

ModbusProxy

USER MANUAL



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Revision History

| | |
|--------------|------------------|
| Oct. 3, 2013 | Initial Release. |
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Contents

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| | |
|---|-----------|
| 1 ModbusProxy Overview | 1 |
| 2 Specifications | 2 |
| 3 Shipping List | 3 |
| 3.1 Optional Shipping Items | 4 |
| 4 Installation | 4 |
| 4.1 Tools Needed | 4 |
| 4.2 Mounting | 5 |
| 5 ModbusProxy Back Panel | 7 |
| 5.1 Power Connection (+12 or +24VDC Build Option) | 8 |
| 5.2 LAN Connection | 9 |
| 6 ModbusProxy Front Panel | 10 |
| 6.1 Craft Port | 10 |
| 7 Front and Back Panel LEDs | 11 |
| 8 How to Set Up the ModbusProxy | 12 |
| 8.1 Set ModbusProxy IP via Craft Port (using TTY Interface) | 12 |
| 9 ModbusProxy Web Interface | 14 |
| 9.1 Introduction | 14 |
| 9.2 TMon Settings | 15 |
| 9.3 Proxy Settings | 16 |
| 9.4 Ethernet Settings | 16 |
| 9.5 Logging on to the ModbusProxy | 18 |
| 9.5.1 Changing the Default Password | 18 |
| 10 How to Upgrade Firmware Via LAN | 20 |
| 11 Frequently Asked Questions | 21 |
| 11.1 General FAQs | 21 |
| 12 Technical Support | 22 |
| 13 End User License Agreement | 23 |

1 ModbusProxy Overview



Your Modbus Routing Solution

Have you ever needed to monitor a **remote** network of Modbus devices? How important is your network security? Rather than create a **vulnerability** in your firewall, you need a device that can communicate with your local network and a remote monitoring system.

Meet the ModbusProxy

The ModbusProxy from DPS Telecom can route TCP messages from up to fifty local devices to a remote TMon unit. This allows remote monitoring of your Modbus devices without compromising your network firewall. The ModbusProxy can be configured through the TTY interface via craft port, or through the easy-to-use web interface. This allows the ModbusProxy to easily be configured through any computer on your network.

2 Specifications

| | |
|-------------------------------|---|
| Protocols: | Telnet, HTTP, HTTPS |
| Dimensions: | 1.720" H x 11.5" W x 4" D |
| Weight: | 1.5 lbs. |
| Mounting: | 19" rack or wall mount |
| Power Input: | +12VDC to -24 VDC |
| Current Draw: | 150 mA @ +12VDC 75 mA @ +24VDC |
| Fuse: | 1/2 Amp GMT Fuse, if -48V or -24V Power Input PTC Resettable Fuse, if +12VDC power |
| Interfaces: | 1 RJ45 10/100BaseT Ethernet port 1 Craft Serial Port |
| Visual Interface: | 7 Front Panel LEDs 3 Back Panel LEDs |
| Operating Temperature: | 32°–140° F (0°–60° C) |
| Operating Humidity: | 0%–95% non-condensing |
| RoHS: | 5/6 |

3 Shipping List

Please make sure all of the following items are included with your ModbusProxy. If parts are missing, or if you ever need to order new parts, please refer to the part numbers listed and call DPS Telecom at 1-800-622-3314.



**ModbusProxy
D-PK-NG216**



**ModbusProxy User Manual
D-UM-NMMBP**



**6 ft. DB9M-DB9F Download Cable
D-PR-045-10A-04**



**14 ft. Ethernet Cable
D-PR-923-10A-14**



**19" Rack Ear
D-CS-325-10A-00**



**Wall Mount Bracket
D-CS-532-10A-05**



x 4
**Four 3/8" Ear Screws
1-000-60375-05**



x 2
**Two Metric Rack Screws
2-0008075-03**



x 2
**Two Standard Rack Screws
1-100-12500-06**



**Pads
2-015-00030-00**



+24V Wall Transformer, 400 mA,

110/24VAC (Barrel Plug)

D-PR-105-10A-02

3.1 Optional Shipping Items



Small WAGO connector
2-802-01020-00



Long 19" Rack Ear
(D-CS-325-10A-10)

4 Installation

4.1 Tools Needed

To install the ModbusProxy, you'll need the following tools:



