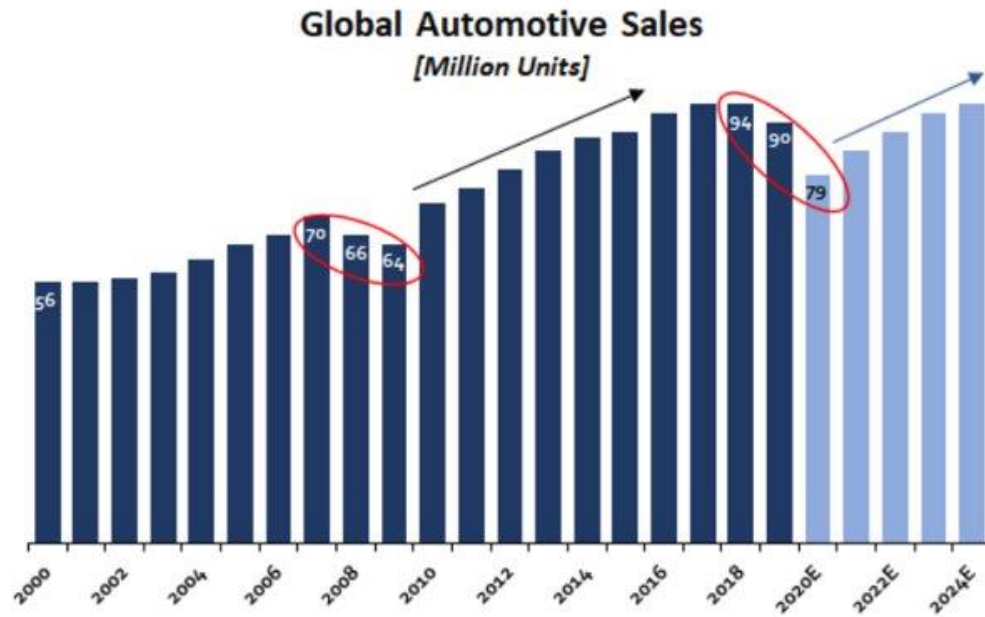




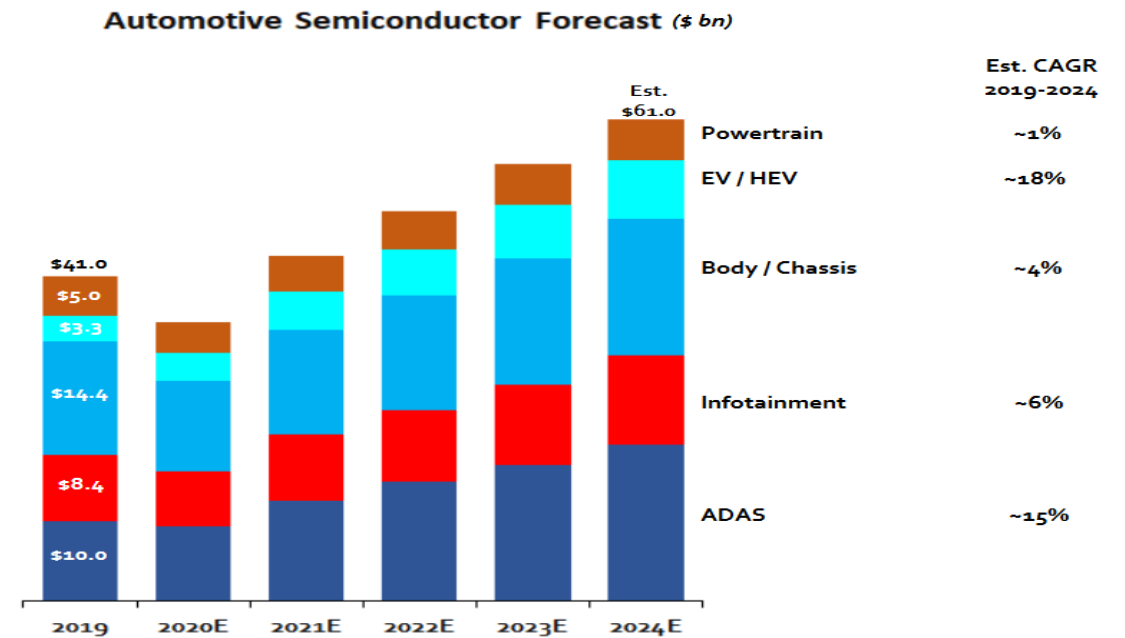
# Automotive Recovery Driven by Electronics Content Growth

...while Automotive units may take years to rebound from recent declines....

