Release Note

Allen-Bradley

EtherNet/IP Communication Daughtercard

Catalog Number 1788-ENBT

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About This Publication

These release notes provide enhancement and anomaly information for this module.

Compatible Versions of Software

Use these or later versions of software with the 1788-ENBT module.

If using	Use this version or later
RSLinx Classic software	2.43
RSLinx Enterprise software	3.00
RSLogix 5000 programming software	15.00
RSNetWorx for EtherNet/IP software	5.11

Enhancements

These firmware revisions contain these enhancements:

- Enhancements with Revision 3.1 on page 2
- Enhancements with Revision 2.1 on page 3

Enhancements with Revision 3.1

Revision	Adds support for
3.1	Updating the 802.3 MAC destination address in pre-built I/O packets when a gratuitous Address Resolution Protocol (ARP) request is received from a redundant chassis pair. When using produce/consume tags between this module and a redundant chassis pair with RSLogix 5000 software version 19.50 , this prevents the loss of three to five seconds of data if the primary controller switches over. Lgx00095033, Lgx00095269

Enhancements with Revision 2.1

Revision	Adds support for
2.1	Embedded EDS (Electronic Data Sheet) file within module firmware. This feature requires RSNetWorx software, version 5.0 or later.
	When connected to a network with a Dynamic Host Configuration Protocol (DHCP) server, that server automatically assigns an IP address to the module. This feature requires RSLogix 5000 software, version 13 or later or RSLinx software, version 2.43 or later.
	Using a MSG instruction, the FlexLogix controller can send email through the 1788-ENBT module.
	Enhanced embedded web pages.
	Duplicate IP address detection.

Corrected Anomalies

These firmware revisions contain these corrected anomalies:

- Corrected Anomalies with Revision 3.1 on page 3
- Corrected Anomalies with Revision 2.3 on page 4
- Corrected Anomalies with Revision 2.2 on page 4
- Corrected Anomalies with Revision 2.1 on page 4
- Corrected Anomalies with Revision 1.3 on page 5

Corrected Anomalies with Revision 3.1

Revision	Anomaly
3.1	Corrected an issue with Quality of Service (QoS).
	Added duplicate IP address detection diagnostics to the EtherNet/IP Error web page for modules without a 4-character display. Lgx00098812

Corrected Anomalies with Revision 2.3

Revision	Anomaly
2.3	The 1788-ENBT module, when used with the 1794-L33 or 1794-L34 controller, was writing to the dual port interface at the same time as the controllers. This anomaly could cause the moduke status indicator on the 1788-ENBT module to go solid red and communication through the module to stop after approximately 30 days of continuous operation.

Corrected Anomalies with Revision 2.2

Revision	Anomaly
2.2	The module was modified for compatibility with Logix5000 controllers using the integrated batch feature of RSLogix 5000 software, version 15.00.
	The module would appear to lock up during short-duration power cycles.
	Bad UDP checksum would be created when UDP do not fragment bit is set. This bit is used only with a custom EtherNet/IP driver.

Corrected Anomalies with Revision 2.1

Revision	Anomaly
2.1	This version of the firmware does not work with certain revisions of FlexLogix controllers. The system may appear to be operating normally, with the processor's green status indicator on, but there is no communication between the controller and the module.

With This Revision of 1788-ENBT Module Firmware	Use This Revision of ControlLogix Controller Firmware
1.x	• 1.2 out-of-box • 10.*x* • 11.21 or earlier
2.0 or later	13.*x* or later

Corrected Anomalies with Revision 1.3

Revision	Anomaly
1.3	Erroneous generation of UDP checksum.
	The falsely-reported 'module in use' error when the module is running near its capacity.

Application Notes

These application notes apply to all firmware revisions.

Ethernet Switch Port Configuration

The 1788-ENBT module supports the following Ethernet settings:

- 10 Mbps half duplex
- 10 Mbps full duplex
- 100 Mbps half duplex
- 100 Mbps full duplex

Depending on the module and firmware revision, different port configuration is required:

- **Modules with Firmware Revision 1.28 or Earlier**
  Based on the IEEE 802.3u autonegotiation protocol, the mode is automatically selected. If you connect a module to a port on a 10/100 Mbps switch, you must set this port to autonegotiate.

  If you set this port manually to one of the modes listed above, a mismatch between module and switch modes of operation may occur. This will result in significant reduction of system performance.

- **Modules with Firmware Revision 1.33 or Later**
  Beginning with version 12.0 of RSLogix 5000 software, you can manually configure the communication rate and duplex rate of the 1788-ENBT module.

Additionally, you can manually configure the communication rate and duplex rate on both the 1788-ENBT module and the switch port that is connected to the module. However, the configurations must match on both devices.

Change Ports on an Ethernet Switch (autonegotiation setting only)

If you reconnect the module from one port to another one, regardless of whether the new port is on the same or a different switch (or a hub), follow these steps.

1. Disconnect the cable from the port to which the module is currently connected.
2. Wait until the module link status indicator is off.
3. Connect the cable to the new port.

   This procedure will restart the autonegotiation process at the module side. You can also restart the module itself.

DNS Addressing with EtherNet/IP Modules

Depending on module configuration, DNS addressing of remote EtherNet/IP modules may not function properly with RSLinx software, version 2.41 and RSLogix 5000 software, version 12 and earlier. If you experience this problem, refer to the Technical Support document A56128176, 'How to Make DNS Addressing Work with NetLinx products'.

Download the document at http://www.rockwellautomation.com/support or contact Technical Support at 440-646-5800.

Connection Limitations

Connections are a measure of the number of devices with which a controller or communication card communicates. Some examples of consumed connections include:

- A chassis of discrete I/O (rack-optimized)
- An analog module
- A produce/consume tag

The 1788-ENBT module can support up to 32 I/O connections. However, if all connections are at a maximum packet size of 126 DINTS, the module can support a maximum of 21 connections.

Change the Subnet Mask

After setting or changing the Subnet Mask on a configured 1788-ENBT module, you must cycle power to the module for the Subnet Mask to take effect.

Diagnostic Counters

RSLogix 5000 software and RSLinx software display many diagnostic counters for the 1788-ENBT module. However, some of these fields are not supported by the 1788-ENBT module. The fields that are not supported are permanently displayed as 0.

Internet Group Management Protocol (IGMP) Support

The 1788-ENBT module supports the following versions of IGMP:

- Version 1.0 (firmware revision 1.33 and earlier)
- Version 2.0 (firmware revision 2.1 and later)

Additional Resources

These documents contain additional information concerning related Rockwell Automation products.

Resource	Description
EtherNet/IP Modules in Logix5000 Control Systems User Manual, publication ENET-UM001	Provides information about using all types of EtherNet/IP modules in a ControlLogix system.
ControlLogix Redundancy System User Manual, publication 1756-UM523	Provides information about redundancy in the ControlLogix system, including a section about using EtherNet/IP modules.
ControlLogix Redundancy System Release Notes, publication 1756-RN608	Provides information regarding the enhancements and anomalies specific to the use of the 1788-ENBT module in a redundant system.
ControlLogix EtherNet/IP Bridge Module Installation Instructions, publication 1756-IN019	Provides information about installation procedures and product specifications.

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.

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