Phillips No. 2 Screwdriver

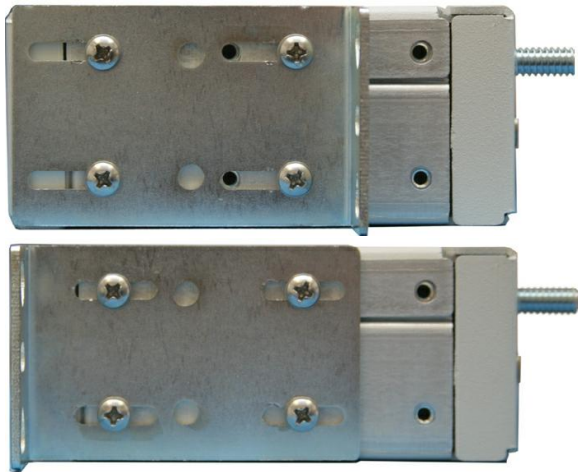


Small Standard No. 2 Screwdriver



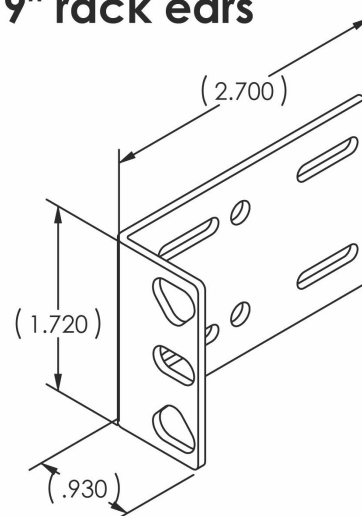
PC with terminal emulator, such as
HyperTerminal

4.2 Mounting



The ModbusProxy can be flush- or rear-mounted

19" rack ears

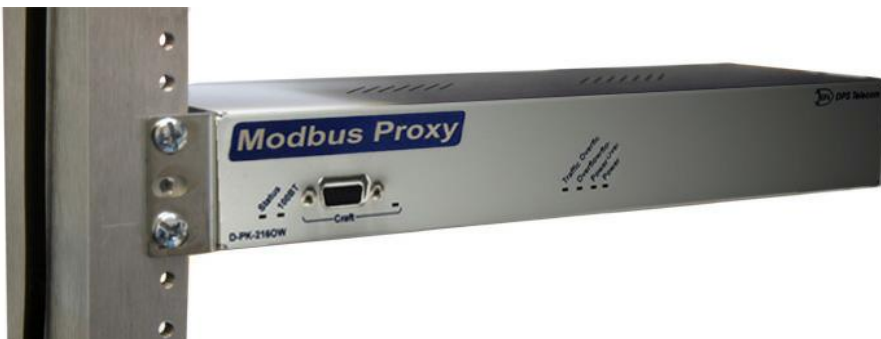


The dimensions (in inches) of the supplied 19" rack ears.

Rack-Mounting Instructions

The compact ModbusProxy occupies only half the width of a standard rack unit. Unless you ordered a second "long" ear (not shown), only one rack ear is supplied with the ModbusProxy. The single rack ear can be mounted on the left or right side of the unit. The ModbusProxy mounts in a 19" rack, and can be mounted on the right or left, in the flush-mount or rear mount locations, as shown in the above image.

As shown below, the ModbusProxy mounts onto one side of a 19" rack using the provided rack ear for either size. The ear can be rotated 180 degrees during installation to adjust the position of the unit relative to the rack. Attach the appropriate ear to the rack in the desired location.



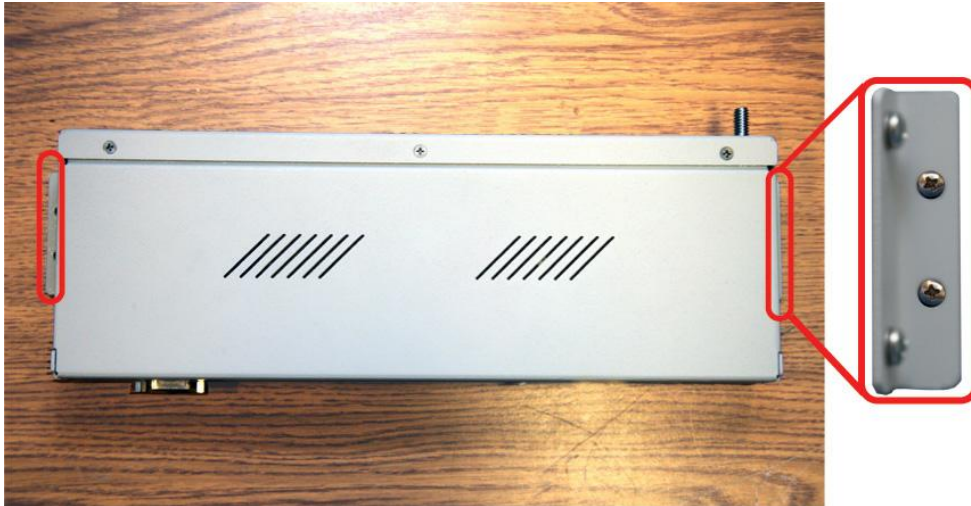
The ModbusProxy also mounts on your 19" equipment racks.

Wall-Mounting Instructions

The rack ears can be rotated 90° for wall mounting (shown below) or 180° for other mounting options (not shown).

1. Depending on your order options, you will attach wall-mount flanges to both sides of the unit.
 - a. Fasten the flange to the ModbusProxy with two of the 6/32 screws provided. (**NOTE:** Screws longer than those provided may contact the internal components of the unit, adversely affecting its normal operation.)

2. After flanges have been attached to the ModbusProxy, mount the unit in the desired location with two screws through each flange.



Use the included wall mount bracket to mount the ModbusProxy vertically on the wall.

