

DF1 Router

Release Notes

A-DF1R

Document No. D103-012

Document Revision 1.0

05/2018

Firmware Revision 1.025

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1. PREFACE

1.1. COMPATIBILITY

Firmware revision 1.025 of the DF1 Router will require the following compatible versions:

Software	Version
Slate	1.031 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
DF1 Router User Manual DF1 Router Datasheet Example Code & UDTs	http://www.aparian.com/products/df1router
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
Map PLC/SLC messages	SLC to CompactLogix Migration Guide: Chapter 3 – Map PLC/SLC Messages (1769-ap001_-en-p.pdf) EtherNet/IP Network Configuration: Chapter 5 – Mapping Tags (enet-um001_-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
1.025	SLC Programming	Updates to avoid SLC5/03 and SLC5/04 crashing when downloading a RSLogix 500 program while a PanelView is connected.
1.024	ENQ Retry	DF1 Router now implements a retry limit to consecutive ENQ requests.
1.019	CIP Serial	Added support for CIP Serial allowing the DF1 Router to program Logix 5000 as well as Connected Components Workbench applications.
	PCCC	Added support for PCCC protocol.
	PanelView 800	Added support for PanelView 800 interfacing.
1.018	DF1 Radio Protocol	Added support for DF1 Radio Protocol with Store and Forward capability
1.017	PLC5/SLC	Implement complete PLC5/SLC/MicroLogix pass through which allows user to configure PLC5/SLC/MicroLogix over an Ethernet network (serves as replacement for NET-ENI).
	DF1 half-duplex	Allow access via serial to multiple PLC5/SLC/MicroLogix devices connected on the same Ethernet network.
1.015	EtherNet/IP	Added CIP stats
1.014	EtherNet/IP	Updates to EtherNet/IP and CIP communication to comply with latest ODVA certification.
1.013	EtherNet/IP	Update EtherNet/IP connection management logging
1.012	EtherNet/IP	Add retry functionality when no response was received
	Mapping Counters	Cleared with download
1.010	Diagnostics	Add additional diagnostics to assist with fault finding.
	EtherNet/IP	Minor improvements to communication stability.

1.009	Reactive Tag Mode PLC2 Messaging	Add support for unprotected bit write.
1.008	Reactive Tag Mode PLC2 Messaging	Add support for PLC2 messaging when in Reactive Tag Mode.
	EtherNet/IP	Improved communications.
1.007	Scheduled Tag Status	Add indications in Logix input assembly of the status for each mapped scheduled item.
1.006	Statistics	Additional EtherNet/IP communication statistics
	PCCC	Changed PCCC messaging from UCMM to Class 3
	Stability	Minor improvements to stability
	Ethernet Cable Length	Added Ethernet cable length measurement
1.003	DF1 Communication	Increased stability and performance of DF1 serial communication.
1.002	Unscheduled Mode	Allow the user to send a connected or unconnected message from RSLogix 5000 to read from or write data to a DF1 file.
	Scheduled Mode	Provide the ability to setup the module to write the values from a Logix tag to a DF1 file and vice versa at a configurable interval without any RSLogix code required.
	Diagnostics	Additional diagnostics are provided allowing the user to see a per node success counter as well as improved DF1 capture descriptions.

3. ANOMALIES FIXED

The following anomalies have been fixed in this firmware revision.

Revision	Anomaly	Description
1.025	None	-
1.023	DF1	Fix issue where certain DF1 packets with excessive size could cause the DF1 Router to reset when operating in Transparent Mode.
	PCCC	Fix issue where a malformed PCCC request could cause the DF1 Router to reset.
1.022	Half Duplex	Resolved issue with Half Duplex checksum calculation.
1.021	Routed PCCC Message	Fixed issue where certain routed PCCC messages did not send to the correct destination address.
	CIP Statistics	Fixed minor anomalies in the CIP statistics
	CIP Serial	Resolved issue where forward open from CIP Serial connection could cause the Class 1 EtherNet/IP connection to drop.
1.020	Multi IP Address	Fixed anomaly where the second IP address could not be contacted after unplugging and reinserting the Ethernet cable
1.019	CIP Port	Updated CIP Port object to address DF1 Port expansion issue.
1.017	Ethernet	Fix for certain broadcast Ethernet packets that were being re-broadcasted.

	DF1 Half-duplex	Fixed addressing used for half-duplex DF1 Serial comms.
1.016	EtherNet/IP Management	Resolved bug in the EtherNet/IP management causing ENIP and TCP clients to timeout too fast due to inactivity.
1.012	Class 3 connection count	Fixed class 3 connection count decrease
	Other	Minor bug fixes
1.011	EtherNet/IP	Resolve issue where if TCP connection is reset the ENIP connection had to first timeout before processing next request.
1.009	Reactive Tag Mode PLC2 Messaging	Fix PLC2 addressing offset.
1.007	Scheduled Tag Status	Add indications in Logix input assembly of the status for each mapped scheduled item.
	ARP client list	Fix issue where DHCP requests increase client list count
	Configuration	Fix anomaly where a large reactive tag list could affect the scheduled configuration.
1.006	Owned	Fixed owned indication when receiving a Forward Close.
1.005	Reset	Fix CIP reset anomaly
1.003	Embedded Responses	Fix embedded response anomaly for heavy DF1 traffic
1.002	Webserver rollover	When certain pages are rapidly refreshed whilst the module is operating with a high usage it could cause the module to fault and reset.
	Webserver statistics	The webserver statistics would go negative once 0x80000000 was reached.
	PLC5 binary addressing	When in Reactive Tag Mode the module incorrectly read PLC5 typed messages that are binary coded.

4. KNOWN ANOMALIES

The following known anomalies exist in this firmware revision.

Revision	Anomaly	Description
1.025	None	-