IC content per vehicle estimated to increase 55% from \$450 in 2018 to \$700 by 2022 according to Gartner, driven by Growth in EV and Hybrid Vehicles.



Source: Gartner (March 2020, December 2019)



Source: Gartner – Semiconductor Forecast Database, Worldwide, Q1'20 Update

**“We expect the market for car electronics and software to grow much faster than the overall automotive market”**

# Automotive Electronics Growth Areas



Infotainment



Electrification



ADAS/Autonomous  
Driving



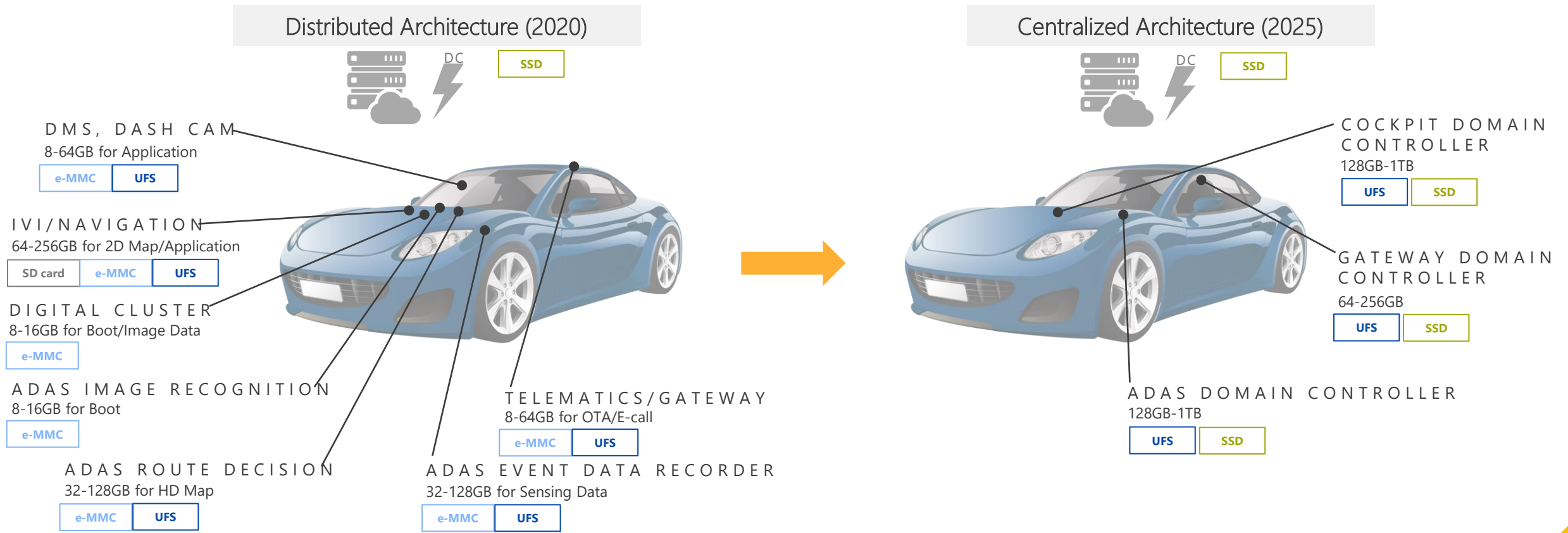
Security



Connectivity

# Storage Demands in Future Automotive System

Along with the development of IVI, ADAS and autonomous driving, demands for storage devices will dramatically increase. Autonomous car needs over 1.5TB storage device in vehicle in 2025.



