FlashCORE III-M4

Manual & Getting Started Guide

Unified Programming Platform
from Design to Production and Beyond

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Data I/O

Date	Modification	Revision
Feb 14, 2026	Initial Release	1.0
Apr 15, 2026	Added section on Export to Mfg	1.1

Design

Engineering

NPI

Small Run

Production

QC

Test

Rework

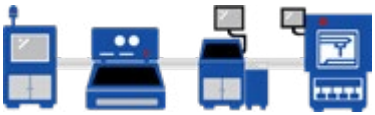
Design, Engineering, NPI

- Control of Data Files
- First Article
- NPI
- Test Fully Programmed Parts

Low & Medium Volume Production

Medium-High Volume Production

- Media Input
- Inspection
- Erase
- Program
- Verify
- Mark
- Media Output



Post SMT Process, Test, QC, Rework

- **Test**
- **Quality Checks**
- **Quality Assurance**
- **Rework**
- **Repair**
- **EOL Support**

Unified Programming Platform

Data I/O offers manual and automated programming solutions that enable our customers to seamlessly transition their programming jobs throughout their preprogrammed parts supply chain on a single, reliable, and scalable platform.

The FlashCORE III-M4 is designed to support manual programming for design & NPI builds to validate functionality prior to high-volume production runs.

Programming Jobs created on the FlashCORE III-M4 can be seamlessly transferred to any PSV System with for production.

Welcome to the FlashCORE III-M4 Manual Programmer Model

Designed for programming first-article builds to validate functionality prior to high-volume production runs, the FlashCORE III-M4 is Data I/O's newest manual programmer. The FlashCORE III-M4 uses the same FlashCORE III programming platform used in the automated PSV Systems ensuring seamless transfer from Engineering to NPI/First-Article and into volume production.

Use this guide to:

1. Set Up FlashCORE III-M4 Programmer Hardware
2. Install FlashCORE III-M4 and TaskLink Software
3. Configure Host Network Adapter
4. Connect FlashCORE III-M4 to TaskLink Host
5. Update FlashCORE III-M4 Programmer Firmware
6. Enable Session Data Logging
7. Create and Run a Programming Job
8. Verify Job Completion
9. Export Job to Mfg/Production

FlashCOREIII-M4 Programmer Kit Contents

A. FlashCORE III-M4 Programmer (Part Number 991-0011-001)
B. Pre-Calibrated Torque Tool (for socket clamps; PN 615-5410-001)
C. Vacuum Tweezers/Toolkit (PN 565-8000-001)
D. Customer Service Letter and FlashCORE III-M4 conformance documents
E. 24V/5A Power Converter/Adapter (PN 383-0121-002)
F. 1 Gbps shielded Ethernet cable (5 ft, 26AWG; PN 411-0017-001)

Figure 1: FlashCORE III-M4 package contents.

Requirements

HOST COMPUTER REQUIREMENTS

- **Operating System**: Microsoft Windows 10 Pro (64-bit)
- **Hard disk space**: - 12.0 GB for FlashCORE III Software, which includes
  1.0 GB - TaskLink for Windows (TLWin for FD3)
  0.5 GB - FlashCORE III Desktop 3 (FD3)
  10.0 GB - Algorithm files (full set)
  0.5 GB - Firmware (update packages)
  X.Y GB - Addt'l space for job/image/data files
- **Network:**
  - A 10/100 Mbps NIC (dedicated, private, Static IP Address) for FlashCORE III-M4
  - (optional) Access to your Corporate LAN / Internet access
  - (optional) 1Gbps Ethernet switch box if networking multiple units (where each FlashCORE III-M4 requires a unique/dedicated IP address)

ELECTRICAL REQUIREMENTS

- **Operating voltage:** 100–240 VAC
- **Power Consumption:** 100 watts max
- **Frequency Range:** 50 to 60 Hz

PROGRAMMING REQUIREMENTS

- Socket Adapter and target device
- FlashCORE III Device Algorithm(s)
- A ground connection between user and FlashCORE III-M4 programmer

ENVIRONMENTAL REQUIREMENTS

- **Operating Temperature:**
  10° to 30° C (50° to 86° F)
- **Humidity:** ≤ 90%

REGULATORY COMPLIANCE

- **Applicable EC Directives:**
- Low Voltage Directive 2014/35/EU Class A
- RoHS 2 (2011/65/EU) + RoHS 3 (2015/863/EU)
- EC Electromagnetic Compat 2014/30/EC Class A
- See the "*EC Declaration of Conformity*" certificate included with your LumenX-M8.

Precautions and Protections

CAUTION: Electrostatic Discharge (ESD) Hazard!
ESD can damage equipment and/or your devices. Always discharge static electricity to a common ground. Use ESD prevention devices with 1 M-Ω to 10 M-Ω resistors.

Using the equipment in a manner **NOT** specified by Data I/O may impair the protection provided by the equipment.

Warnings and Cautions

Electrostatic Discharge (ESD) may damage devices and equipment. Always discharge static electricity to a common ground.

Sensitive Components/Electronics. Do NOT remove covers; no user-serviceable parts inside of programming unit.

1. Set Up FlashCORE III-M4 Hardware

Setting up your FlashCORE III-M4 hardware consists of two easy steps:
A. Prepare the FlashCORE III-M4 Programmer and obtain hex key/torque tool
B. Install the Socket Adapter and Actuator Plate for your target/blank device(s)

A. Prepare the Programmer

1-1. Plug the Power cord into the back of FlashCORE III-M4 (and a 100-240 VAC outlet) but ensure the Power remains OFF at this time.

1-2. Connect network cable between the FlashCORE III-M4 and your Host PC.

Figure 2: Connecting Power and Network for FlashCORE III-M4.

1-3. To prevent electrostatic discharge (ESD), wear an ESD wrist strap plugged into one of the two grounding ports on the sides of FlashCORE III-M4.

1-4. To install a Socket Adapter:

- Push the **YELLOW** actuator bar down.
- With the included torque tool, open the Socket Clamp by loosening the two screws (which do NOT completely detach from Socket Clamp).

Figure 3: Opening the socket clamp.

When installing and removing Socket Adapters, always handle them by the edges and **NEVER** touch the gold contact pins on the bottom/underside.

B. Install the Socket Adapter

1-5. Insert your Socket Adapter in alignment with FlashCORE III-M4.

CAUTION: Bent/Damaged pins reduce yields and programming quality. Do **NOT** touch connector pins.

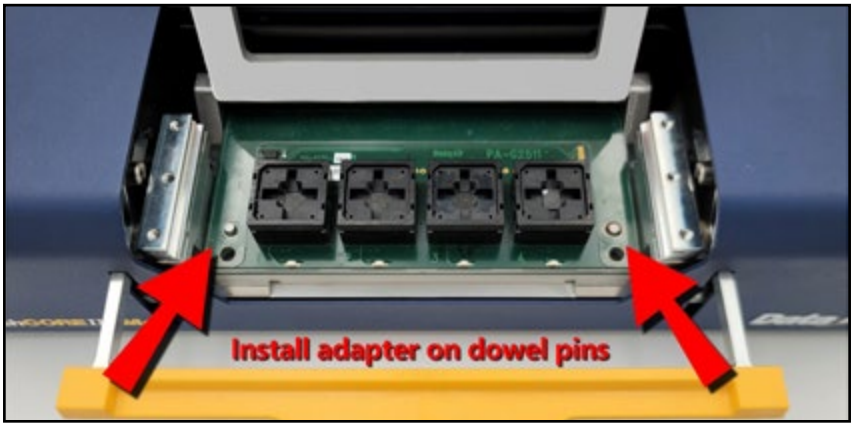


Figure 4: Installing the socket adapter.

NOTE: The two holes at each corner of the adapter must align with the two dowel pins on top of FlashCORE III-M4.

1-6. Lower socket clamp and tighten both (2) screws with included torque tool.

1-7. Use the included vacuum tweezer/tool to place your target/blank device(s) into the socket(s), then lift the actuator bar to the Up position.

1-8. Install/insert/slide-in the metal actuator plate into the bracket grooves (with the flanges facing up) until it snaps into place. With everything installed, your programmer should look similar to this:

Figure 5: Readying FlashCORE III-M4 for programming.

2. Install FlashCORE III-M4 & TaskLink Software

2-1. Insert the USB Flash Drive for FlashCORE III-M4 into the Host PC and install FlashCORE III-M4 software BEFORE installing TaskLink (as instructed herein).

2-2. Start Windows/File Explorer, open the USB drive to the **\FD3** folder (or **\FD3_V1.2.3.45**), right-click **Setup.exe**, then click **Run as administrator**.

2-3. In the FD3 Setup Wizard, click **Next** to accept the defaults and Finish.

