

## Modbus TCP/IP to BACnet/IP Client Edition 2 Gateway 5201-MNET-BACNET

The ProLinx® Modbus TCP/IP to BACnet/IP Client Edition 2 gateway creates a powerful connection between devices on a Modbus TCP/IP network and BACnet® devices. This stand-alone, DIN-rail-mounted, dual-protocol gateway works through a single Ethernet port.

The Modbus TCP/IP driver supports Schneider Electric processors as well as most other devices that use Modbus TCP/IP. This implementation allows both Client (Master) and server (slave) configurations using standard Ethernet TCP/IP connections. The gateway can use both Modbus TCP/IP MBAP and Encapsulated Modbus message formats.

The ProLinx BACnet/IP (Building Automation and Control networking) Client Edition 2 protocol implementation is designed specifically to meet the communication needs of building automation and control systems by providing limited BACnet/IP command support for such applications as heating, ventilating, and air-conditioning control, lighting control, access control, and fire detection systems.



Features	Benefits
Powerful network integration	<ul style="list-style-type: none"> <li>◆ Allows movement of data between dissimilar networks using two communication protocols on one gateway</li> <li>◆ Protocols share access to a common memory database to exchange data between networks</li> <li>◆ View diagnostic data for both networks from a single configuration/debug port</li> </ul>
Modbus TCP/IP protocol interface	<ul style="list-style-type: none"> <li>◆ Modbus TCP/IP adds Ethernet capability to one of the most widely used industrial protocols</li> <li>◆ Suitable for SCADA and "foreign device" interface applications</li> <li>◆ Floating-point data movement supported, including configurable support for Enron and Daniel® floating-point applications</li> <li>◆ Communicate with programmable controllers, intelligent devices, sensors and instruments</li> <li>◆ Allows PCs and HMIs to monitor field devices</li> </ul>
BACnet/IP Client Edition 2	<ul style="list-style-type: none"> <li>◆ Standard protocol for Building Automation and Control limited to Analog and Digital I/O commands</li> <li>◆ Communicate with Building Automation controllers, HVAC, Fire and Safety equipment</li> <li>◆ Support for Trane Building Control Unit (BCU)</li> </ul>
Backed by ProSoft Technology	<ul style="list-style-type: none"> <li>◆ 20-year history of delivering high-quality, reliable solutions designed with you in mind</li> <li>◆ Free, unlimited, worldwide Technical Support by phone for pre-sale, set-up, or troubleshooting support helps you get going sooner and stay running longer</li> <li>◆ Three-Year Warranty ensures reliability and protects against equipment failures</li> </ul>

### Configuration

ProSoft Configuration Builder (PCB) provides a PC-based software configuration solution for quick and easy management of gateway configuration files, as well as viewing communication and network diagnostics.

PCB is not only a powerful solution for new configuration files, but also allows you to import information from previously installed (known working) configurations into new projects.

## General Specifications - ProLinX

ProLinX® communication gateways provide connectivity for two or more dissimilar network types. The gateways, enclosed in sturdy extruded aluminum, are stand-alone, DIN-rail-mounted solutions that provide data transfer between many of today's most widely used industrial automation protocols.

## General Specifications - Modbus TCP/IP

ProSoft's Modbus TCP/IP implementation uses the gateway's shared internal memory for data transfer. Sharing the memory with another protocol driver allows the gateway to transfer data between Modbus TCP/IP devices and other devices on other networks.

Configurable floating-point data movement is supported, including support for Enron or Daniel® floating-point applications.

### Modbus TCP/IP Server (Slave)

The server driver accepts incoming connections on Service Port 502 for Clients using Modbus TCP/IP MBAP messages and on Service Port 2000 (or other Service Ports) for Clients using Encapsulated Modbus messages.

