EtherNet/IP to Modbus Master/Slave Gateway
5201/5202-DFNT-MCM(4)

The DFNT-MCM modules are the ideal solution for the many applications where EtherNet/IP connectivity can be used to integrate Modbus serial devices 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 Modbus device support, the module provides a very powerful interface to the many Modbus 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 Modbus Master/Slave Gateway
5201/5202-DFNT-MCM(4)

The ProLinx EtherNet/IP to Modbus Master/Slave Gateway creates a powerful connection between devices on an EtherNet/IP network and Modbus devices. This stand-alone DIN-rail mounted protocol gateway provides one Ethernet port and up to four serial ports.

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 Modbus protocol driver supports Master and Slave implementations of the protocol. All Modbus serial ports are individually 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 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
- One client

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

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**EtherNet/IP Client Specifications**

- **Polling of command list**: User configurable polling of commands, including disabled, continuous and on change of data (write only).

**Modbus Master/Slave**

The Modbus driver provides extensive support for both the Master and the Slave implementations of the protocol. The serial port(s) on the gateway can be individually configured to support the Modbus protocol (Master or Slave, RTU or ASCII, Baud rate, etc.).

**General Parameters – Modbus Protocol**

- **Communication parameters**
  - Baud Rate: 110 to 115K baud
  - Stop Bits: 1 or 2
  - Data Size: 7 or 8 bits
  - Parity: None, Even, Odd
  - RTS Timing delays: 0 to 65535 ms

- **Error Checking**
  - RTU mode (binary) with CRC-16
  - ASCII mode with LRC error checking

- **Floating Point**
  - Floating point data movement supported, including configurable support for Enron implementation

- **Function Codes**
  - 1: Read Output Status
  - 2: Read Input Status
  - 3: Read Multiple Data Registers
  - 4: Read Input Registers
  - 5: Write Single Bit
  - 6: Write Single Data Register
  - 15: Write Multiple Bits
  - 16: Write Multiple Data Register

**Modbus Master**

- **Command List**
  - Up to 100 command per master port, each fully configurable for function, slave address, register to/from addressing and word/bit count.
  - **Polling of command list**
    - Configurable polling of command list, including continuous and on change of data, and dynamically user or automatic enabled.

**Modbus Slave**

- **Node address**: 1 to 247 – software selectable

**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**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power Supply</strong></td>
<td>24 VDC nominal</td>
</tr>
<tr>
<td></td>
<td>18 to 36 VDC allowed</td>
</tr>
<tr>
<td></td>
<td>Positive, Negative, GND Terminals</td>
</tr>
<tr>
<td></td>
<td>2.5 mm screwdriver blade</td>
</tr>
<tr>
<td><strong>Current Load</strong></td>
<td>500 mA max@ 24 VDC</td>
</tr>
<tr>
<td><strong>Operating Temperature</strong></td>
<td>−20 to 50°C (−4 to 122°F)</td>
</tr>
<tr>
<td><strong>Storage Temperature</strong></td>
<td>−40 to 85°C (−40 to 185°F)</td>
</tr>
<tr>
<td><strong>Relative Humidity</strong></td>
<td>5 to 95% (non-condensing)</td>
</tr>
</tbody>
</table>

**Specification**

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Standard: 5.20H x 2.07W x 4.52D in. (13.2cmH x 5.25cmW x 11.48cmD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Extended: 5.20H x 2.73W x 4.52D in. (13.2cmH x 6.93cmW x 11.48cmD)</td>
</tr>
<tr>
<td><strong>LED Indicators</strong></td>
<td>Power and Module Status</td>
</tr>
<tr>
<td></td>
<td>Application Status</td>
</tr>
<tr>
<td></td>
<td>Serial Port Activity LED</td>
</tr>
<tr>
<td></td>
<td>Serial Activity and Error Status</td>
</tr>
<tr>
<td><strong>Configuration Serial Port</strong></td>
<td>DB-9M RS-232 only</td>
</tr>
<tr>
<td></td>
<td>No hardware handshaking</td>
</tr>
<tr>
<td><strong>Ethernet Port</strong></td>
<td>RJ45 Connector</td>
</tr>
<tr>
<td></td>
<td>Link and Activity LED indicators</td>
</tr>
<tr>
<td><strong>Application Serial Ports</strong></td>
<td>RS-232/422/485</td>
</tr>
<tr>
<td></td>
<td>RS-232 handshaking configurable</td>
</tr>
<tr>
<td></td>
<td>RS-422/485 screw termination included</td>
</tr>
<tr>
<td><strong>Serial Port Isolation</strong></td>
<td>2500V RMS port signal isolation per UL</td>
</tr>
<tr>
<td></td>
<td>3000V DC min. port to ground and port to logic power isolation</td>
</tr>
<tr>
<td><strong>Shipped with Each Unit</strong></td>
<td>Mini-DIN to DB-9M serial cables</td>
</tr>
<tr>
<td></td>
<td>4 ft RS-232 configuration cable</td>
</tr>
<tr>
<td></td>
<td>2.5mm screwdriver</td>
</tr>
<tr>
<td></td>
<td>CD (docs and Configuration utility)</td>
</tr>
<tr>
<td></td>
<td>RS-422/485 DB-9 to Screw Terminal Adaptor (1 or 4, depending on ports)</td>
</tr>
</tbody>
</table>

**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.


**Ordering Information**

To order this product, please use the following:

- **5201-DFNT-MCM** EtherNet/IP to Modbus Master/Slave
- **5202-DFNT-MCM4** 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](http://www.prosoft-technology.com)

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  - europe@prosoft-technology.com,
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