EtherNet/IP to IEC 60870-5-101 Slave Gateway

5201-DFNT-101S

The DFNT-101S modules are the ideal solution for the many applications where EtherNet/IP connectivity can be used to integrate an IEC 101 master 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 101 Slave device support, the module provides a very powerful interface to the many IEC 101 master 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.

How to Contact Us: Sales and Support

All ProSoft Technology® products are backed with unlimited technical support. Contact our worldwide Technical Support team directly by phone or email:

Asia Pacific
+603.7724.2080, asiapc@prosoft-technology.com
Languages spoken include: Chinese, Japanese, English

Europe – Middle East – Africa
+33 (0) 5.34.36.87.20, support.EMEA@prosoft-technology.com
Languages spoken include: French, English

North America
+1.661.716.5100, support@prosoft-technology.com
Languages spoken include: English, Spanish

Latin America (Sales only)
+1.281.298.9109, latinam@prosoft-technology.com
Languages spoken include: Spanish, English

Brasil
+55-11.5084.5178, eduardo@prosoft-technology.com
Languages spoken include: Portuguese, English

EtherNet/IP to IEC 60870-5-101 Slave Gateway

5201-DFNT-101S

The ProLinx EtherNet/IP to IEC60870-5-101S Gateway creates a powerful connection between devices on an EtherNet/IP network and an IEC 101 master device. This stand-alone DIN-rail mounted protocol gateway provides one Ethernet port and one IEC 101 Slave 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 60870-5-101 Slave protocol driver supports Slave implementations of the protocol. 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.
Polling of command list	User configurable polling of commands, including disabled, continuous and on change of data (write only).

IEC 60870-5-101 Slave

The 101S module acts as an input/output module between the IEC 60870-5-101 and other protocols and networks, as well as several proprietary interfaces.

General specifications include:

- User-definable module memory usage
- Storage of IEC time used in module is available in the database
- Protocol implementation conforms to the IEC 60870-5-101 specification with fully configurable parameters
- Priority Queues
- Invalid Bit Monitoring
- Supports Balanced and Unbalanced Mode
- Supports CP24 and CP56 time formats for events
- Event generation configurable per point or data type

General Parameters	
Communication parameters	Baud Rate: 110 to 19,200 baud Stop Bits: 1 or 2 Data Size: 5 or 8 bits Parity: None, Even, Odd RTS Timing Delays: 0 to 65535 ms

IEC 60870-5-101 Slave	
Configurable Parameters	Data link address length Common Address of ASDU length Inform. Object Address length Select/Operate Timeout Event Scan delay Use Balanced Mode Short Pulse Time Long Pulse Time Time DB Offset

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	0 to 50°C (32 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)
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

Specification	Description
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-101S   EtherNet/IP to IEC 60870-5-101 Slave Gateway

Note:

The 5201-DFNT-101S is in a Final Sales Period of two years, effective October 14, 2008 until October 14, 2010. Thereafter, the product will continue to be supported until October 14, 2014. The recommended replacement product is the 5102-DFCM3-101S DF1 Master/Slave to IEC 101 Slave Communication Gateway.

For more information on the Product Retirement Program, please visit: http://www.prosoft-technology.com/products/product_retirement_program

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

Distributors:
Place your order by email or fax to:
North American / Latin American / Asia Pacific
orders@prosoft-technology.com,
fax to +1 661.716.5101
Europe
europe@prosoft-technology.com,
fax to +33 (0) 5.61.78.40.52