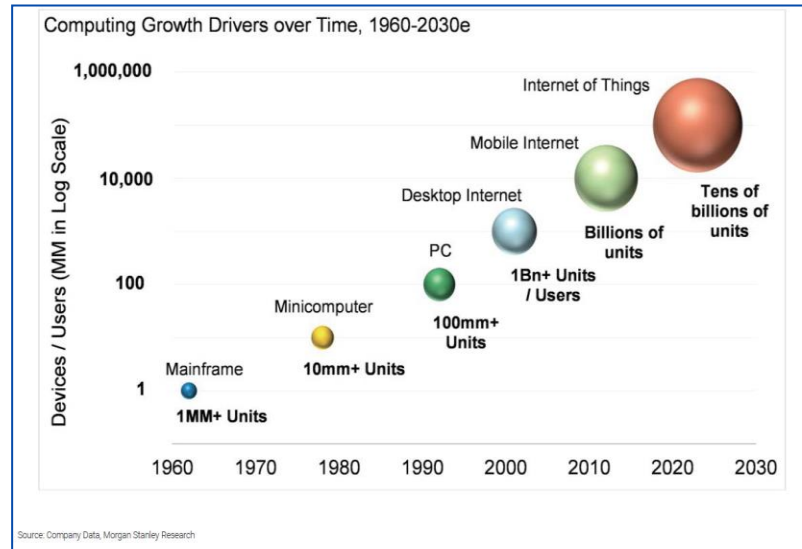
# IoT Market Drivers - Multi-Year Secular Growth

The IoT is forecast to be bigger than the mobile internet and desktop markets

*"We believe nearly every single industry will eventually migrate to an IoT model yielding 50 billion connected devices by 2020."*

Needham & Company

Security Issues are top of mind and must be addressed



**Computing**

**NSA Hacking Chief: Internet of Things Security Keeps Me Up at Night**

The leader of the National putting industrial control s secure.

by Tom Simonite January

**The trend to connect device the Internet is making life hackers—but also keeping**

**Internet of Things: Shoddy security and IoT hackers are putting human lives at risk**

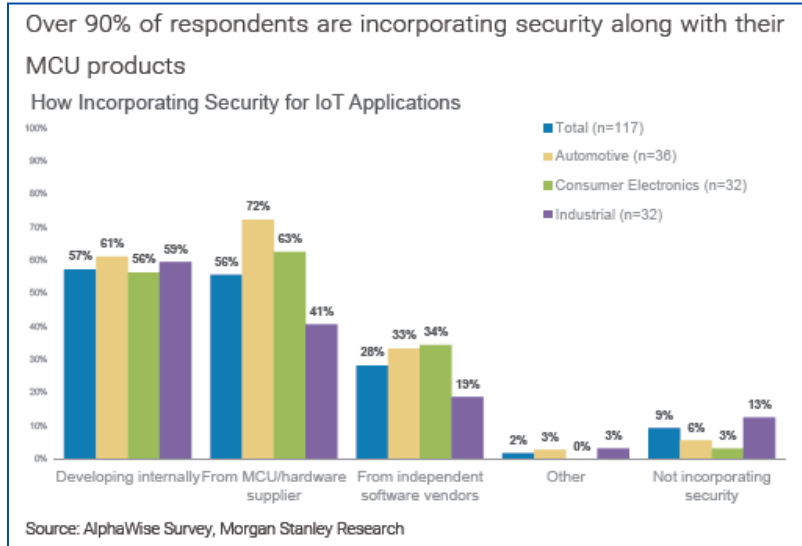
Experts say need for IoT security isn't overhyped

**Hackers demonstrated first ransomware for IoT thermostats at DEF CON**

**MORE LIKE THIS**

- Thugs developing co ransomware for And Hitler ransomware fo
- Cryptoworms: The fu ransomware hell
- Your router won't pr when smartphones smart homes

