ControlNet Router

(Enhanced)

Firmware Revision v1.001.010+

Release Notes

A-CNR

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Firmware Revision 1.001.021

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1. PREFACE

1.1. COMPATIBILITY

Firmware revision 1.001.021 of the ControlNet Router will require the following compatible versions:

Software	Version
Slate	1.085 and later

1.2. NOTES

The following should be noted:

- Firmware upgrades will be done using Aparian's Slate software.
- Aparian flash files have an *.afb* extension.
- Slate can also be used to set the initial network parameters using its DHCP server.
- Should any interruptions cause the module to not complete the firmware upgrade the module will return to Safe Mode. The user can then re-flash the module with the application firmware. See the user manual for more information regarding Safe Mode.

1.3. ADDITIONAL INFORMATION

The following resources contain additional information that can assist the user with the module installation and operation.

Resource	Link
Slate Installation	http://www.aparian.com/software/slate
ControlNet Router User Manual ControlNet Router Datasheet Example Code & UDTs	http://www.aparian.com/products/controlnetrouter
Ethernet wiring standard	www.cisco.com/c/en/us/td/docs/video/cds/cde/cde205_220_420/installation/guide/cde205_220_420_hig/Connectors.html
CIP Routing	The CIP Networks Library, Volume 1, Appendix C:Data Management
ControlNet	http://www.odva.org
ControlNet Cabling	ControlNet Coax Media Planning and Installation Guide https://literature.rockwellautomation.com/idc/groups/literature/documents/in/cnet-in002_-en-p.pdf

1.4. SUPPORT

Technical support will be provided via the Web (in the form of user manuals, FAQ, datasheets etc.) to assist with installation, operation, and diagnostics.

For additional support the user can use either of the following:

Contact Us web link	www.aparian.com/contact-us
Support email	support@aparian.com

2. IMPROVEMENTS

The following updates are included in this firmware revision.

Revision	Improvement	Description
1.001.021	Powerup	Improved resilience when powering up with inconsistent power feed.
1.001.020	ControlNet message overflow	Improved robustness when a ControlNet message overflow event occurs.
1.001.019	None	-
1.001.018	SCADA Support	Added Virtual Gateway Routing option for SCADA applications allowing various SCADA systems (e.g., KEPware, Wonderware, etc.) to communicate with Logix controllers over ControlNet (via the A-CNR).
1.001.017	PLC5 Analog Read/Write	Added support to use a Block Transfer Read (BTR) or Block Transfer Write (BTW) in Logix to exchange data with PLC5 Analog cards.
1.001.014	Bridge Mode	Added bridge mode that must be used with the A-CNR AOP in Logix. This will allow the user to connect and configure ControlNet IO under the A-CNR AOP in Logix.
	Soft Schedule	Added Soft Schedule which allows up to 30 x Scheduled ControlNet Connections to be running (when operating as a ControlNet Originator) using software packet triggers. Current Hard Schedule (which is hardware trigger based) still supports 10 x Scheduled Connections.
	Unscheduled Cyclic Packets	Support processing of Unscheduled Cyclic packets.
1.001.013	EIP Class 1 Connection	Increased the EIP Class 1 Originator connection count to 16 from 10.
1.001.011	General	Non-application specific update.

3. ANOMALIES FIXED

The following anomalies have been fixed in this firmware revision.

Revision	Anomaly	Description
1.001.021	Modbus Client Default Gateway	Fixed issue that would cause communication issues with multiple Modbus TCP Servers on a different subnet when using a Default Gateway.
	DHCP Domain Server	Fixed anomaly where a DHCP Server providing a single Domain Server IP address could cause the module to crash.
	Modbus TCP Client	Corrected the number of simultaneous Modbus TCP connections.
1.001.020	None	-
1.001.019	EIP Originator Class 1 Connection Instance	Fixed issue which would not allow connections with 16-bit connection instances.
1.001.017	Routed Fwd Close	Fixed issue where Class 3 routed messages would not send the forward close, received in bridge mode, to the ControlNet node.
1.001.016	CNet Peer to Peer Connection	Fixed anomaly that caused the Peer-to-peer Scheduled ControlNet connection to time out.
1.001.015	Tag Read Length	When using Logix Tag Read, fixed the issue with the length being used.
	CNet Peer to Peer Connection	The newer versions of Logix uses Peer-to-peer Scheduled ControlNet communication when using the Generic Profile in Logix. The A-CNR was updated to correctly support this.
1.001.014	Mapping	Fixed issue which could cause a faulty startup when EIP Originator or Modbus Client has been configured without any mapping items.
1.001.012	Keeper Scheduling	Resolved anomaly that could cause the local CNR's scheduled connections to become unscheduled when the local CNR makes a network change as a Keeper.
	ACK overflow	Resolved anomaly which could cause a flood of ACK messages to be sent between two CNR modules.

4. KNOWN ANOMALIES

The following known anomalies exist in this firmware revision.

Revision	Anomaly	Description
1.001.021	None	-