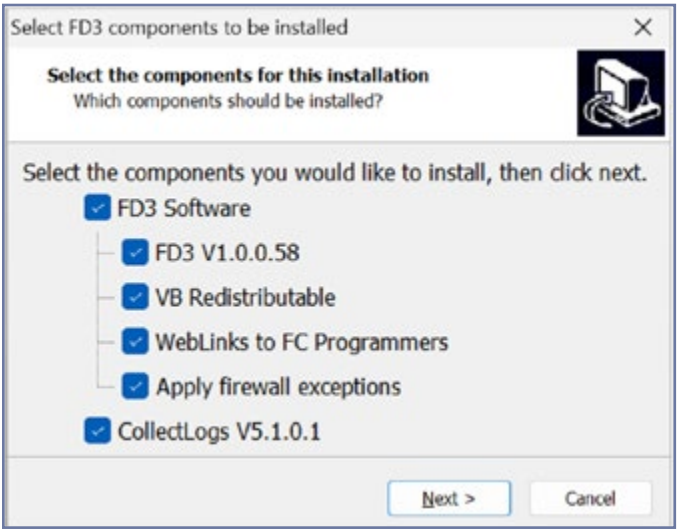


Figure 6: Installing FlashCORE III-M4 software.

2-4. Now open the **TaskLink**/**TLWin** folder and run Setup (ex. ***9.50_AlgSet_2025B_FCIII_M4_2025Dec16.exe***) to extract the TLWin **Setup.exe** file.

2-5. Right-click the extracted **Setup.exe** and click **Run as Administrator**, then complete the TaskLink setup wizard by accepting the default options.

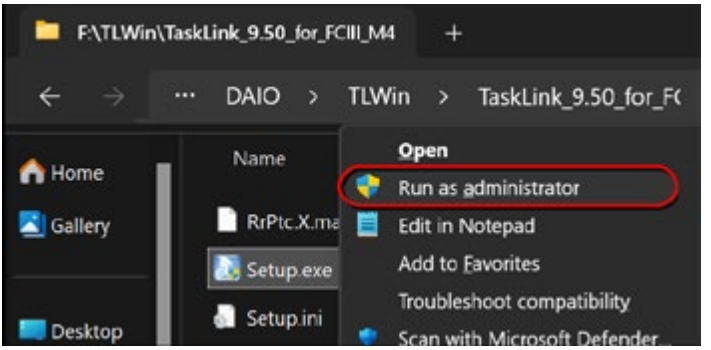


Figure 7: Installing TaskLink software.

3. Configure Host Network Adapter

Open Control Panel to configure a Host network adapter for FlashCORE III-M4.

3-1. In **Control Panel**, click **Network and Internet** > **Network and Sharing Center** > click **Change Adapter Settings**.

3-2. Right-click **Local Area Connection** (to your FlashCORE III-M4) > **Properties** > **Internet Protocol Version 4 (TCP/IPv4)** > **Properties**.

3-3. **IP address**=***192.168.1.250*** > **Subnet mask**=***255.255.255.0*** > **OK** > **Close**.

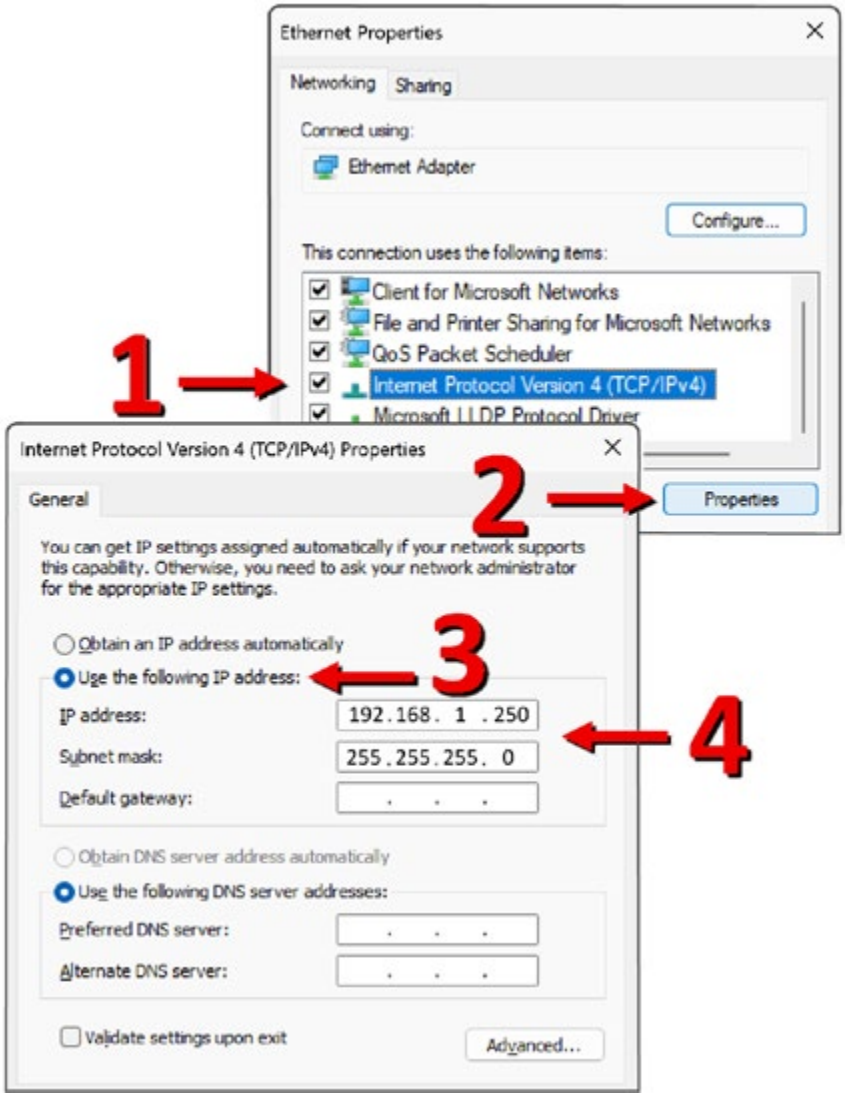


Figure 8: Adding IP address for FlashCORE III-M4.

4. Connect FlashCORE III-M4 to TaskLink Host

4-1. Flip the Power switch on the back of FlashCORE III-M4 and wait for it to complete its startup test routine (the **GREEN** LED illuminates when done).

NOTE: Before proceeding, **wait until the YELLOW LED (on top) stops flashing**, and the **GREEN** LED illuminates.

If the **RED** LED illuminates instead of the **GREEN** LED, then isolate the Self-Test error between programmer and socket adapter (ex. flip the Power OFF, remove the socket adapter, and then flip the Power back ON).

4-2. Start **TaskLink**, click **Set System Options**, and then click **OK**.

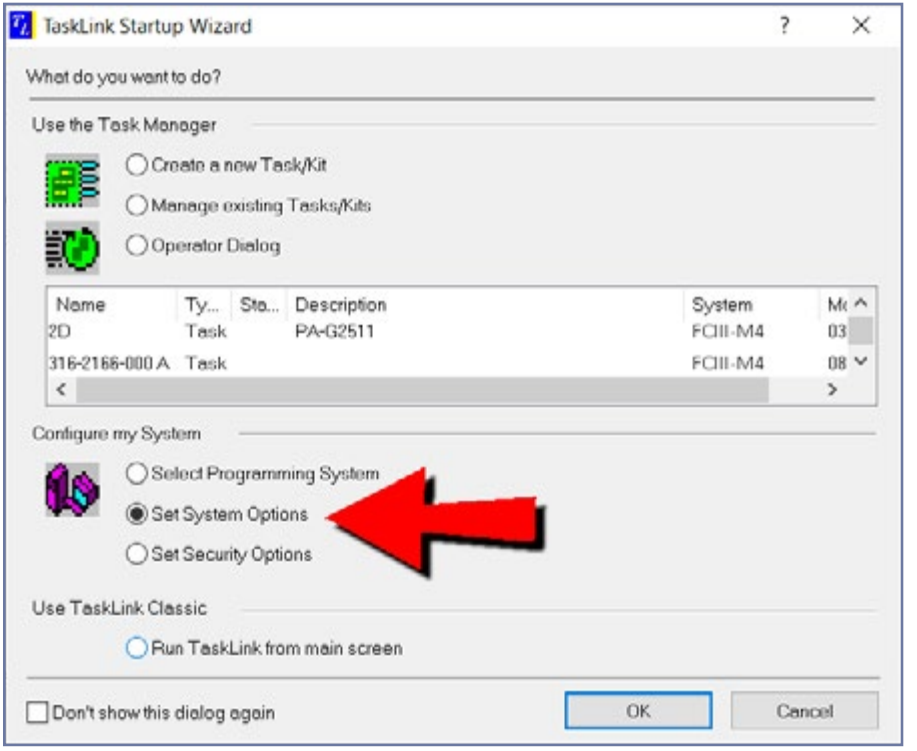


Figure 9: Configuring settings at TaskLink startup (recommended).

4-3. In the **Programming System Options** dialog box, check the box for **Export Tasks as Universal** (3rd checkbox from the bottom, which enables your jobs/tasks to import and run on any PSV System model in Production; all other 'Developer-type' modifications are Recommended).