**IN THE**

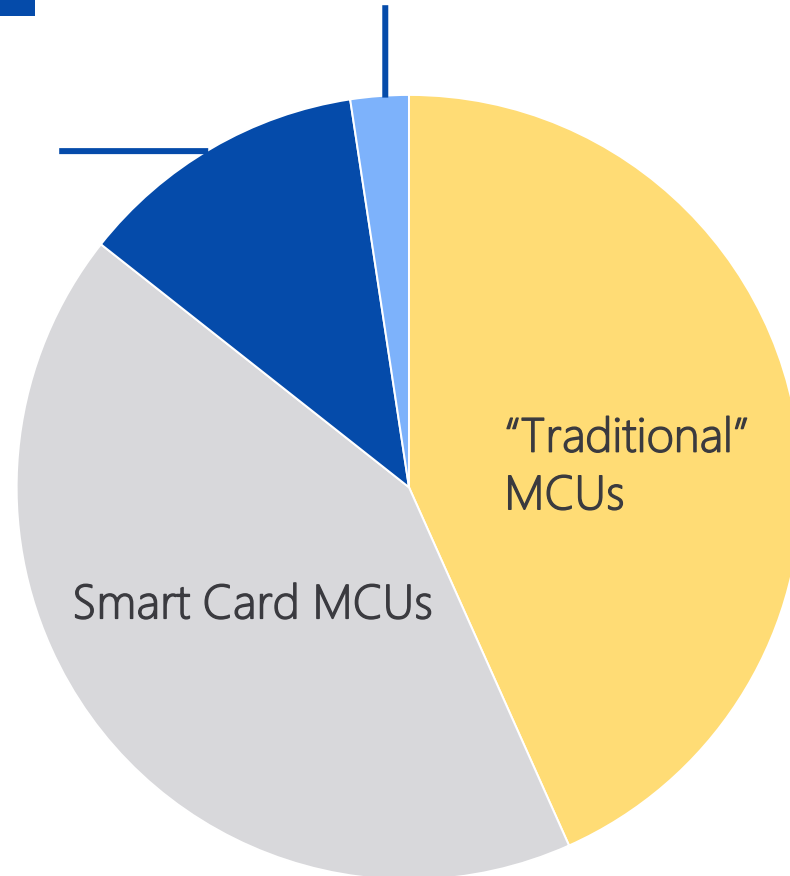


# Billions of Security Enabled Devices

2023 Security Market:  
3-4 Billion Units

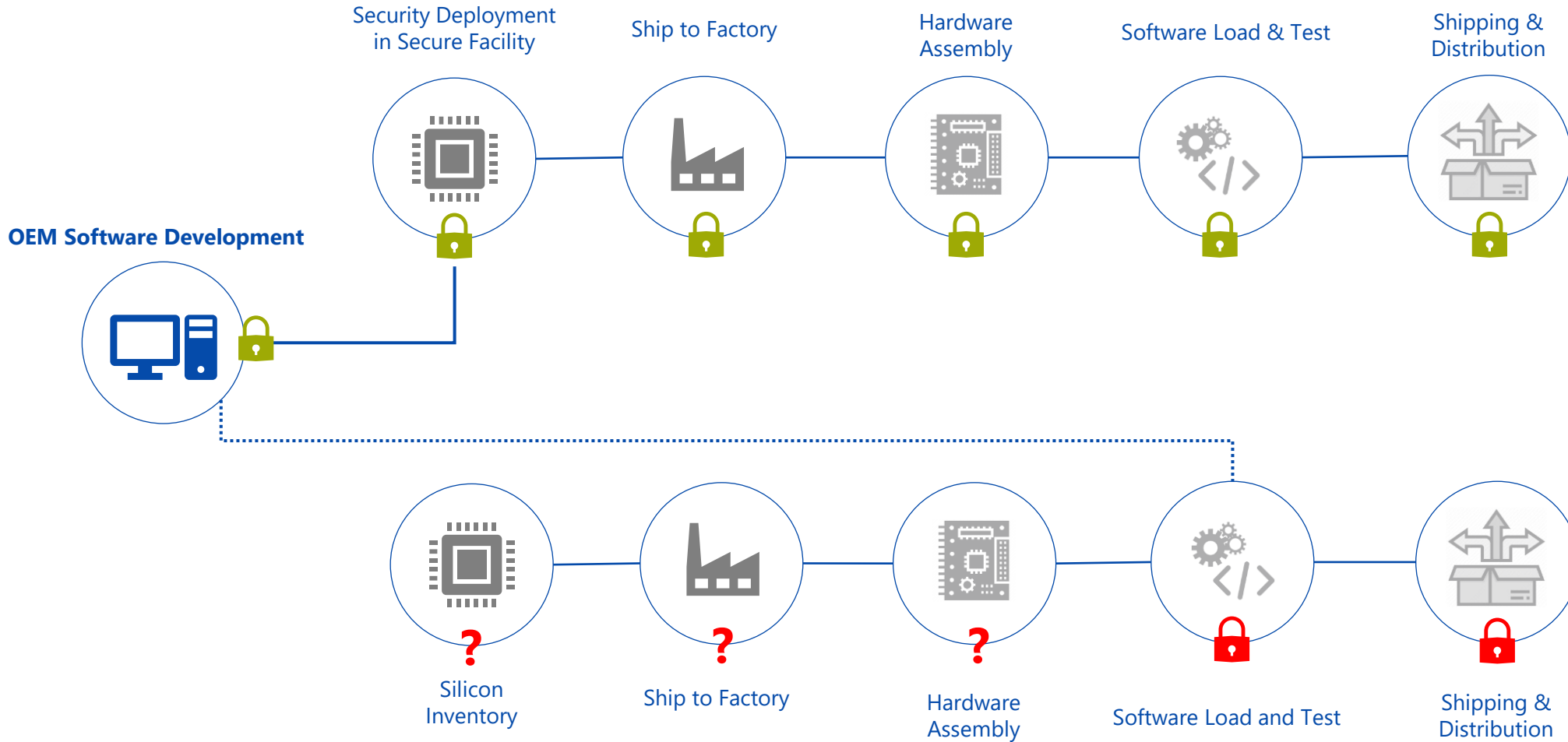
Standalone Secure  
Elements  
AICs, ESEs, TPMs

"Secure" MCUs with  
Embedded Secure Elements



Total Market:  
>20 Billion Units

# Security Deployment as-a-Service



## SentriX Security Deployment as-a-Service

- Per part fee, no MOQ
- Reduced attack surface

## Traditional Security Deployment

- Large upfront & operating expense
- Increased attack surface

# IoT Device Security in Mass Production



## Commercial Benefits

- Low upfront cost
- No minimum order quantities
- Per part as-a-Service model
- Offer a premium value-added and revenue-generating service
- Upgrade an existing PSV5000 or PSV7000 to SentiX



## Easy to Use

- Preconfigured security use cases
- Intuitive collaboration tool
- Low or high-volume production
- Optional services, e.g. automated cloud onboarding



## Robust Security

- Pre-manufacturing assembly security deployment
- Authenticates parts
- Cryptographic protection of secrets & firmware
- Supports hardware Roots of Trust
- FIPS 140 compliant hardware security module (HSM)

# Our Opportunity with SentiX

- The Internet of Things is a huge growth market, with security of supply chain and protection of firmware top of mind
- Data I/O and SentiX Partners provide a scalable, easy to develop and deploy service for customers of all sizes. Initial applications are the 'tip of the iceberg' of what is possible with SentiX
- Data I/O can now scale SentiX capabilities to over 370 PSV family systems already deployed
- Per Part Fee and licensing model drives high margin recurring revenue growth



# Investment Merits: Positioned for Long-Term Growth



Cycle Trending Favorably in 2021



*Data iO*

Thank You!