5 ModbusProxy Back Panel




5.1 Power Connection (+12 or +24VDC Build Option)

The ModbusProxy is powered by a screw-on plug, located on the right side of the back panel.

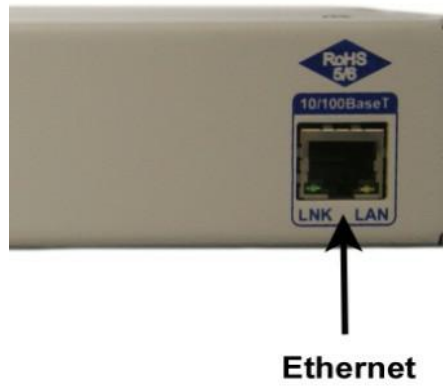


Close-up view of ModbusProxy's screw-on power connector.

Before you connect a power supply to the ModbusProxy:

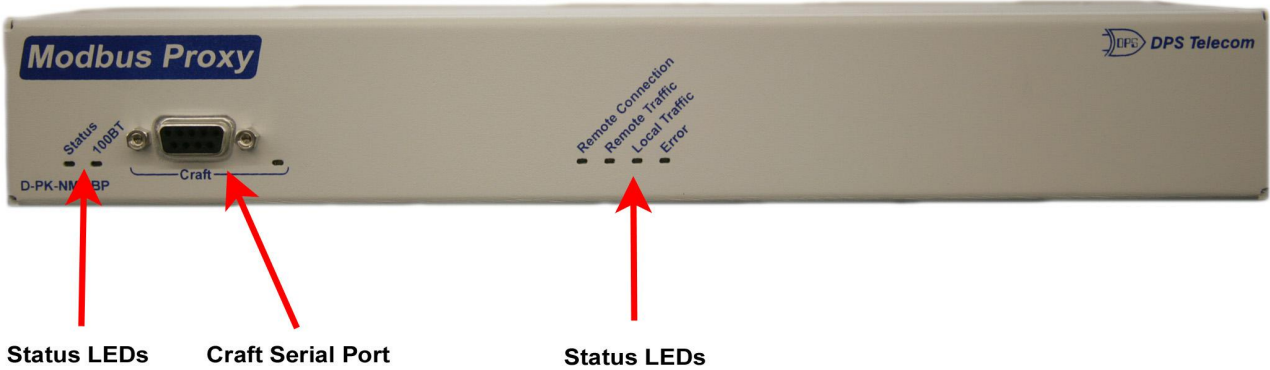
1. Use the grounding lug to connect the unit to earth ground. The grounding lug is next to the symbol . Insert the eyelet of the earth ground cable between the two bolts on the grounding lug (Ground cable not included.)
2. Plug in the power connector to the rear panel of the ModbusProxy. Twist the collar of the plug to lock in place.
3. Plug in the wall transformer to a power outlet. The power LED should be lit green. To confirm that power is correctly connected, the front panel LEDs will flash RED and GREEN, indicating that the firmware is booting up.

5.2 LAN Connection



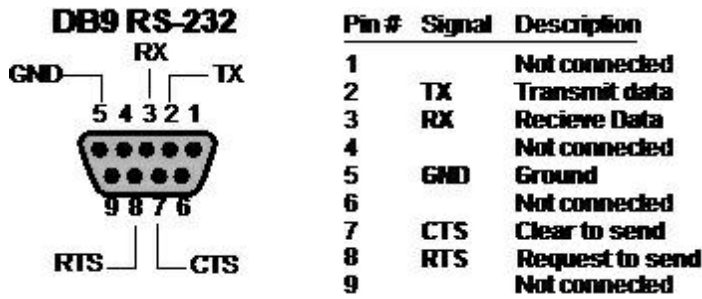
To connect the ModbusProxy to the LAN, insert a standard Ethernet cable into the 10/100BaseT Ethernet port on the back of the unit. If the LAN connection is OK, the LNK LED will light **SOLID GREEN**.

6 ModbusProxy Front Panel



ModbusProxy Front panel connections and LEDs

6.1 Craft Port



Use the front panel craft port to connect the ModbusProxy to a PC for onsite unit configuration. To use the craft port, connect the included DB9 download cable from your PC's COM port to the craft port. This is a standard DB9 to DB9. A pinout is shown above for reference.

7 Front and Back Panel LEDs



ModbusProxy LEDs

Front Panel LED Descriptions

| LED | Status | Description |
|-------------------|----------------|---|
| Status | Blinking Green | Application is running |
| | Blinking Red | Boot Loader is running. |
| 100BT | Solid Green | 100 Mb/s |
| | Off | 10 Mb/s |
| Craft | Blinking Red | Receiving data via craft port |
| | Blinking Green | Transmitting data via craft port |
| Remote Connection | Solid Green | Connected to remote TMon |
| | Off | No connection to remote TMon |
| Remote Traffic | Blinking Green | Traffic between TMon and ModbusProxy |
| | Off | No traffic between TMon and ModbusProxy |
| Local Traffic | Blinking Green | Traffic between TMon and ModbusProxy |
| | Off | No traffic between TMon and ModbusProxy |
| Error | Solid Red | There is an error in the ModbusProxy Configuration or Operation |
| | Off | No error. |

