



EtherNet/IP Communication Daughtercard

Catalog Number 1788-ENBT

About This Publication

This release note provides enhancement and anomaly information for this module.

Use this document along with your EtherNet/IP Communication Daughtercard User Manual, publication 1788-UM054.

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Firmware Revision 2.1 Enhancements

This revision of firmware includes these enhancements.

- The 1788-ENBT module supports:
 - Embedded EDS (Electronic Data Sheet) file

The module contains its own EDS file within its firmware. This feature requires RSNetWorx software, version 5.0 or later.

- Dynamic Host Configuration Protocol (DHCP)

When connected to a network with a 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.

- Email

Using a MSG instruction, the FlexLogix controller can send email through the 1788-ENBT module.

For more information, refer to the EtherNet/IP Modules User Manual, publication ENET-UM001.

- The embedded web pages for the 1788-ENBT have been enhanced to make them easier to manage and to be more user-friendly.

- The 1788-ENBT module supports duplicate IP address detection.

When you change the IP address or connect the module to an EtherNet/IP network, the module checks to make sure that the IP address assigned to this module is not the same as that for any other device on the network. If the module determines that there is a conflict (some other device on the network already has the IP address), the EtherNet/IP port of the module goes into conflict mode, where the module's:

- OK LED blinks red
- network (NET) LED is solid red
- front display indicates the conflict

For more information on this feature, refer to chapter 3 of the EtherNet/IP Modules in Logix5000 Control Systems User Manual, publication ENET-UM001.

Firmware Revision 2.3 Corrected Anomalies

This revision of firmware corrects this anomaly.

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 MS LED indicator on the 1788-ENBT module to go solid red and communication through the module to stop after approximately 30 days of continuous operation.

Firmware Revision 2.2 Corrected Anomalies

This revision of firmware corrects these anomalies.

- The firmware 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 the power up process from short duration power cycles.

The module status LED indicator is solid green and all other LED indicators are off. Communication is not possible from the Ethernet port or from the backplane.

- 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.

Firmware Revision 2.1 Corrected Anomaly

This version of the firmware does not work with certain versions of FlexLogix controllers.

The system may appear to be operating normally, with the processor's green LED on, but there is no communication between the controller and the module.

If You Are Using This Revision of 1788-ENBT Module Firmware	You Must Use This Revision of FlexLogix Controller Firmware
1.x	<ul style="list-style-type: none"> • 1.2 out-of-box • 10.x • 11.21 or earlier
2.0 or later	13.x or later

To work around this anomaly, you can do one of the following:

- Flash upgrade the FlexLogix controller to version 13.x or later.
- Flash downgrade the 1788-ENBT module to version 1.x.

Firmware Revision 1.33 Corrected Anomalies

This revision of firmware corrects these anomalies.

- Erroneous generation of UDP checksum
- The falsely-reported “module in use” error when the product 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 LED 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 NetLinx EtherNet/IP Modules

Depending on module configuration, DNS addressing of remote NetLinx 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://support.rockwellautomation.com> 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.

For more information on how the 1788-ENBT module uses connections, refer to the FlexLogix Selection Guide, publication 1794-SG001.

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

This product also has a user manual (pub. no. 1756-UM054) which you can view or download at <http://literature.rockwellautomation.com>. To order paper copies of technical documentation, contact your local Rockwell Automation distributor or sales representative.

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Notes:

Rockwell Automation Support

Rockwell Automation provides technical information on the Web to assist you in using its products. At <http://support.rockwellautomation.com>, 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://support.rockwellautomation.com>.

Installation Assistance

If you experience a problem with a hardware module 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 module up and running.

United States	1.440.646.3223 Monday – Friday, 8am – 5pm EST
Outside United States	Please contact your local Rockwell Automation representative for any technical support issues.

New Product Satisfaction Return

Rockwell tests all of its products to ensure that they are fully operational when shipped from the manufacturing facility. However, if your product is not functioning, it may need to be returned.

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

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