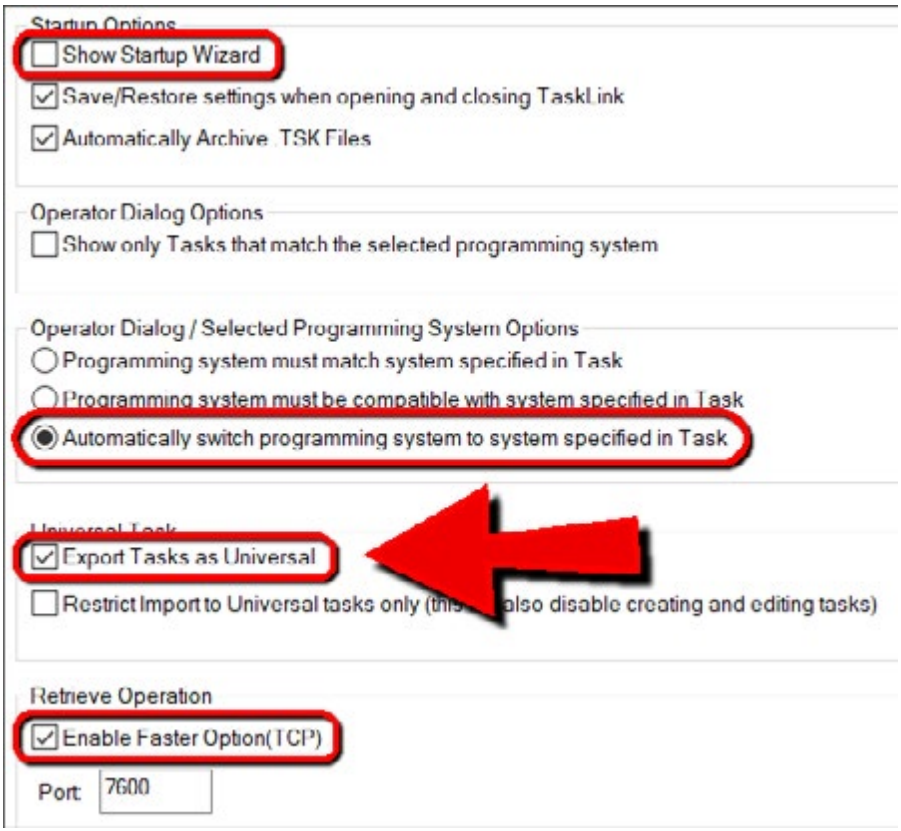


Figure 10: Configuring Startup options (highlights show non-defaults).

4-4. (Optional) Similarly, click the **General** tab and modify the settings to suit your particular environment (or to the recommended development configuration depicted below, which highlights only the non-defaults).

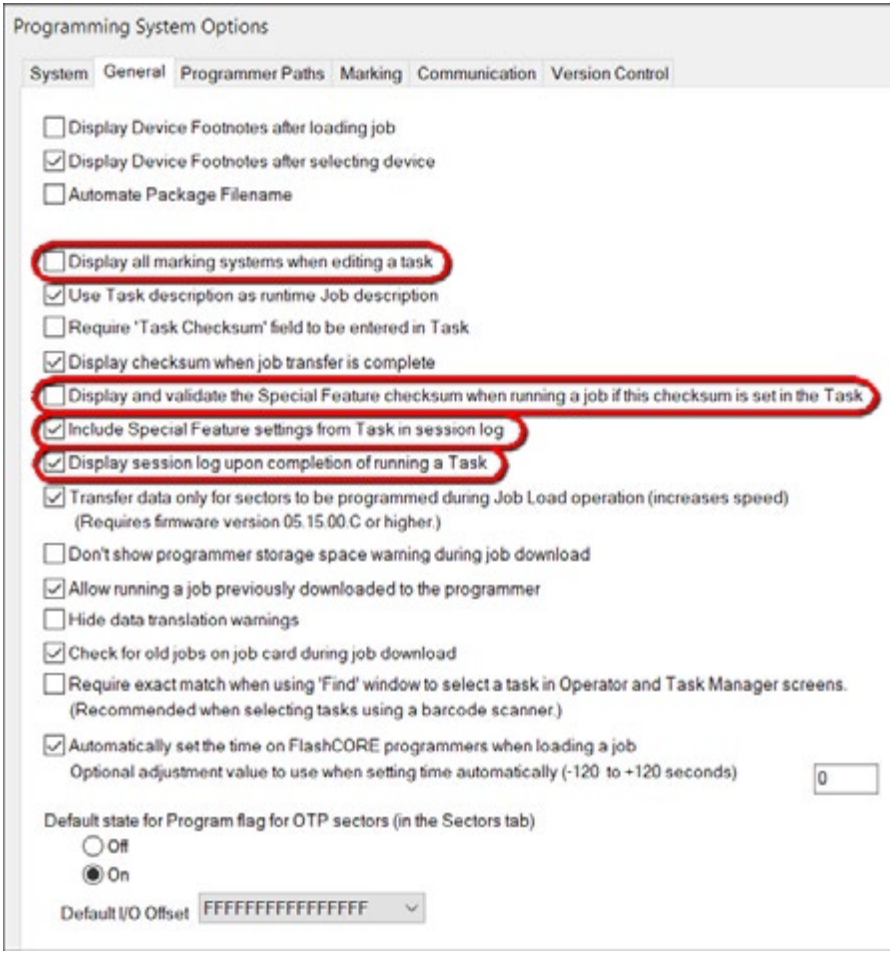


Figure 11: Configuring System options (highlights show non-defaults).

4-5. Finally, click the **Communication** tab, and then click **Locate**.

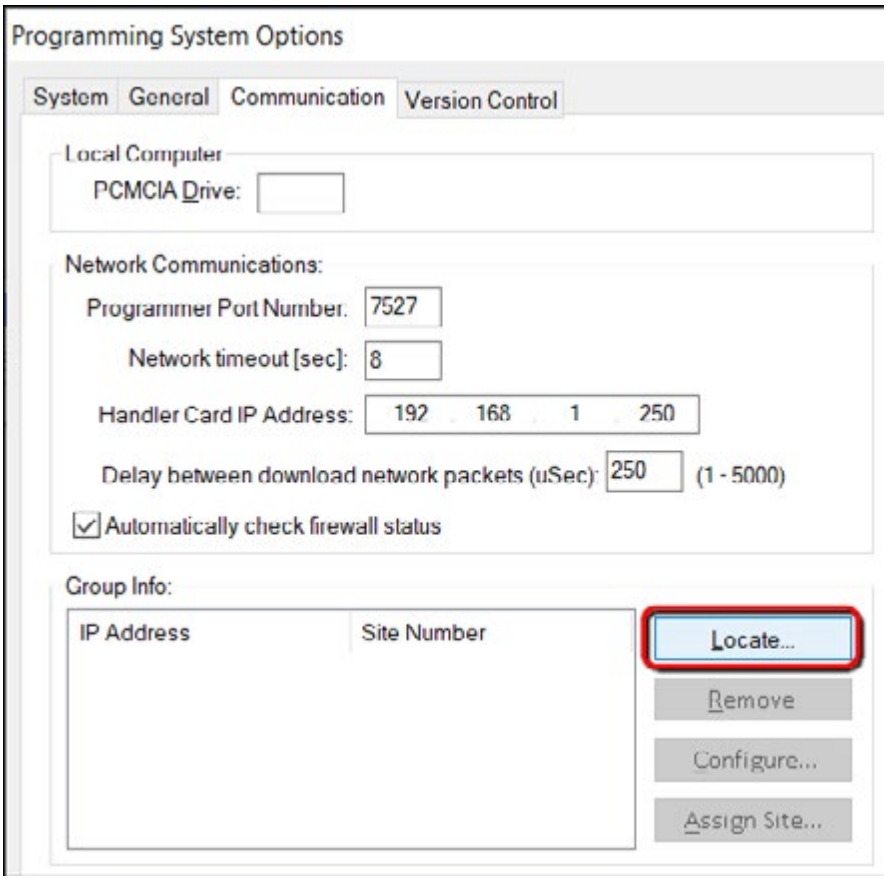


Figure 12: Detecting your connected FlashCORE III-M4.

4-6. After TaskLink finds your programmer, select it, and then click **OK**.

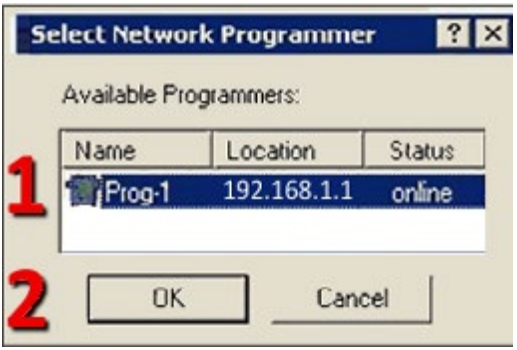


Figure 13: Adding FlashCORE III-M4 to TaskLink.