Back Panel LED Descriptions

| LED | Status | Description |
|-----|-------------|------------------------------|
| PWR | Solid Green | Power supply OK |
| | Off | No voltage or leads reversed |

Back Panel LED Descriptions

8 How to Set Up the ModbusProxy

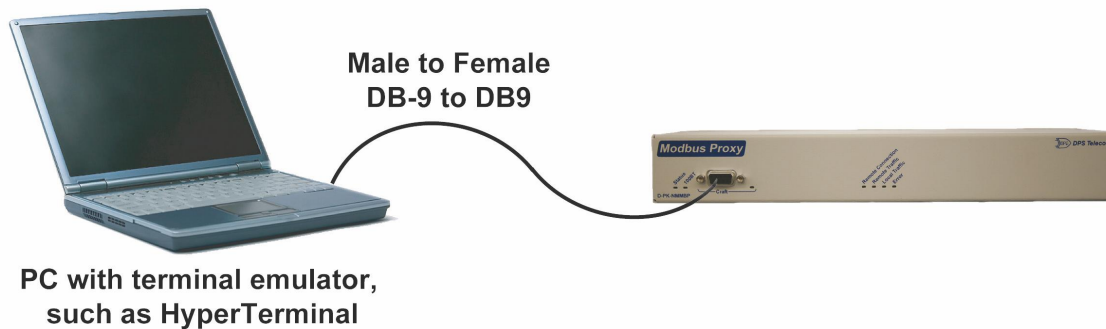
The following steps are required in order to setup the ModbusProxy on your network:

1. **Set the ModbusProxy's IP Address** (using the TTY interface).
2. **Set the ModbusProxy's Gateway** (using the TTY interface).
3. **Set the ModbusProxy's SubnetMask** (using the TTY interface).

8.1 Set ModbusProxy IP via Craft Port (using TTY Interface)

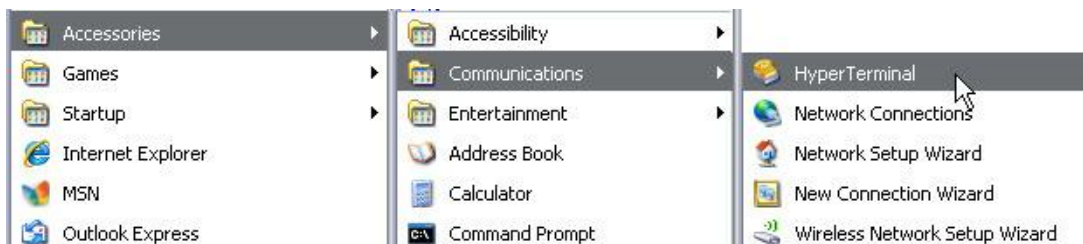
Before you may use the ModbusProxy on your network, you must first assign it an IP address, a subnet mask, and a default gateway. This provisioning step is performed within the TTY interface.

1. To connect to the ModbusProxy for IP address provisioning, use a physical cable connection between your PC's COM port and the unit's craft port. **Note:** You must be connected via craft port or Telnet to use the TTY interface. Make sure you are using the straight through (1 to 1) Male to Female DB9-DB9 download cable provided with your ModbusProxy to make a craft port connection. We'll be using HyperTerminal to connect to the unit in the following example - however, most terminal-emulating programs should work.

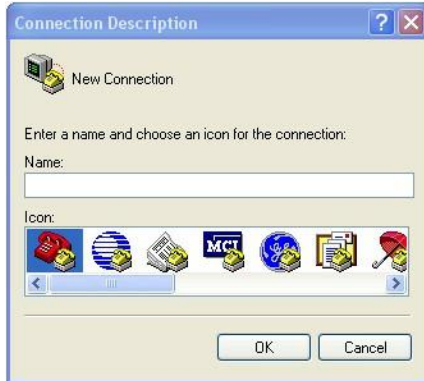


To access HyperTerminal using Windows:

2. Click on the **Start** menu > select **Programs** > **Accessories** > **Communications** > **HyperTerminal**.



3. At the Connection Description screen, enter a name for this connection. You may also select an icon. The name and icon do not affect your ability to connect to the unit.



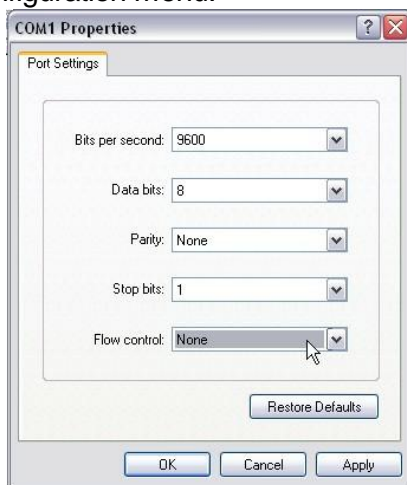
4. At the Connect To screen, select Com port you'll be using from the drop down and click OK. (COM1 is the most commonly used.)



