



EtherNet/IP to IEC 60870-5-103 Master Gateway 5201-DFNT-103M

The DFNT-103M modules are the ideal solution for the many applications where EtherNet/IP connectivity can be used to integrate an IEC 103 slave device into a system. The EtherNet/IP gateway is a powerful module designed with both Client and Server support, enabling easy connection to Rockwell Automation PLCs (CLX, SLC, PLC, CPLX, and similar devices). In combination with the IEC 103 Master device support, the module provides a very powerful interface to the many IEC 103 slave devices which are in use in the industrial marketplace today. Applications for the module are found in most industries, especially Manufacturing, Oil and Gas, Electrical Power and Food Processing.

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EtherNet/IP to IEC 60870-5-103 Master Gateway

5201-DFNT-103M

The ProLinx EtherNet/IP to IEC60870-5-103 Master Gateway creates a powerful connection between devices on an EtherNet/IP network and an IEC 103 slave device. This stand-alone DIN-rail mounted protocol gateway provides one Ethernet port and one IEC 103 Master configurable serial port.

The Ethernet/IP protocol driver supports the Explicit Messaging implementation of the protocol. User-configurable as both a Client and a Server, the EtherNet/IP port is a very powerful data transfer tool.

The IEC 60870-5-103 Master protocol driver works as a master to monitor and control up to 16 slaves. The serial port is user-configurable, providing a very powerful and flexible host or device interface solution.

EtherNet/IP

The EtherNet/IP protocol is one of the primary connectivity tools to the different Rockwell Automation platforms. The Explicit Messaging aspect of the protocol (only) has been implemented in the ProLinx units to provide the data transfer link between the ProLinx units and the Rockwell Automation hardware.

General Protocol Information

Messaging	PCCC on CIP Explicit Messaging supported
Miscellaneous	125 word read and write data lengths Floating point data supported

EtherNet/IP Server Specifications

In Server mode, the module accepts commands from one or more clients to read/write data stored in the module's internal registers.

EtherNet/IP Server Specifications

Connections	Five independent TCP server sockets permit remote clients to interact with all data contained in the module.
Data File	Data Table File Start – Fixed at N10 Data Table File Size – 100 or 1000 words
CIP Services Supported	0x4C – CIP Data Table Read 0x4D – CIP Data Table Write

EtherNet/IP Client Specifications

In Client mode, the module controls the read/write data transfer between the gateway and other EtherNet/IP devices. Data transfer can be initiated and executed without any ladder programming being required in the Rockwell Automation hardware.

EtherNet/IP Client Specifications

General	One client
Command List	Support for 100 commands, each configurable for command, IP address, register to/from addressing and word/bit count.

EtherNet/IP Client Specifications

Polling of command list	User configurable polling of commands, including disabled, continuous and on change of data (write only).
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IEC 60870-5-103 Master

The IEC 60870-5-103 Master driver provides extensive support for Master implementations of the protocol. The serial port on the gateway is user-configurable to support the IEC protocol (Master, Error Checking, Baud rate, etc).

The module supports:

- 16 slaves (sessions with distinct Data Link Addresses)
- Each slave (session) supports up to 3 sectors (with distinct Common ASDU Addresses)
- Configurable Time Sync and General Interrogation messages during initialization
- Supports General Interrogation, General Command and Time Synchronization Commands.

General Parameters

Communication parameters	Baud Rate: 110 to 19200 baud Stop Bits: 1 or 2 Data Size: 5 or 8 bits Parity: None, Even, Odd RTS Timing delays: 0 to 65535 ms
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IEC 60870-5-103 Master

Configurable Parameters	Baud Rate Parity RTS On RTS Off Minimum Delay Receive Timeout Data Link Address Common ASDU Address
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General Specifications

The ProLinx Communication Modules provide connectivity for two or more dissimilar network types. The modules, encased in sturdy extruded aluminum, are stand-alone DIN-rail mounted protocol gateways, providing communication between many of the most widely used protocols in industrial automation today.

Hardware Specifications

Specification	Description
Power Supply	24 VDC nominal 18 to 36 VDC allowed Positive, Negative, GND Terminals 2.5 mm screwdriver blade
Current Load	500 mA max@ 24 VDC
Operating Temperature	-20 to 50°C (-4 to 122°F)
Storage Temperature	-40 to 85°C (-40 to 185°F)
Relative Humidity	5 to 95% (non-condensing)
Dimensions	Standard: 5.20H x 2.07W x 4.52D in. (13.2cmH x 5.25cmW x 11.48cmD) Extended: 5.20H x 2.73W x 4.52D in. (13.2cmH x 6.934cmW x 11.48cmD)

Specification	Description
LED Indicators	Power and Module Status Application Status Serial Port Activity LED Serial Activity and Error LED Status
Configuration Serial Port	DB-9M RS-232 only No hardware handshaking
Ethernet Port (Ethernet modules only)	RJ45 Connector Link and Activity LED indicators
Application Serial Ports	RS-232/422/485 RS-232 handshaking configurable RS-422/485 screw termination included
Serial Port Isolation	2500V RMS port signal isolation per UL 1577 3000V DC min. port to ground and port to logic power isolation
Shipped with Each Unit	Mini-DIN to DB-9M serial cables 4 ft RS-232 configuration cable 2.5mm screwdriver CD (docs and Configuration utility) RS-422/485 DB-9 to Screw Terminal Adaptor (1 or 4, depending on ports)

ProSoft Configuration Builder

ProSoft Configuration Builder (PCB) provides a quick and easy way to manage module configuration files customized to meet your application needs. PCB is not only a powerful solution for new configuration files, but also allows you to import information from previously installed (known working) configurations to new projects.

Additional Products

ProSoft Technology offers a full complement of hardware and software solutions for a wide variety of industrial communication platforms.

Visit our web site at <http://www.prosoft-technology.com> for a complete list of products.

Ordering Information

To order this product, please use the following:

5201-DFNT-103M EtherNet/IP to IEC 60870-5-103 Master Gateway

To place an order, please contact your local ProSoft Technology distributor. For a list of ProSoft distributors near you, go to <http://www.prosoft-technology.com>

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