If TaskLink does not detect your connected FlashCORE III-M4, then ensure it is reachable from the Host PC directly:

A. Click **Start**, type ***cmd***, then right-click **cmd** > **Run as administrator**.

B. In Cmd Prompt, type ***ping 192.168.1.1*** and press ENTER.

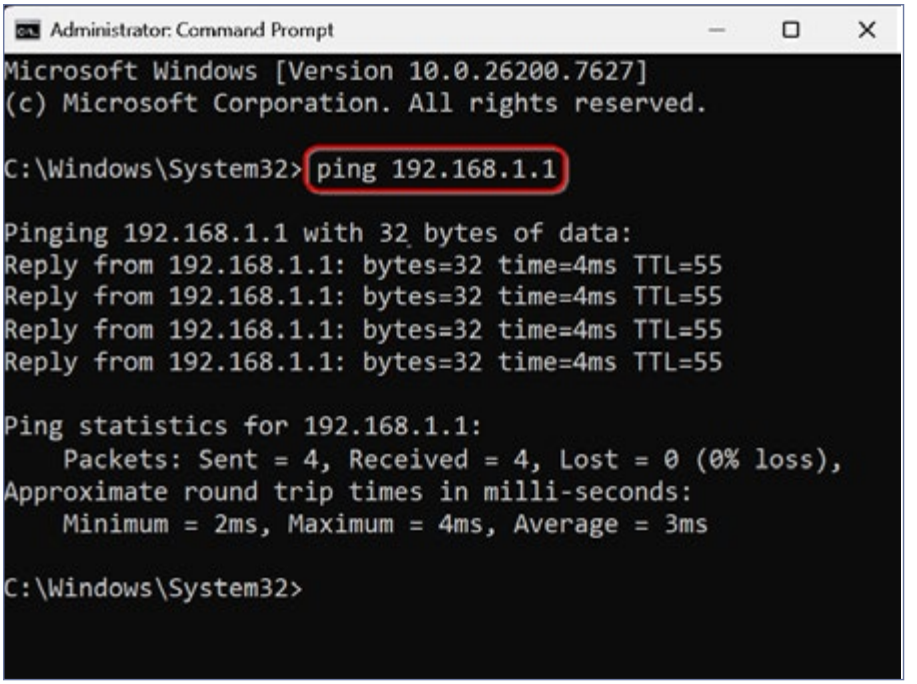


Figure 14: Testing if TaskLink can detect FlashCORE III-M4.

If you see a reply from the IP address, then your Host PC has connectivity with the FlashCORE III-M4 so please repeat Step 4-5 (to **Locate** again).

If there is no reply, the *ping* request times out, or FlashCORE III-M4 is otherwise unreachable, then Host PC cannot contact FlashCORE III-M4 properly; please check that both ends of all connections are securely fastened/tightly seated; if necessary, isolation test all connection hardware separately from FlashCORE III-M4.

4-7. Return to the **Communication** tab, from the box/list of detected programmers (near the bottom), select/click the IP address corresponding with your FCIII-M4, and then click **Assign Site**.

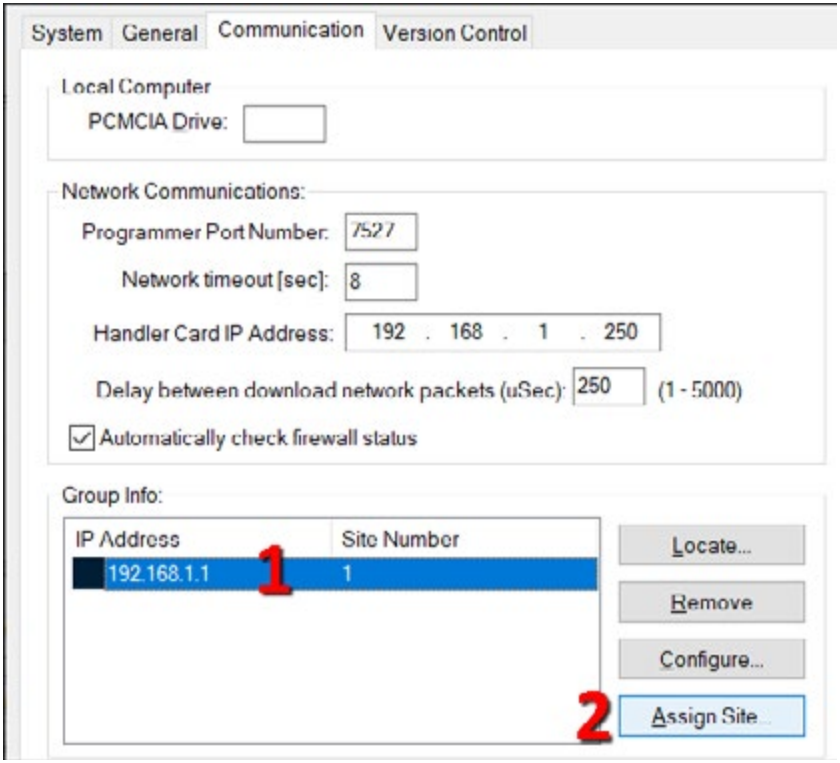


Figure 15: Configuring TaskLink connectivity with FCIII-M4.

4-8. In the **Assign Site Number** dialog box, select your FCIII-M4 from the **Site Number** drop-down list, click **Toggle LEDs** (to ensure the selected FCIII-M4 responds properly), and then click **OK**.

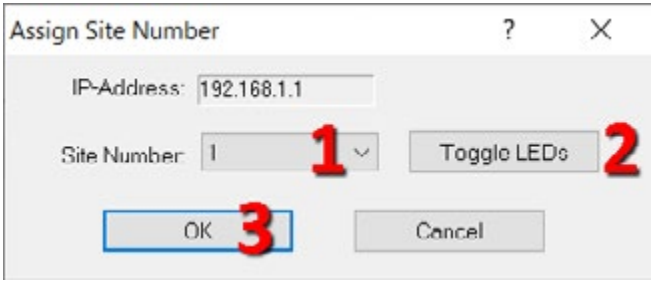


Figure 16: Assigning site number for FCIII-M4.

4-9. Click **OK** twice to dismiss the FCIII-M4 dialogs (and return to TaskLink).

5. Update FlashCORE III-M4 Programmer Firmware

When you add a programmer to TaskLink and/or update the TaskLink version, remember to also update the firmware version of each FlashCORE III-M4 (else the programmer cannot properly interpret newer algorithms residing on the Host).

5-1. In TaskLink, click **Tools** (at top), then click **Update Programmer Firmware**.

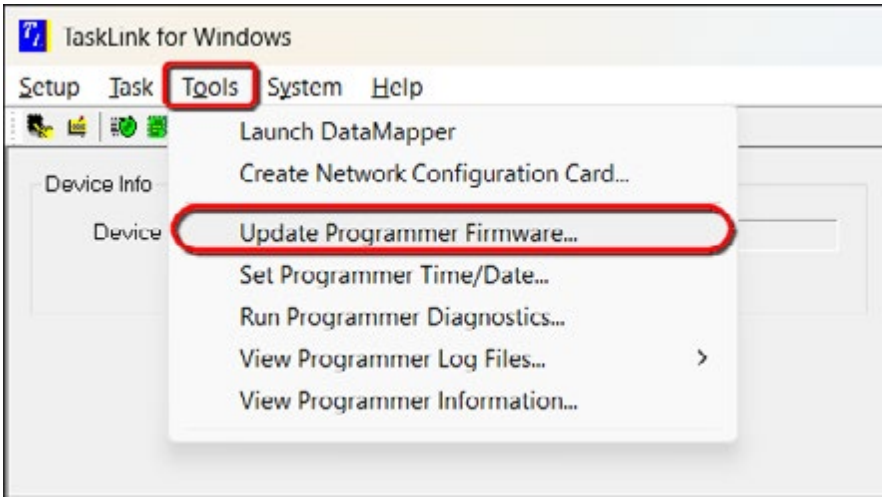


Figure 17: Updating programmer firmware from TaskLink.

5-2. In the dialog box for firmware version check, click **OK**.

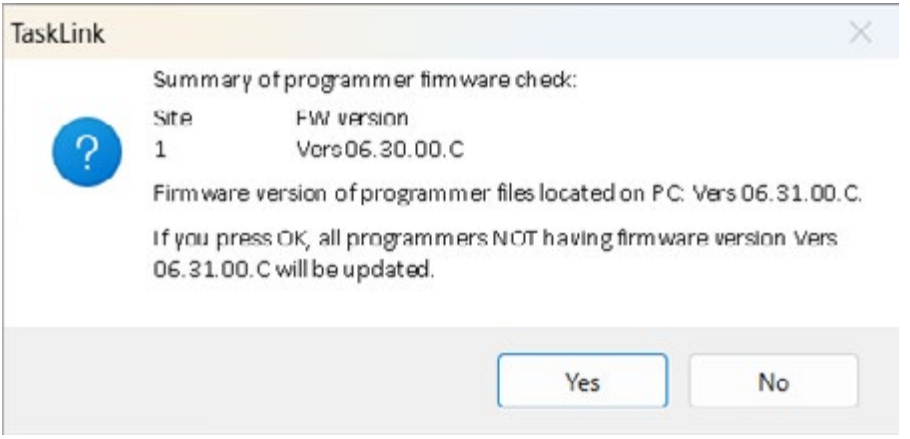


Figure 18: Checking programmer for current firmware version.

5-3. Wait for TaskLink to finish downloading firmware to your FlashCORE III-M4.

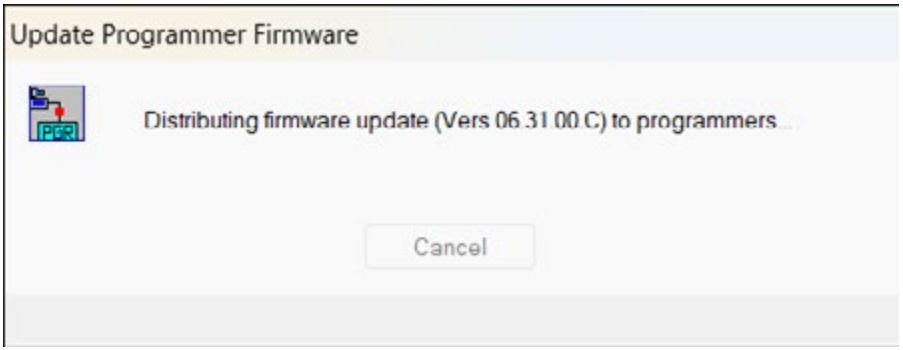


Figure 19: Downloading firmware from TaskLink to FlashCORE III-M4.