- Supports five independent server connections for Service Port 502 (MBAP)
- Supports five independent server connections for Service Port 2000 (Encapsulated)
- Supports a total Modbus TCP/IP data transfer capacity of up to 4000 registers or up to 64,000 bits in any combination of data types throughout the memory database
- Modbus data types overlap in the gateway's memory database, so the same data can be conveniently read or written as bit-level or register-level data

### Modbus TCP/IP Client (Master)

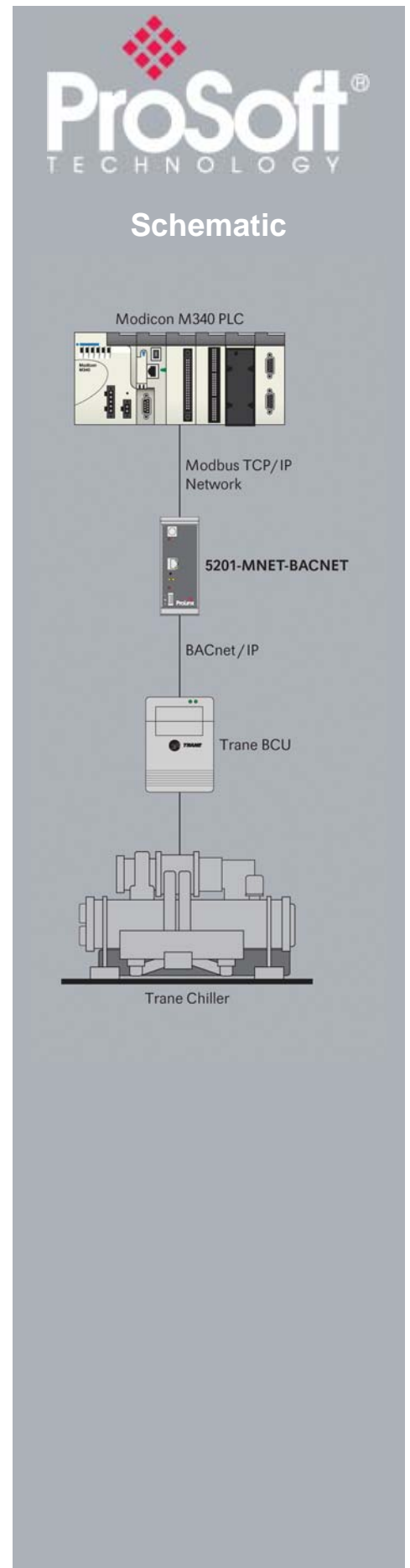
- Actively reads data from and writes data to Modbus TCP/IP devices, using MBAP or Encapsulated Modbus message formats
- Offers one Client connection with up to 100 commands to talk to multiple servers

### Status Data

Error codes, counters, and port status available

## General Specifications - BACnet/IP Client Edition 2

- The ProLinX BACnet/IP Client Edition 2 driver provides a single UDP Client to interface with one or more devices that contain BACnet/IP servers
- The driver implements a limited subset of the BACnet/IP protocol
- The gateway controls the read/write data transfer between itself and other BACnet/IP devices



## Functional Specifications

### Modbus TCP/IP

Modbus Commands Supported (Client and Server)	1: Read Coil Status 2: Read Input Status 3: Read Holding Registers 4: Read Input Registers 5: Force (Write) Single Coil	6: Preset (Write) Single Holding Register 15: Force (Write) Multiple Coils 16: Preset (Write) Multiple Holding Registers
Configurable Parameters (Client and Server)	Gateway IP Address Modbus data type starting address offsets Floating-point start address and database offset	
Configurable Parameters (Client Only)	Minimum Command Delay Response Timeout Retry Count Command Error Pointer	
Command List	Up to 100 fully configurable Client commands	
Status Data	Error codes reported individually for each command	
Command List Polling	Each command can be individually enabled or disabled; write-only-on-data-change is available	

### Functional Specifications - BACnet/IP Client Edition 2

General	One UDP Client
Command List	Support for 100 commands, each configurable for function code, IP address, register to/from addressing and word/bit count
Service Port	1 to 65535
Function Code	12=Read Single Property 14=Read Multiple Properties 15=Write Single Property 16=Write Multiple Properties
Data Type	0=Analog Input 1=Analog Output 2=Analog Value (Edition 2 only) 3=Binary Input 4=Binary Output 5=Binary Value (Edition 2 only)
Point Count	1 to 25