5. Select the following COM port options:

- Bits per second: 9600
- Data bits: 8
- Parity: None
- Stop bits: 1
- Flow control: **None**

Once connected, you will see a blank, white HyperTerminal screen. Press Enter to activate the configuration menu.



6. When prompted, enter the default user name **admin** and password **dpstelecom**. **NOTE:** If you don't receive a prompt for your user name and password, check the Serialport you are using on your PC and make sure you are using the cable provided.

Additional cables can be ordered from DPS Telecom: *Part number D-PR-045-10A-04*



7. The ModbusProxy's main main menu will appear. Type C for C)onfig, then E for E)thernet. Configure the unit's IP address, subnet mask, and default gateway.

8. ESC to the main menu. When asked if you'd like to save your changes, type Y for Y)es. Reboot the ModbusProxy to save its new configuration.

```

NG 16 - HyperTerminal
File Edit View Call Transfer Help
-----
Login: admin
Password: *****
Logged in successfully.

DPS Telecom, Inc.

C)onfig P)ing D)ebug e(X)it ? C
E)thernet D)CP S)tats n(V)ram
Pr(I)maryPort re(B)oot (ESC) ? E
Linked      : Yes
DHCP        : Disabled
Host Name   :
Unit IP     : 126.10.230.131 (126.10.230.131)
Subnet Mask : 255.255.192.0 (255.255.192.0)
Gateway     : 255.255.255.255 (255.255.255.255)
Unit MAC    : 00.10.81.00.45.F5
Unit Addr S)ubnet G)ateway D)HCP H)ost (ESC) ?

9600 baud - HyperTerminal
File Edit View Call Transfer Help
-----
E)thernet S)tats n(V)ram re(B)oot (ESC) ? E
Unit IP     : 192.168.1.100 (192.168.1.100)
Subnet Mask : 255.255.192.0 (255.255.192.0)
Gateway     : 255.255.255.255 (255.255.255.255)
Unit MAC    : 00.10.81.00.45.8F
Unit Addr S)ubnet G)ateway (ESC) ? U
Unit IP     : 126.10.230.121
Unit IP     : 126.10.230.121 (126.10.230.121)
Subnet Mask : 255.255.192.0 (255.255.192.0)
Gateway     : 255.255.255.255 (255.255.255.255)
Unit MAC    : 00.10.81.00.45.8F
Unit Addr S)ubnet G)ateway (ESC) ? <--
E)thernet S)tats n(V)ram re(B)oot (ESC) ? B
Do you want to save changes (y/N) : y
Write...complete
Rebooting...UC
Connected 0:02:14 ANSFW 9600 8-A-1 SCROLL CAPS FLSX CAPTURE PRINT echo

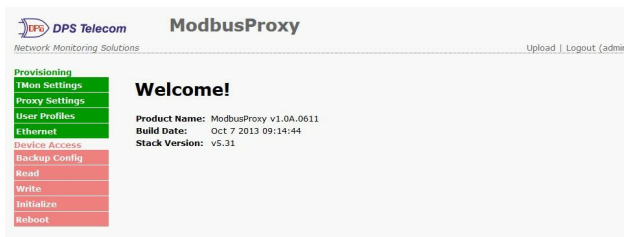
```

You have successfully assigned an IP address to the ModbusProxy. This is the only configuration step required within the ModbusProxy itself. Next, you will need to provision your VoIP Order Wire devices with the IP address of this ModbusProxy.

NOTE: If you changed your computer's IP earlier in order to connect to the ModbusProxy, be sure to change the IP of your computer back to one that operates on your network.

9 ModbusProxy Web Interface

9.1 Introduction



The ModbusProxy features a built-in Web Browser Interface that allows you to manage local devices and configure the unit through the Internet or your Intranet. You can quickly set up alarm point descriptions, view alarm status, issue controls, and configure paging information, and more using most commonly used browsers.

NOTE: Max # of users allowed to simultaneously access the ModbusProxy via the Web is 1.

9.2 TMon Settings

From the **Provisioning > TMon Settings** menu, you will configure and edit the global system, T/Mon and control settings for the ModbusProxy.

| TMon Settings | |
|---|---------------|
| Description | Value |
| IP Address: IP Address of TMon configured as Modbus Interrogator. | 206.169.2.247 |
| TCP Port: The port used to connect with the TMon. | 503 |
| TCP Connection Timeout (1sec - 20sec): | 5sec |
| Delay Before Reconnect (1sec - 20sec): | 5sec |
| Inactivity Timeout (1sec - 20sec): | 5sec |

Save

The Provisioning > TMon Settings menu

| Description | Value |
|--|--|
| IP Address | The IP Address of the remote TMon unit configured as Modbus Interrogator. |
| TCP Port | The port used to connect with the TMon. |
| TCP Connection Timeout (1sec - 20sec) | How long the ModbusProxy waits before disconnecting because of a failed TMon TCP connection. |
| Delay Before Reconnect (1sec - 20sec) | How long the ModbusProxy waits before attempting another TCP connection. |
| Inactivity Timeout (1sec - 20sec) | How long the ModbusProxy waits before disconnecting because of inactivity from TMon. |