5-4. Now wait for your FlashCORE III-M4 to finish installing the firmware update.

Figure 20: Installing the downloaded firmware update.

5-5. When the firmware update finishes its installation, click **OK**.

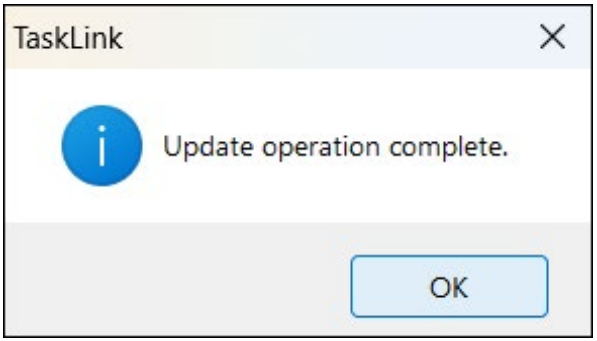


Figure 21: Completing the firmware update.

6. Enable Session Data Logging

By default, every FlashCORE III-M4 logs events, adapter statistics, and socket statistics in its local Programmer Log. But on the Host PC, TaskLink logging is disabled by default. To enable the logging of job session statistics:

6-1. Click the **Setup** menu item (at top), and then click **Session Data Logging**.

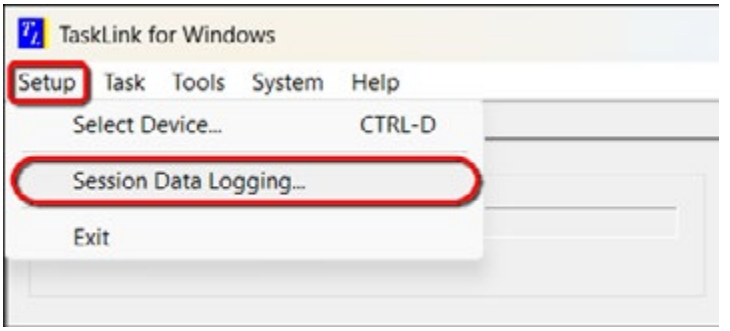


Figure 22: Configuring TaskLink session log.

6-2. In the **Session Data Logging** dialog box, check the **Enable data logging** box, configure your desired logging options, and then click **OK**.

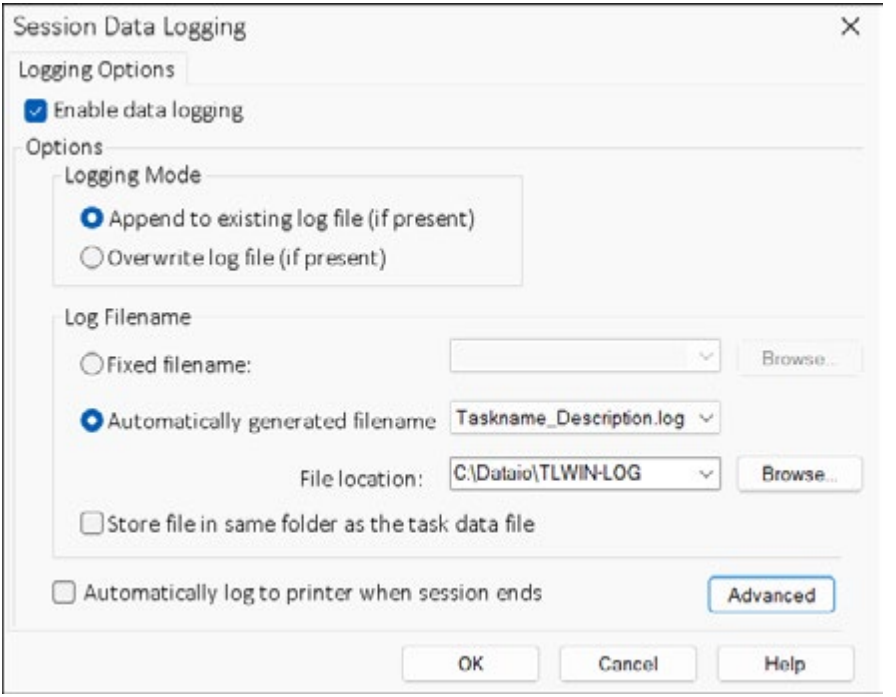


Figure 23: Enabling session log options.

7. Create and Run a Job

7-1. In TaskLink, click the **Help** menu item (at top), and then click **Help Topics**.

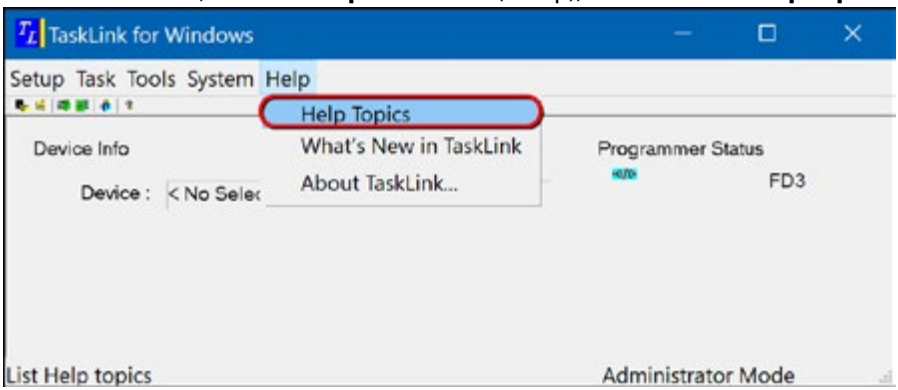


Figure 24: Accessing Help for technical guidance.

7-2. On the **Search** tab, query for the keyword(s) '***create task***', and from the list of results, double-click "***How to Create a Task***" and follow its instructions.

7-3. When the device image is ready for programming, **Save** the job, and then open Task Manager (**Task** menu at top).

7-4. In **Task Manager**, select the desired job, and then click **Run**.

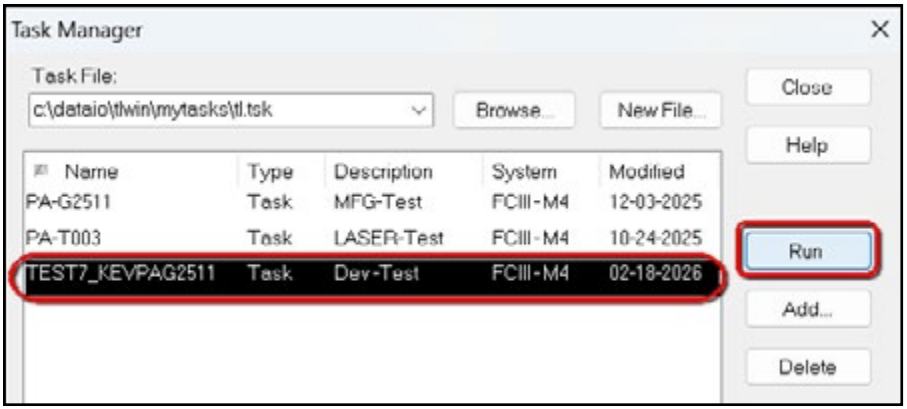


Figure 25: Selecting the job to run in TaskLink.

7-5. In the **Process Devices** dialog box, type a **Pass Limit**, and then click **OK**.

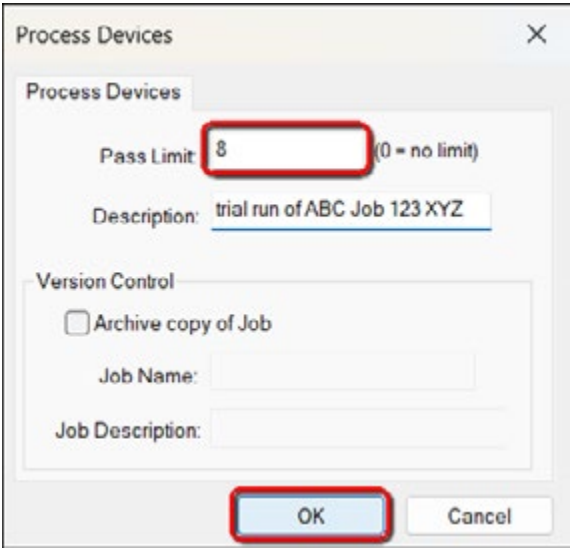


Figure 26: Typing the quantity to produce.

7-6. Wait for the job download to complete, which may take a few minutes.