Nasdaq: DAIO

For more information, please go to  
<https://www.dataio.com/Company/Investor-Relations/Data-I-O-Profile>

**Data iO**

Thank You

Bringing Devices to Life



# Growing Recurring Revenue Mix

## Capital Equipment

- Approx. 56% of 2020 sales
- Off-line and in-line programming systems
- Automated systems cost \$68K-\$677K
- Manual systems cost \$10K-\$52K
- Usually last 5-7 years
- Adapters fit to these products
- Installed base drives recurring consumables sales

## Adapters



- Approx. 28% of 2020 sales
- Usually last 3-24 months

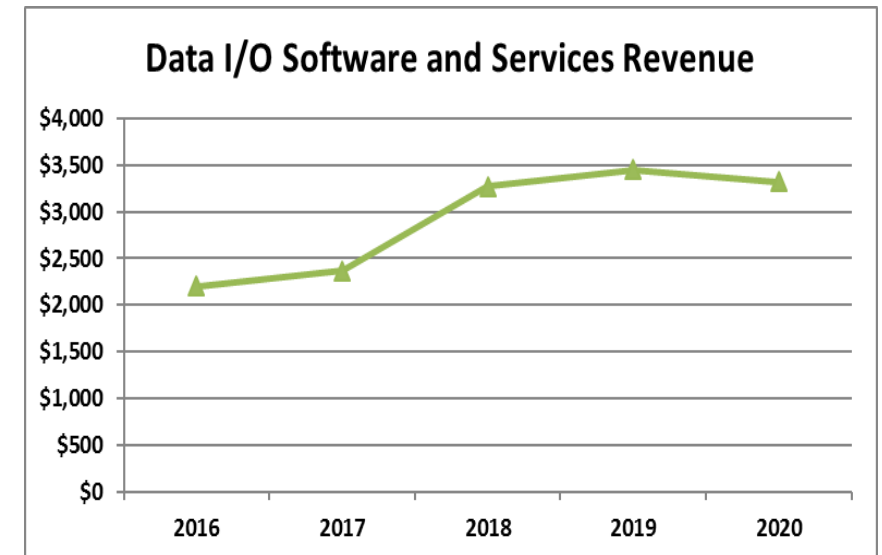
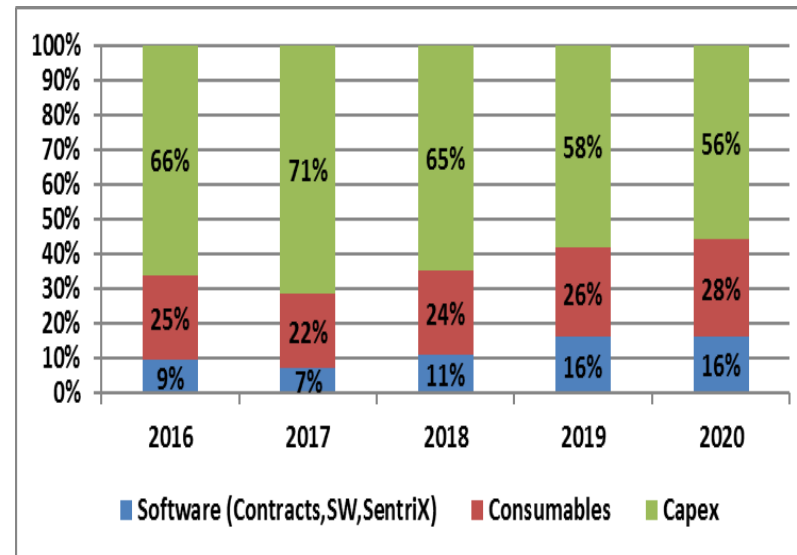
## Software, SentiX, Service



- Approx. 16% of 2020 sales
- Annual Software/Service Contracts
- Device Supports
- SentiX Revenues