9.3 Proxy Settings

Provisioning

TMon Settings

Proxy Settings

User Profiles

Ethernet

Device Access

Backup Config

Read

Write

Initialize

Reboot

Proxy Settings

| Id | Modbus Slave Address | IP Address | TCP Port |
|----|----------------------|-----------------|----------|
| 1 | 1 | 10.76.20.15 | 502 |
| 2 | 255 | 255.255.255.255 | 2000 |
| 3 | 255 | 255.255.255.255 | 2000 |
| 4 | 255 | 255.255.255.255 | 2000 |
| 5 | 255 | 255.255.255.255 | 2000 |
| 6 | 255 | 255.255.255.255 | 2000 |
| 7 | 255 | 255.255.255.255 | 2000 |
| 8 | 255 | 255.255.255.255 | 2000 |

The Provisioning > Proxy Settings menu

| Editing Proxy Settings | |
|-----------------------------|---|
| Id | Helps user keep track of how many devices have been configured. |
| Modbus Slave Address | The Modbus Protocol unit ID to be polled by the TMon. |
| IP Address | The IP Address of the Modbus Device. |
| TCP Port | The port used to communicate with the Modbus Device. |

9.4 Ethernet Settings

Provisioning

TMon Settings

Proxy Settings

User Profiles

Ethernet

Device Access

Backup Config

Read

Write

Initialize

Reboot

Ethernet Settings

| | |
|--------------|-----------------------------------|
| | |
| MAC Address | 0:10:81:0:81:d0 |
| Host Name | () |
| Enable DHCP | <input type="checkbox"/> |
| Unit IP | 126.10.230.44 (126.10.230.44) |
| Subnet Mask | 255.255.255.0 (255.255.255.0) |
| Gateway | 126.10.230.254 (126.10.230.254) |
| DNS Server 1 | 255.255.255.255 (255.255.255.255) |
| DNS Server 2 | 255.255.255.255 (255.255.255.255) |

The Provisioning > Ethernet menu

| Ethernet Settings | |
|--------------------|--|
| MAC Address | Hardware address of the ModbusProxy. (Not editable - For reference only.) |
| Host Name | Used only for web browsing. Example: If you don't want to remember this ModbusProxy's IP address, you can type in a name in this field, such as "MyModbusProxy". Once you save and reboot the unit, you can now browse |

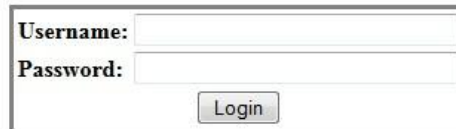
| | |
|---------------------|--|
| | to it locally by simply typing in "MyTempDefender G2" in the address bar. (no "http://" needed). |
| Enable DHCP | Used to turn on Dynamic Host Connection Protocol. NOT recommended, because the unit is assigned an IP address from your DHCP server. The IP you've already assigned to the unit becomes inactive. Using DHCP means the unit will NOT operate in a T/Mon environment. |
| Unit IP | IP address of the ModbusProxy. |
| Subnet Mask | A road sign to the ModbusProxy, telling it whether your packets should stay on your local network or be forwarded somewhere else on a wide-area network. |
| Gateway | An important parameter if you are connected to a wide-area network. It tells the ModbusProxy which machine is the gateway out of your local network. Set to 255.255.255.255 if not using. Contact your network administrator for this info. |
| DNS Server 1 | Primary IP address of the domain name server. Set to 255.255.255.255 if not using. |
| DNS Server 2 | Secondary IP address of the domain name server. Set to 255.255.255.255 is not using. |

Note: DNS Server settings are required if a hostname is being used for ping targets.

9.5 Logging on to the ModbusProxy

For Web Interface functionality, the unit must first be configured with some basic network information. If this step has not been done, refer to the section "Quick Start: How to Set Up the ModbusProxy" for instructions on initial configuration setup.

1. To connect to the ModbusProxy from your Web browser, enter its IP address in the address bar of your web browser. It may be helpful to bookmark the logon page to avoid entering this each time.
2. After connecting to the unit's IP address, enter your login information and click OK. **NOTE:** The factory default username is "**admin**" and the password is "**dpstelecom**".
3. In the left frame you will see the **Monitor** menu (blue) and **Edit** menu (green) The Monitor menu links are used to view the current status of alarms. The Edit menu is used to change the unit's configuration settings. All the software configuration will occur in the **Edit** menu. The following sections provide detailed information regarding these functions.



A screenshot of the login interface. It features two input fields: "Username:" and "Password:". Below these fields is a "Login" button.