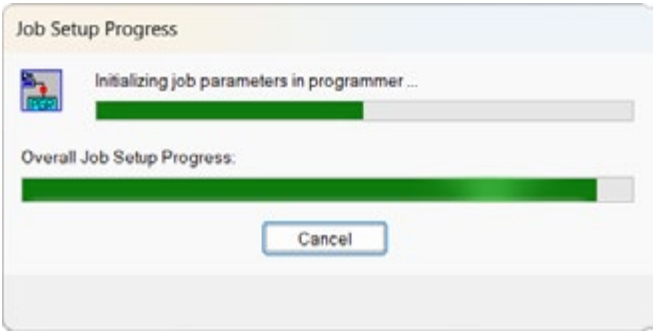


Figure 27: Downloading job to FlashCORE III-M4.

7-7. After the download completes, click **Yes** to start handling/mfg software.

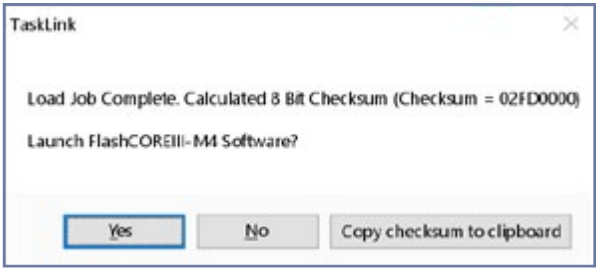


Figure 28: Starting PnP Handler software.

7-8. Then in the **FlashCOREIII-M4** dialog box, click **Start**.

Figure 29: Starting FlashCORE III-M4 software.

7-9. Finally, in the **Job** dialog box, confirm the Pass Limit (and versions of algorithm and device mfg software in the bottom status bar), then click **Run**.

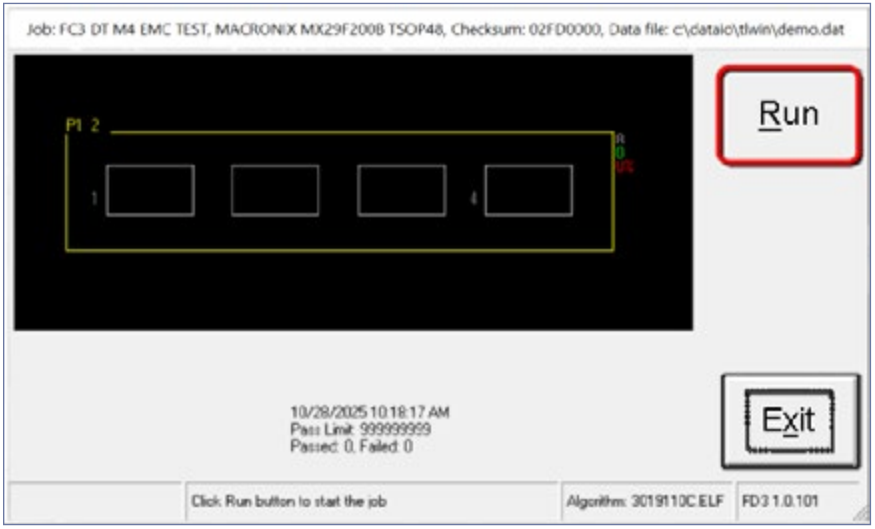


Figure 30: Starting handler and parts traceability.

8. Verify Job Completion

8-1. If the **Pass Limit** that you entered (from page 19) exceeds the number of sockets, then after each programming cycle completes the FlashCOREIII-M4 software automatically stops and instructs you to remove the programmed device(s) from socket(s) and replace with blank devices.

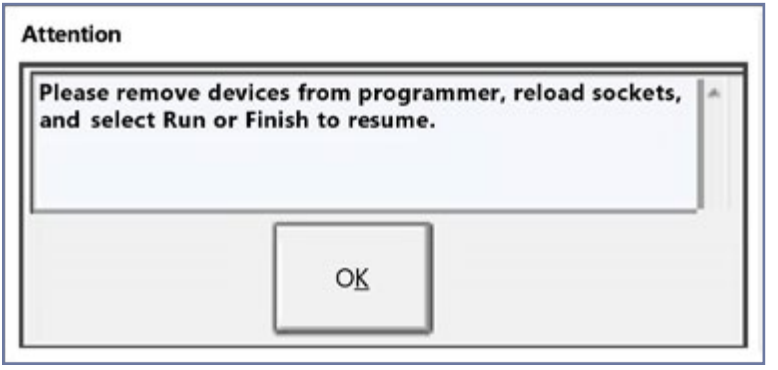


Figure 31: Replacing programmed devices with blank ones.

8-2. When the Pass Limit is reached or the **Exit** button is clicked, Otherwise, the **Run** window shows socket status by color.

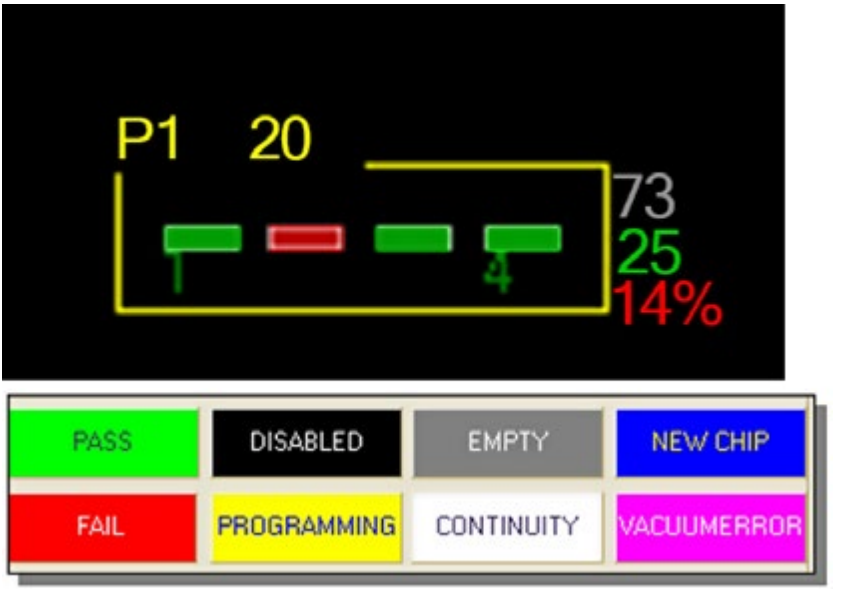


Figure 32: Displaying socket status by color.

Programmer LEDs

RED: Error/Failure
One or more devices failed programming; or the Self-Test failed; or any other error.

YELLOW (flashing): Busy
Operation in-progress; or accessing resources; or otherwise busy. Do NOT cut power/open sockets.

GREEN: Ready/Pass
Waiting for input; or programming done/ PASSED; or OKAY to open sockets.

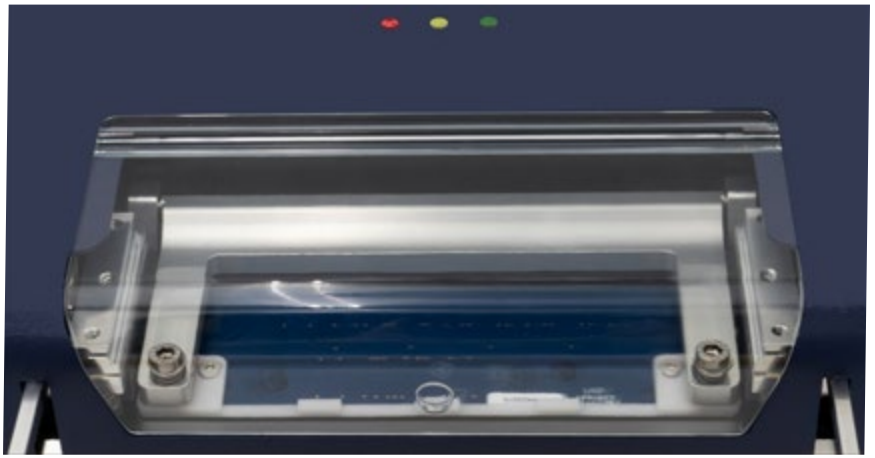


Figure 33: Interpreting LED lights atop FlashCORE III-M4.

Specifically unless otherwise **GREEN** (all sockets PASS), a solid **RED** LED indicates at least one device (of up to 4 per cycle) failed programming (marked as ***Reject***); while a flashing **RED** LED can indicate an empty socket, device placed in wrong orientation or PIN1 location, or a continuity error (retry device in different socket);

Socket Adapter LEDs

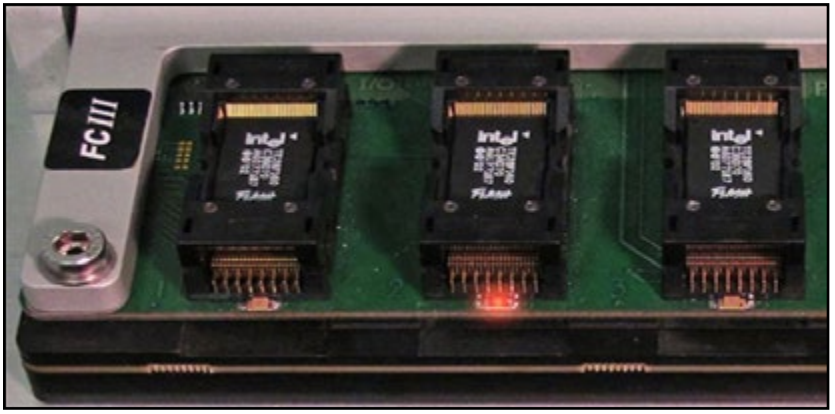


Figure 34: Pinpointing socket with error (RED LED remains lit).

