

FLEX I/O ControlNet Adapter

Firmware Revision: 10.3

Catalog Numbers 1794-ACN15, 1794-ACN15K, 1794-ACNR15,
1794-ACNR15XT, Series D

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About This Publication

These release notes supplement the existing documentation supplied with your product.

Before You Begin

ATTENTION

The Series D adapter, Firmware Revision 10.3, will impact your ControlNet network and will require a new EDS file for RSLinx and RSNetWorx. RSLogix 5000 does not have to be updated as long as the adapter in the I/O configuration tree has electronic keying configured as "Compatible Keying".

Firmware Revision History

Firmware Revision History for FLEX I/O ControlNet Adapter

Revision	Description
10.3	Second revision.
10.1	First revision.

The following tables provide a list of enhancements and corrected anomalies for the FLEX I/O ControlNet Adapter firmware revisions.

Enhancements

Enhancements for Firmware Revision 10.3

Enhancement	Description
Optimized CPU loading	The I/O module scanning and scheduled transmit preparation routines have been optimized. Previously, certain combinations of connection quantity and NUT duration would cause these routines to run more frequently than necessary, resulting in significant loading of the CPU in the adapter.

Enhancements for Firmware Revision 10.1

Enhancement	Description
Series D hardware	<p>The ControlNet FLEX I/O Adapter has been redesigned to address part obsolescence issues. The Series D design is a functional replacement for the Series C product. Both products are functionally identical except for the new hardware watchdog described later.</p> <p>There are some minor hardware packaging differences between the Series C and D. The push button node address switches have been replaced with rotary switches and moved up to the top face of the module. The footprint of the module is the same as the Series C, but the top face of the Series D extends farther away from the DIN rail compared to the Series C. The Series D is the same height as the HART I/O modules.</p> <p>The Series D is RoHS compliant. The operating temperature range for 1794-ACNR15XT has been extended to -25...70 °C (-13...158 °F).</p>
Hardware Watchdog	The Series D ControlNet FLEX I/O Adapter supports a hardware watchdog. If for any reason the hardware and firmware of the module are unable to correctly trigger the hardware watchdog, the watchdog device will timeout in typically 1.6 seconds and will attempt to reset the Adapter automatically.

Enhancements for Firmware Revision 10.1

Enhancement	Description
EDS File	<p>The product's EDS File has been updated with the Series D major firmware revision and is embedded in the product's firmware.</p> <p>To access the EDS File:</p> <ol style="list-style-type: none">1. Use RSNetWorx and select a v10 adapter.2. Right-click the adapter and select Re-Register Device... The EDS Wizard will start up.3. Select and use the Upload EDS file(s) from the device option. <p>Version 2.57 or later of RSLinx is able to access and install the Adapter's EDS file as an alternative to using RSNetWorx.</p>

Anomalies

Corrected Anomalies for Firmware Revision 10.3

Anomaly	Description
Adapter connections time out during PLC5-type redundancy switchover	<p>This anomaly may occur during a PLC5-type redundant controller switchover.</p> <p>During the switchover, some of the scheduled packets transmitted from the adapter may be skipped until the switchover is complete. With certain combinations of connection quantity, NUT length, connection RPI, connection timeout duration and switchover duration, enough packets may be skipped to cause the scanner to timeout one or more of the connections with the adapter.</p>
Aborted scheduled transmit packets	<p>This anomaly may occur with certain combination of NUT duration, connection quantity, connection RPI and MAC ID. Under these conditions, the scheduled packet transmit buffer can be inappropriately flushed. If the flush occurs during the adapter's scheduled transmission, aborted MAC frames and possible connection timeout may result.</p>

Additional Information

Connected Messaging Limits

Network Update Time (NUT)	Supported Connections	Number of HART modules
2.0...2.99 ms	3	1
3.0...3.99 ms	12	4
4.0...7.99 ms	20	6
8.0...750.0 ms	32	8

Considerations for Connection Limits

- At the lower NUT rates (10 ms or less), it is recommended that all the Module Connections have their RPI (Requested Packet Interval) times set at or above their default RPI rate as specified by the software when creating the connection.
- The Rack Connection RPI may be set as low as the NUT.
- HART I/O Modules support a dual connection to both the Real Time I/O Data (RPI user adjustable) and the HART Command 3 Data (RPI fixed at 750 ms). When the dual connection is used, the Adapter counts this as 3 Connection Resources.

IMPORTANT**HART Pass Through Message**

When sending HART Command data to a HART device with a Pass Through Message, ensure that the Message Source Length is set to the size of the selected HART request/response buffer (attribute/assembly index) in the module.

Additional Resources

You can view or download publications at <http://www.rockwellautomation.com/literature/>. To order paper copies of technical documentation, contact your local Rockwell Automation distributor or sales representative.

Rockwell Automation Support

Rockwell Automation provides technical information on the Web to assist you in using its products. At <http://www.rockwellautomation.com/support/>, you can find technical manuals, a knowledge base of FAQs, technical and application notes, sample code and links to software service packs, and a MySupport feature that you can customize to make the best use of these tools.

For an additional level of technical phone support for installation, configuration, and troubleshooting, we offer TechConnect support programs. For more information, contact your local distributor or Rockwell Automation representative, or visit <http://www.rockwellautomation.com/support/>.

Installation Assistance

If you experience a problem within the first 24 hours of installation, please review the information that's contained in this manual. You can also contact a special Customer Support number for initial help in getting your product up and running.

United States or Canada	1.440.646.3434
Outside United States or Canada	Use the Worldwide Locator at http://www.rockwellautomation.com/support/americas/phone_en.html , or contact your local Rockwell Automation representative.

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United States	Contact your distributor. You must provide a Customer Support case number (call the phone number above to obtain one) to your distributor to complete the return process.
Outside United States	Please contact your local Rockwell Automation representative for the return procedure.

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