Where Automation Connects™

### Global Distribution

We think like you do

ProSoft Technology® products are distributed and supported worldwide through a network of over 500 distributors in over 50 countries. Our knowledgeable distributors are familiar with your application needs. For a complete list of distributors, go to our web site at:

[www.prosoft-technology.com](http://www.prosoft-technology.com)

### Global Support

We are there for you

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

### Global Offices

We are where you are

ProSoft Technology has regional offices worldwide available to help you with all your industrial application needs. If you need help choosing a ProSoft Technology solution for your particular application check out our contact information under distributor sales on the web site at:

[www.prosoft-technology.com](http://www.prosoft-technology.com)

Whether your application is large or small, our technical professionals are there to help you choose the right communication solution.

## Hardware Specifications

Specification	Description
Power Supply	24 Vdc nominal 18 Vdc to 32 Vdc allowed Positive, Negative, GND Terminals 2.5 mm screwdriver blade
Current Load	500 mA maximum @ 32 Vdc maximum
Operating Temperature	-4°F to 122°F (-20°C to 50°C)
Storage Temperature	-40°F to 185°F (-40°C to 85°C)
Relative Humidity	5% to 95% (with no condensation)
Dimensions (Height x Width x Depth)	Standard: 5.20 in x 2.07 in x 4.52 in (13.2 cm x 5.25 cm x 11.48 cm) Extended: 5.20 in x 2.73 in x 4.52 in (13.2 cm x 6.934 cm x 11.48 cm)
LED Indicators (On all gateways)	Power and Hardware Fault Configuration and Application Communication Status Serial Configuration Port Activity and Error
Configuration Serial Port	DB-9M RS-232 only No hardware handshaking
Ethernet Port (Ethernet protocol gateways only)	10 Base-T half-duplex RJ45 Connector Link LED and Activity LED indicators Electrical Isolation 1500 Vrms at 50 Hz to 60 Hz for 60 seconds, applied as specified in section 5.3.2 of IEC 60950: 1991 Ethernet Broadcast Storm Resiliency = less than or equal to 5000 [ARP] frames-per-second and less than or equal to 5 minutes duration
Application Serial Port(s) (Serial protocol gateways only)	RS-232/422/485 RS-232 handshaking configurable RS-422/485 DB-9 to Screw Terminal Adapter <b>Note:</b> The number of serial application ports depends on the gateway type, and the combination of protocols.
Serial Port Isolation	2500 Vrms port signal isolation per UL 1577 3000 Vdc min. isolation port to ground and port to logic
Shipped with Each Unit	Mini-DIN to DB-9M serial cables 4-foot RS-232 configuration cable 2.5 mm screwdriver CD (docs and configuration utility) RS-422/485 DB-9 to Screw Terminal Adapter for each serial application port (serial protocols only)

## Agency Approvals and Certifications

ATEX	EN 50021: April 1999
CE	IEC 1131-2:1, EN60950:2000, EN55011:1998, Class A, EN61000-6-2:1998, EN50021:1999
cULus	UL 1604, EN 60950



E183151



## Additional Products

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

For a complete list of products, visit our web site at:  
[www.prosoft-technology.com](http://www.prosoft-technology.com)

## Ordering Information

To order this product, please use the following:

### Modbus TCP/IP to BACnet/IP Client Edition 2 Gateway

5201-MNET-BACNET

To place an order, please contact your local ProSoft Technology distributor. For a list of ProSoft Technology distributors near you, go to:  
[www.prosoft-technology.com](http://www.prosoft-technology.com)  
and select Distributors from the menu.

Place your order by email or fax to:

North American / Latin American /  
Asia Pacific  
[orders@prosoft-technology.com](mailto:orders@prosoft-technology.com)  
fax to +1 661.716.5101

Europe / Middle East / Africa  
[europe@prosoft-technology.com](mailto:europe@prosoft-technology.com)  
fax to +33 (0) 5.61.78.40.52

Copyright © 2010 ProSoft Technology, Inc., all rights reserved. 12/2/2010

Specifications subject to change without notice.