9. Export Job to Mfg/Production

When your 1st-article job passes validation and testing (or the job is otherwise ready for duplication and volume manufacturing), simply use the Export option to save the job (from out of the TaskLink database) onto your local drive as an ASCII/plaintext (**.TXT**) file that imports into any automated/production PSV System without any modification*.

* Subject to your consideration/resolution/support for each of the critical workflow differences between the two deployment environments depicted in the Venn diagram below.

Figure 35: Testing for Dept/Role differences.

While the device and programming job are under Development, the software license included with FlashCORE III- M4 is sufficient for Research and Development (R&D) purposes (ex. experimental, testing, prototyping). But in production, Data I/O handles commercial software licensing at the PSV System-level (not programmer-level) where unlike Development environments, most Manufacturing facilities are highly secured 24 hrs/day with strict and tightly controlled process-based workflows that minimize operator discretion. Thus, do your best to anticipate and list all of the possible problems during (and after) deployment across environments (ex. from Development to Staging to Production/Mfg). Then:

- Prioritize the list by extent of impact/issue severity
- Account for (and address/prevent) higher-ranked issues from causing confu sion, disruption, and otherwise unexpected behavior in the field/factory
- For example, apply a production/commercial software license in the develop ment environment to test for undesirable behavior before starting Production

9-1. Start TaskLink (on Dev PC), click **Task** (at top), then click **Task Manager**.

9-2. In Task Manager, select/click the desired job to export, then click **Export**.

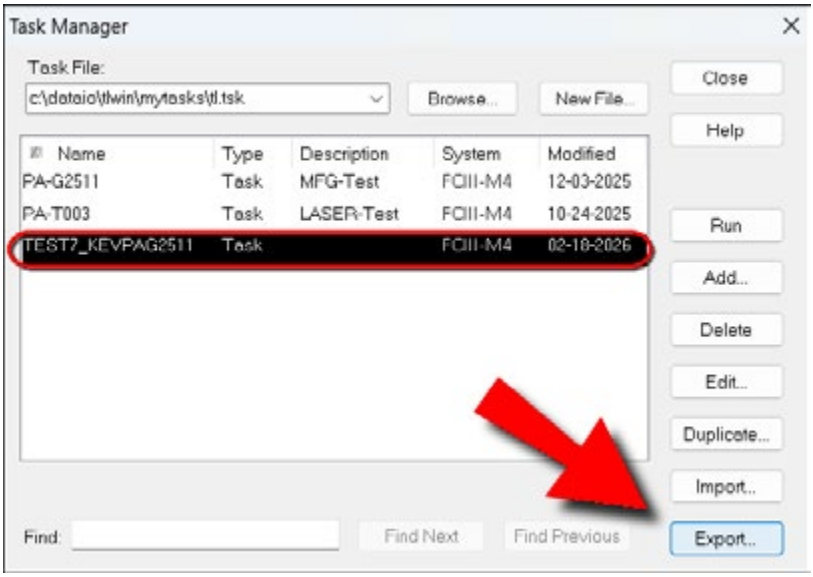


Figure 36: Selecting a job to export for Mfg/Production.

9-3. In the **Export To ASCII File** dialog box, type a filename for the exported job (or press ENTER to accept the default name), and then click **Save**.

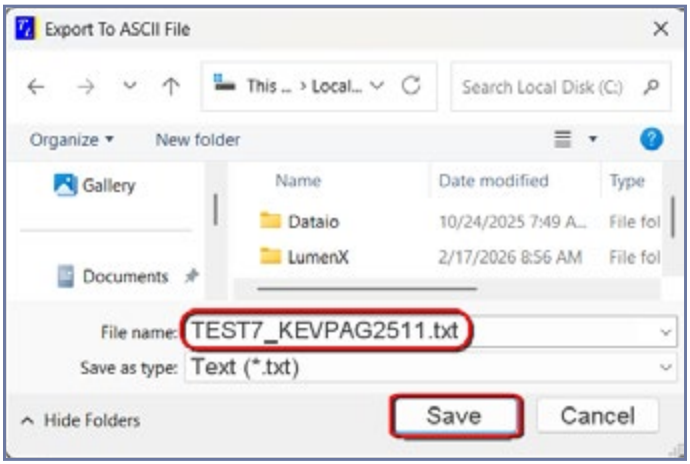


Figure 37: Specifying exported job name.

9-4. Now copy the exported '< ***your job name*** > . ***TXT*** ' file to the Handler PC of the PSV System in Production (ex. via USB Flash Drive, cloud/network share...).

9-5. On the Handler PC of the PSV System in production, start TaskLink, click the **Task** menu item (at top), and then click **Task Manager**.

9-6. In Task Manager, click **Import**.

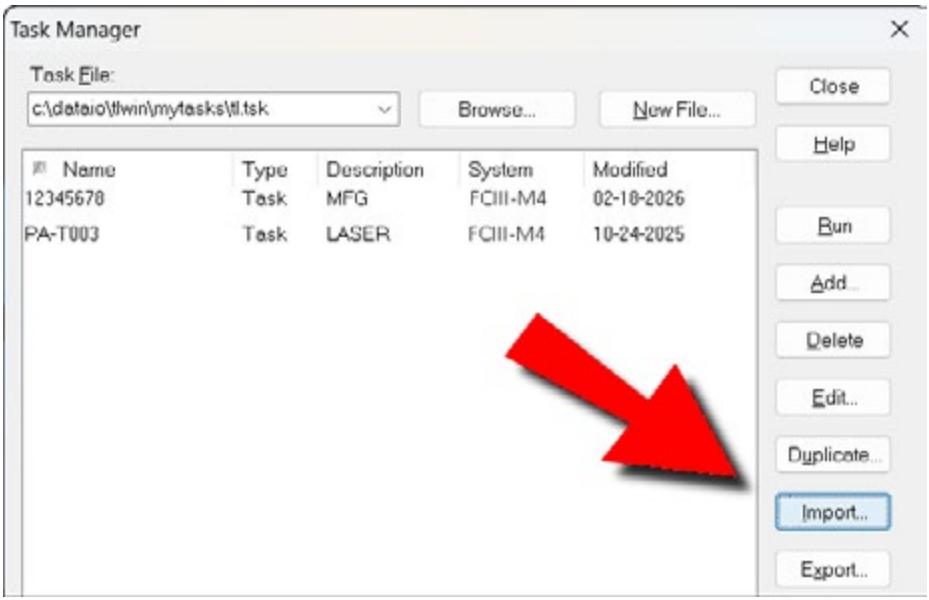


Figure 38: Importing a job in Production.

9-7. In the **Import Options** dialog box, click **ASCII file**, and then click **OK**.

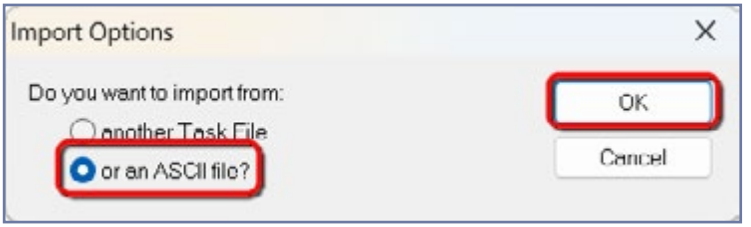


Figure 39: Selecting job file type for import.

9-8. In the **Import From ASCII File** dialog box, select the '< ***your job name*** > ***.TXT***' file that was exported from Development, and then click **Open**.

9-9. In the **TaskLink** dialog box (that confirms "Import complete"), click **OK**.

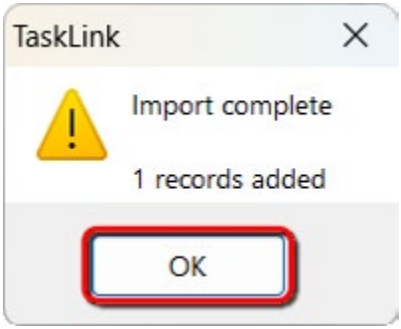


Figure 40: Confirming completion.

9-10. In the **Edit Task** dialog box, click **Browse** and select the package file for your target device, and then in the **Open** dialog box, click **Open**.

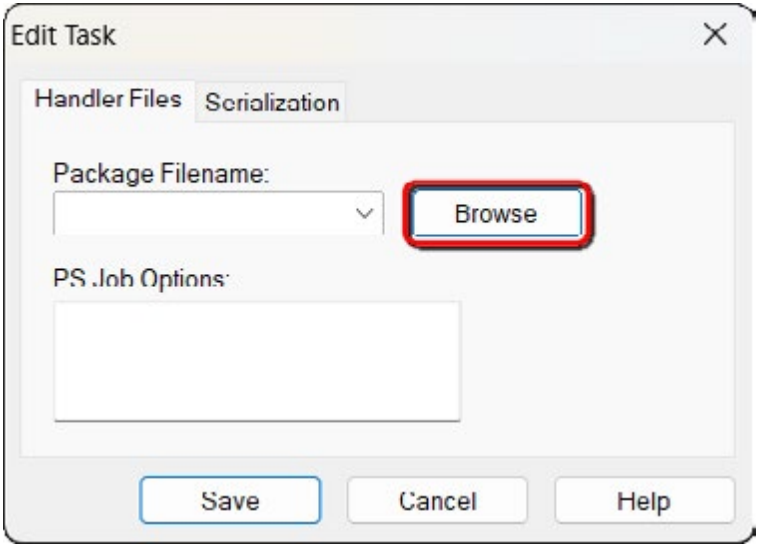


Figure 41: Browsing for package file of device.