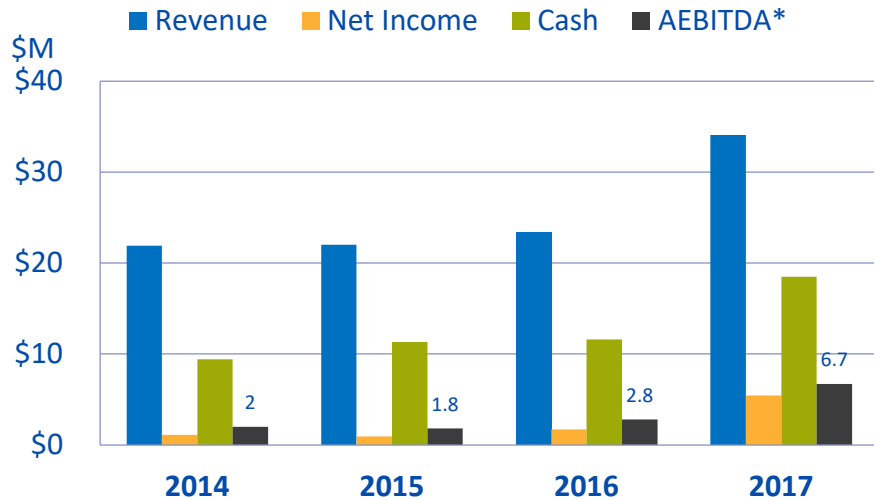
## 2020 Highlight

Percentage of total sales attributable to consumables, software and services increased for third consecutive year

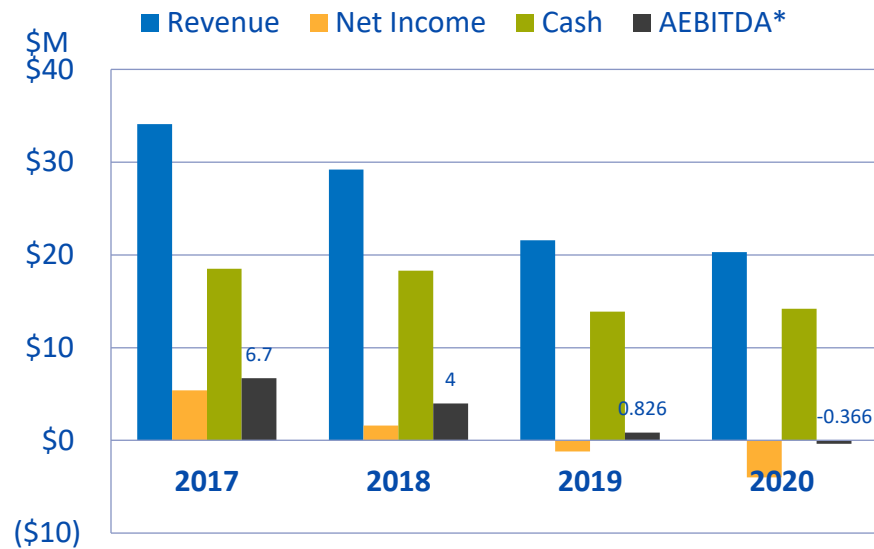


# Operating Leverage Poised for Upcycle

## Prior Upcycle: 2014-2017



## Prior Downturn: 2017-2020



\*Adjusted EBITDA is a non-GAAP measure; reconciliation to GAAP provided.

- Prior Upcycle: 2014-2017/2018**
- PSV programming systems launched
  - Revenue increased 56%
  - Gross margin peaked at over 62%
  - Net Income increased 390%
  - Cash increased 97%
  - AEBITDA margin from 9.1% to 19.6%

- Prior Downturn: 2018-2020**
- Consumables increase as % of rev's
  - Capital equipment break to upside in 4Q19 interrupted by COVID-19
  - Gross margin bottomed at over 52%
  - OpEx sustained near \$3.4M
  - Cash ~\$4M higher than at 2014
  - AEBITDA maintained near breakeven
  - PSV installed base of 330+ drives service revenue
  - SentiX launched

- Next Upcycle Opportunity:**
- Automotive and SentiX Growth
  - Improved gross margins
  - Higher % of Recurring Revenue
  - Operating Leverage accelerated

## Path to the Next Upcycle