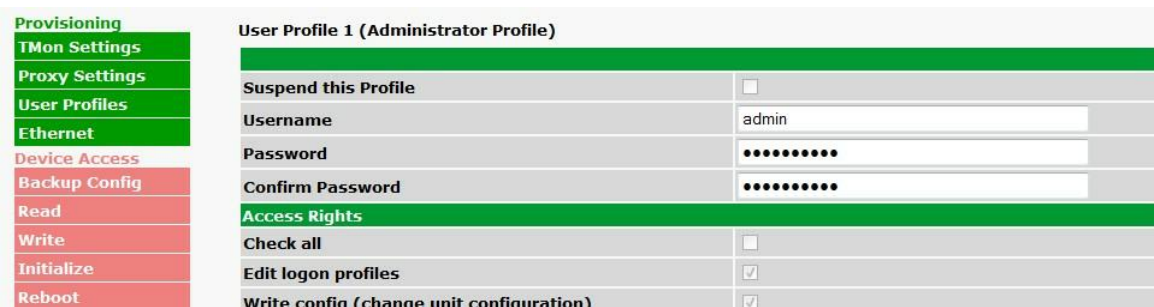
Enter your password to enter the ModbusProxy IT Web Browser Interface

9.5.1 Changing the Default Password

The password can be configured from the **Provisioning > User Profiles** screen. The minimum password length is four characters; however, DPS recommends setting the minimum password length to at least five characters.

Use the following steps to change the logon password:

1. From the **Provisioning** menu select **User Profiles**.
2. Click the **Edit** button.
2. Enter the new user name in the **Username** field.
3. Enter the new password in the **Password** field.
4. Click the **Save** button.



A screenshot of the "User Profile 1 (Administrator Profile)" configuration screen. On the left is a navigation menu with "Provisioning" selected. The main area shows configuration options for the user profile.

| User Profile 1 (Administrator Profile) | |
|--|-------------------------------------|
| Suspend this Profile | <input type="checkbox"/> |
| Username | admin |
| Password | |
| Confirm Password | |
| Access Rights | |
| Check all | <input type="checkbox"/> |
| Edit logon profiles | <input checked="" type="checkbox"/> |
| Write confia (change unit configuration) | <input checked="" type="checkbox"/> |

Global System Settings section of the Edit > System menu

NOTE: You will see the following popup when making changes to the ModbusProxy from the **Edit** menu. It will appear when confirming your changes to the database, either by clicking **Next** in the setup wizards or the **Save** button.



Commit to NVRAM popup

10 How to Upgrade Firmware Via LAN

The ModbusProxy's web interface can be used to **upgrade firmware**. To connect, type the ModbusProxy's assigned IP address into the address bar of your web browser followed by **/multiload** (<http://yourIPAddress/multiload>), and press Enter.

At the login prompt, enter your username and password.



Once logged in, click the **Upload** link found at the top-right of the Welcome screen. Browse for the firmware file (*.mpb) and write it to the ModbusProxy.

11 Frequently Asked Questions

Here are answers to some common questions from ModbusProxy users. The latest FAQs can be found on the DPS Telecom support web page, <http://www.dpstele.com/support/>

If you have a question about the ModbusProxy, please call DPS Telecom at **(559) 454-1600** or e-mail us at support@dpstele.com

11.1 General FAQs

Q. How do I telnet to the ModbusProxy?

A. You must use **Port 2002** to connect to the ModbusProxy. Configure your Telnet client to connect using TCP/IP (**not** "Telnet," or any other port options). For connection information, enter the IP address of the ModbusProxy and Port 2002. For example, to connect to the ModbusProxy using the standard Windows Telnet client, click Start, click Run, and type "telnet <ModbusProxy IP address> 2002."

Q. How do I connect my ModbusProxy to the LAN?

A. Remember that the only purpose of the ModbusProxy's web interface is to update firmware. To connect your ModbusProxy to your LAN, you need to configure the unit IP address, the subnet mask, and the default gateway via the TTY interface (using Telnet). A sample configuration could look like this:

Unit Address: 192.168.1.100

subnet mask: 255.255.255.0

Default Gateway: 192.168.1.1

Save your changes by writing to NVRAM and reboot. Any change to the unit's IP configuration requires a reboot.

Q. When I connect to the ModbusProxy through the craft port on the front panel it either doesn't work right or it doesn't work at all. What's going on?

A. Make sure your using the right COM port settings. Your COM port settings should read:

Bits per second: 9600 (9600 baud)

Data bits: 8

Parity: None

Stop bits: 1

Flow control: None

Important! Flow control **must** be set to **none**. Flow control normally defaults to hardware in most terminal programs, and this will not work correctly with the ModbusProxy.

Q. I'm unsure if the voltage of my power supply is within the specified range. How to I test the voltage?

A. Connect the black common lead of a voltmeter to the ground terminal of the battery. Connect the red lead of the voltmeter to the battery's VDC terminal. The voltmeter should read a value that is within the range listed in the "Specifications" section of this manual. The acceptable voltage range is also commonly listed on the back panel of the unit near the power connector.

12 Technical Support

DPS Telecom products are backed by our courteous, friendly Technical Support representatives, who will give you the best in fast and accurate customer service. To help us help you better, please take the following steps before calling Technical Support:

1. Check the DPS Telecom website.

You will find answers to many common questions on the DPS Telecom website, at <http://www.dpstele.com/support/>. Look here first for a fast solution to your problem.