The package file essentially maps physical characteristics and dimensions of the target device package to virtual parameters and settings in Handler software for proper Pick-and-Place (PnP).

9-11. Confirm that TaskLink now displays your selected package file in the **Package Filename** drop-down list, and then click **Save**.

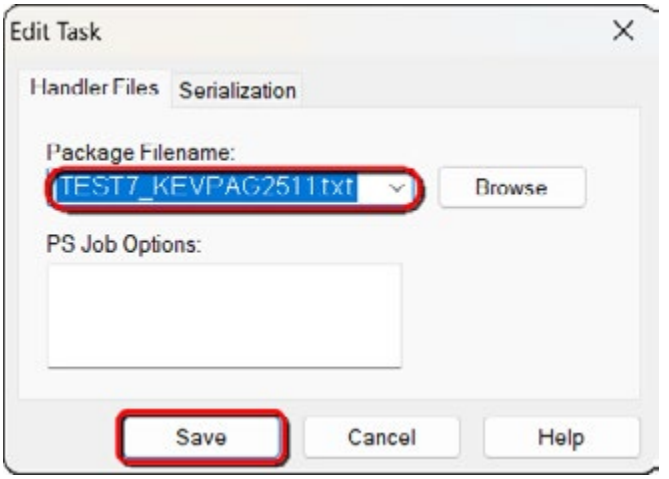


Figure 42: Confirming package file for device.

9-12. If applicable, click the **Serialization** tab, configure the appropriate serialization settings, and then click **Save**.

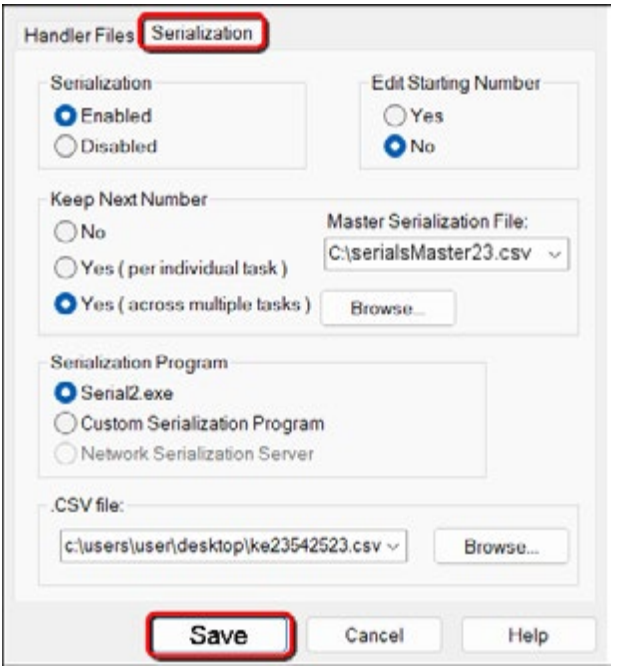


Figure 43: Saving serialization settings.

9-13. Returning to Task Manager, select the imported job, then click **Run**.

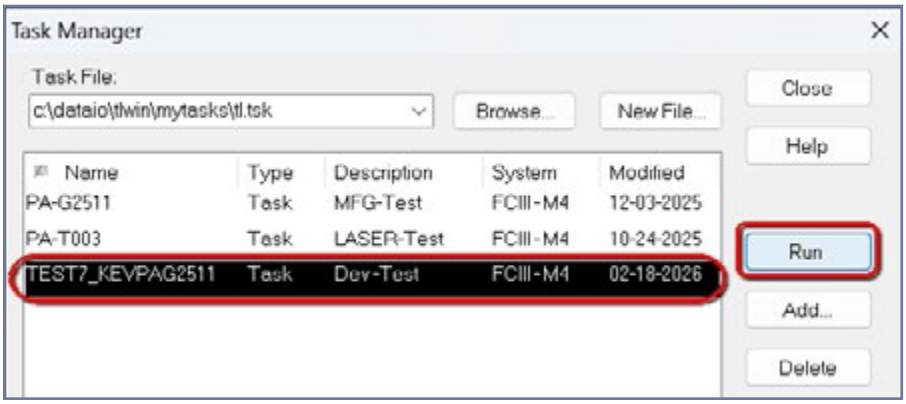


Figure 44: Confirming job selection for volume production run.

9-14. In the **Process Devices** dialog box, enter a **Pass Limit** and hereafter, repeat the steps for running a volume production job (on page 19).

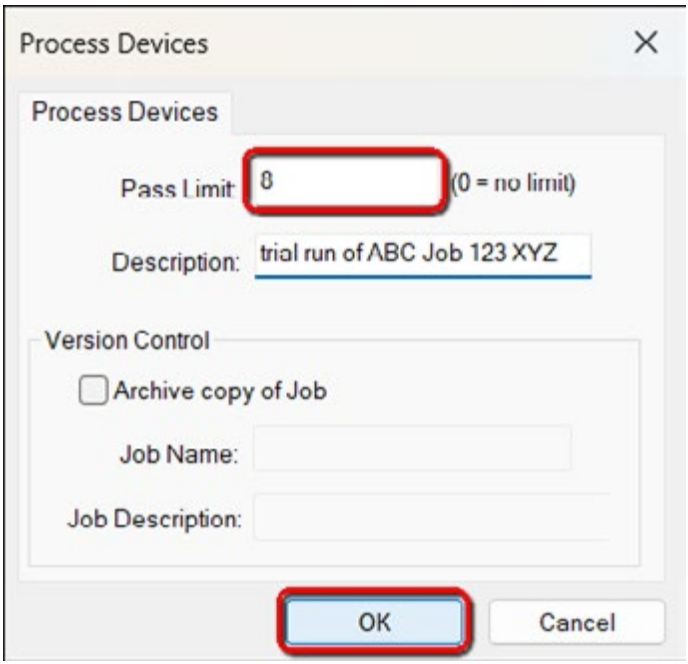


Figure 45: Specifying "Run Count" to produce.

Technical Support

First check the **Troubleshooting** section of the product documentation at:
C:\DataIO\TLWin\TaskLink_for_FCIII_M4.chm

To contact your local representative, please perform a lookup at:
- https://www.dataio.com/Contact-Us/Representative-Search

To submit a service request (requires account registration), please login to our MAX Customer Portal:
- https://myaccount.dataio.com

FOR QUICK ACCURATE SUPPORT, PLEASE PROVIDE THE FOLLOWING:
- FlashCORE III-M4 Part Number and Serial Number (see label)

- Version of TaskLink, Device Algorithm, and Programmer Firmware
- Detailed description of the problem and/or symptoms you are facing (if any)
- Error messages, event logs, log files, and/or screenshots (if any)
- Device manufacturer, part number, pkg type, number of pins, etc.
- Name, telephone number, address, and e-mail address

Contact Sales

For specific questions about our products and services, please visit:
- https://www.dataio.com/Contact-Us/Sales

For all general inquiries, please visit:
- https://www.dataio.com/Contact-Us

Self Help

To view Help in TaskLink for FlashCORE III-M4:
- click the **Help** menu item (at the top), then click **Help**; OR
- open browser to C:\Data IO\TLWin\TaskLink_for_FCIII-M4.chm

To learn more about our products and services, please visit:
- https://www.dataio.com/Support/Technical-Library

FlashCORE III-M4 Resources & Quick Links

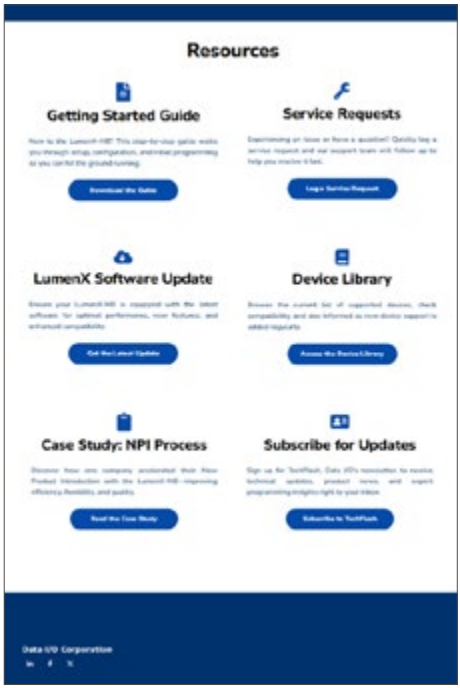
For the latest software, support, and resources for your FlashCORE III-M4 manual programmer, visit our online Resource Hub. It's your one-stop destination for setup guidance, device updates, service requests, and more.

Visit: https://info.dataio.com/fciii-m4-product-resources

Or scan the QR code below.

Access to:

- **e-Getting Started Guide**
- **Service Requests**
- **TaskLink Software**
- **Device Library**
- **Case Studies**
- **TechFlash email Updates**



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