



## Wireless Modbus Plus Gateway

### 6303-WA-MBP

The WA-MBP modules are the ideal solution for the many applications where wireless Modbus Plus connectivity can be used to integrate devices into a system. The Modbus Plus gateway is a powerful module designed with both Master and Slave support, enabling easy connection to other Modbus devices (Modicon processors and many others). Data is exchanged between devices and/or networks using a shared common database and an efficient but powerful wireless protocol. This common database provides the "backbone" communications for various field devices using different networks.

Applications for the module are found in most industries, especially Manufacturing, Oil and Gas, Electrical Power and Food Processing.

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

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The ProLinx Wireless Modbus Plus Gateway creates a powerful wireless connection between devices on a Modbus Plus network.

The Modbus Plus protocol driver supports both Master and Slave implementations of the protocol on the DB9 Female Modbus Plus port. The Modbus Plus port is fully configurable.

The PWP modules offer one-to-one or one-to-many interconnect scenarios. Data is exchanged between devices and/or networks using a shared common database and an efficient but powerful wireless protocol. This common database provides the "backbone" communications for various field devices using different networks.

### Modbus Plus

The Modbus Plus protocol driver exists in a single Modbus Plus Port (MBP). The driver can be configured on an individual port basis as either a master or a slave to interface with other Modbus Plus devices.

#### General Parameters

|                       |  |
|-----------------------|--|
| Modbus Function Codes | 3: Read Multiple Data Registers (MSTR 2)<br>16: Write Multiple Data Register (MSTR 1)<br>Global data read (32 words max.)<br>Global data write (32 words max.) |
| Address Scope         | 1 to 64  |

#### Modbus Plus Functioning as a Master

|                         |   |
|-------------------------|---|
| Command List            | Up to 200 commands on the master port, fully configurable for function, slave address, register to/from addressing and word count |
| Polling of command list | Configurable polling of command list, including continuous and on change of data  |

#### Modbus Plus Functioning as a Slave

|              |                               |
|--------------|-------------------------------|
| Node address | 1 to 64 – software selectable |
|--------------|-------------------------------|

### ProSoft Wireless Protocol

ProSoft Wireless Protocol (PWP) offers versatility where a mix of control devices requires cooperation with each other. This involves sharing of information across the applications regardless of device or network type, often at high speed, and with high reliability. Wireless

bandwidth utilization is optimized by using efficient communication methods. The protocol supports Unicast, Broadcast and Multicast group messaging. Efficiency is based on the fact each device on the "wireless" network can produce these types of messages and each device determines which of these messages to consume.

## General Specifications – Radio Modules

These modules utilize a full function wireless network card, supporting RF data rates up to 11 Mbps. The modules function as a client, providing an ultra-fast wireless solution for the most demanding industrial applications.

These modules allow you to connect various field devices using different networks or protocols and share data between these devices "over-the-air." This is accomplished by exchanging shared common database information over-the-air with ProSoft Technology's efficient but powerful wireless protocol.

| Specification              | Description  |
|----------------------------|--|
| Frequency                  | 2.4 GHz band (2400 to 2483.5 MHz)*                           |
| Wireless medium            | DSSS – Direct Sequence Spread Spectrum (802.11b)             |
| Output power               | 32 mW (15 dBm)   |
| Channel data rates         | 11, 5.5, 2, 1 Mbps   |
| Channels – user selectable | 1 through 11* **   |
| Security                   | PWP + WEP 64/128 Encryption with WEP key rollover management |
| Antenna Ports              | (2) RP-SMA connectors, automatic antenna diversity           |
| Bit Error Rate (BER)       | Better than 10 <sup>-5</sup>                                 |

\* Varies with country regulation

\*\* Some European countries such as France allow fewer channels

## Hardware Specifications

| Specification         | Description   |
|-----------------------|---|
| Power Supply          | 24 VDC nominal, 18 to 36 VDC allowed. Positive, Negative, GND Terminals   |
| 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            | <b>Standard:</b> 5.20H x 2.07W x 4.52D inches (13.2cmH x 5.25cmW x 11.48cmD)<br><b>Extended:</b> 5.20H x 2.73W x 4.52D inches (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, RF Link Status, RF Data Status  |
| Configuration Serial Port | Mini-DIN RS-232 only<br>No hardware handshaking  |
| Application Serial Ports  | Mini-DIN, RS-232/422/485<br>RS232 handshaking configurable<br>RS422/485 screw termination included   |
| Antenna Ports             | Two RP-SMA connectors, with automatic antenna diversity.   |
| Port Isolation            | 2500V Opto-Isolators<br>500V Power Supply Isolation  |
| Shipped with each unit    | Mini-DIN to DB-9M cables per serial port, 4 ft RS-232 configuration cable, 2.5mm screwdriver, CD (docs and Configuration utility), RS-422/485 DB9 to Screw Terminal Adaptor (1 to 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.