2. Prepare relevant information.

Having important information about your DPS Telecom product in hand when you call will greatly reduce the time it takes to answer your questions. If you do not have all of the information when you call, our Technical Support representatives can assist you in gathering it. Please write the information down for easy access. Please have your user manual and hardware serial number ready.

3. Have access to troubled equipment.

Please be at or near your equipment when you call DPS Telecom Technical Support. This will help us solve your problem more efficiently.

4. Call during Customer Support hours.

Customer support hours are Monday through Friday, from 7 A.M. to 6 P.M., Pacific time. The DPS Telecom Technical Support phone number is **(559) 454-1600**.

Emergency Assistance: *Emergency assistance is available 24 hours a day, 7 days a week. For emergency assistance after hours, allow the phone to ring until it is answered with a paging message. You will be asked to enter your phone number. An on-call technical support representative will return your call as soon as possible.*

13 End User License Agreement

All Software and firmware used in, for, or in connection with the Product, parts, subsystems, or derivatives thereof, in whatever form, including, without limitation, source code, object code and microcode, including any computer programs and any documentation relating to or describing such Software is furnished to the End User only under a non-exclusive perpetual license solely for End User's use with the Product.

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DPS Telecom's warranty and limitation on its liability for the Software is as described in the warranty information provided to End User in the Product Manual.

End User shall indemnify DPS Telecom and hold it harmless for and against any and all claims, damages, losses, costs, expenses, obligations, liabilities, fees and costs and all amounts paid in settlement of any claim, action or suit which may be asserted against DPS Telecom which arise out of or are related to the non-fulfillment of any covenant or obligation of End User in connection with this Agreement.

This Agreement shall be construed and enforced in accordance with the laws of the State of California, without regard to choice of law principles and excluding the provisions of the UN Convention on Contracts for the International Sale of Goods. Any dispute arising out of the Agreement shall be commenced and maintained only in Fresno County, California. In the event suit is brought or an attorney is retained by any party to this Agreement to seek interpretation or construction of any term or provision of this Agreement, to enforce the terms of this Agreement, to collect any money due, or to obtain any money damages or equitable relief for breach, the prevailing party shall be entitled to recover, in addition to any other available remedy, reimbursement for reasonable attorneys' fees, court costs, costs of investigation, and other related expenses.

Warranty

DPS Telecom warrants, to the original purchaser only, that its products a) substantially conform to DPS' published specifications and b) are substantially free from defects in material and workmanship. This warranty expires two years from the date of product delivery with respect to hardware and ninety days from the date of product delivery with respect to software. If the purchaser discovers within these periods a failure of the product to substantially conform to the specifications or that the product is not substantially free from defects in material and workmanship, the purchaser must promptly notify DPS. Within reasonable time after notification, DPS will endeavor to correct any substantial non-conformance with the specifications or substantial defects in material and workmanship, with new or used replacement parts. All warranty service will be performed at the company's office in Fresno, California, at no charge to the purchaser, other than the cost of shipping to and from DPS, which shall be the responsibility of the purchaser. If DPS is unable to repair the product to conform to the warranty, DPS will provide at its option one of the following: a replacement product or a refund of the purchase price for the non-conforming product. These remedies are the purchaser's only remedies for breach of warranty. Prior to initial use the purchaser shall have determined the suitability of the product for its intended use. DPS does not warrant a) any product, components or parts not manufactured by DPS, b) defects caused by the purchaser's failure to provide a suitable installation environment for the product, c) damage caused by use of the product for purposes other than those for which it was designed, d) damage caused by disasters such as fire, flood, wind or lightning unless and to the extent that the product specification provides for resistance to a defined disaster, e) damage caused by unauthorized attachments or modifications, f) damage during shipment from the purchaser to DPS, or g) any abuse or misuse by the purchaser.

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In no event will DPS be liable for any special, incidental, or consequential damages based on breach of warranty, breach of contract, negligence, strict tort, or any other legal theory. Damages that DPS will not be responsible for include but are not limited to, loss of profits; loss of savings or revenue; loss of use of the product or any associated equipment; cost of capital; cost of any substitute equipment, facilities or services; downtime; claims of third parties including customers; and injury to property.

The purchaser shall fill out the requested information on the Product Warranty Card and mail the card to DPS. This card provides information that helps DPS make product improvements and develop new products.

For an additional fee DPS may, at its option, make available by written agreement only an extended warranty providing an additional period of time for the applicability of the standard warranty.

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Network Alarm Monitoring Fundamentals

Alarm Monitoring – Where Do You Start?

You've just been put in charge of purchasing, selecting or recommending a new network alarm system for your company. Where do you start? What alarm equipment do you need? What monitoring features are essential, and which can you live without? How can you make sure your network is fully protected, without spending too much on equipment you won't use?

This White Paper is a quick guide to how you can answer these questions for yourself. This paper will NOT tell you, "Just buy this system and everything will be fine." Every network is different. A one-size fits-all system won't provide the specific coverage you need and may cost more money than you really need to spend.

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