

M7500CRD-IP INSTRUCTIONS

1. Introduction



LED COLOR	LED1 - LINK (LEFT - SIDE)	LED2 - ACTIVITY (RIGHT SIDE)
OFF	NO LINK	NO ACTIVITY
AMBER	10 Mbps	HALF DUPLEX
GREEN	100 Mbps	FULL DUPLEX

When the pushbutton is depressed for 2 seconds, all default settings are restored and the password cleared.

2. Default Settings

IP Address: _____ 192.168.1.169
 Subnet Mask: _____ 255.255.255.0
 Default Gateway: _____ 0.0.0.0
 Name Server: _____ 0.0.0.0
 HTTP Port: _____ 80
 Telnet Port: 23
 Telnet Timeout: _____ 60 sec
 DHCP: _____ Disabled
 Configuration Password: _____ unassigned

3. Installation

It is recommended that you read the entire instruction booklet before proceeding.

- Unplug M7500PRO
- Remove the installed RS232 card
- Insert the M7500CRD-IP card into the card slot.
- Connect Ethernet cable. Do not use the provided cross over cable unless the M7500CRD-IP is connected directly to the network connector of a computer.
- Plug in M7500PRO

4. Setup with network

The following instructions are written using generalized nomenclature for network routers and are not geared toward any specific router. Refer to the instructions for your router for details.

Note: The instructions given in this document are for systems running Windows XP operating system. To setup the M7500CRD-IP for systems not running Windows XP, please refer to the operating manual for that system.

If the subnet of your network is 192.168.1.XXX, you can use the static IP address of the M7500CRD-IP, 192.168.1.169. If IP address 192.168.1.169 is assigned to another device, you will have to manually re-assign it to an unused address. Refer to the DHCP client table in the router software for a list of assigned addresses.

If the subnet of your network is other than 192.168.1.XXX, you will have to re-assign the IP address to one on the same subnet. The IP address can be assigned manually by one of the following methods:

- Connect directly to the computer with the provided Ethernet cross over cable as described in section 5.
- Manually assign a static IP address using the ARP utility as described in section 6.

4.1 Automatic IP Address Assignment with DHCP

The default setting for DHCP is disabled. It is recommended that a static IP address be assigned to the card to ensure that it will not change should the system be shut down and re-started. DHCP mode can only be enabled via the web interface.

Before installing the M7500CRD-IP, go to the DHCP Client Table in your router's setup software to find the list of assigned IP addresses. Write-down (or print) the list of assigned IP addresses.

After installing the M7500CRD-IP and setting DHCP mode to enabled, refresh the DHCP Client Table. Make a note of the newly assigned IP address. This is the address your M7500CRD-IP has been assigned.

To access the Web Interface, open your internet browser and enter the IP address into the address bar.

Note: Pressing the reset button will force DHCP mode back to disabled.

5. Setup with stand-alone computer

The following instructions outline the setup on a stand-alone computer running Windows XP.

Connect the provided crossover cable to the network port of your computer.

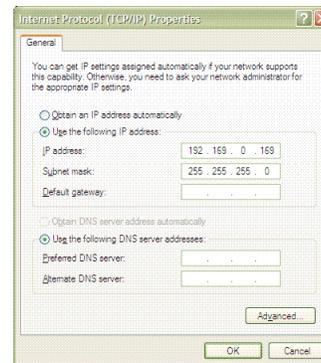
In the Control Panel, double-click on Network Connections Icon

In Network Connections, double-click on the Local Area Connection Icon

In the Local Area Connection Status Window, double-click on Properties

In the Local Area Connection Properties Window, double-click on Internet Protocol (TCP/IP).

The General tab of the Internet Protocol (TCP/IP) Properties window opens.



Make a note of the following:

Obtain an IP address automatically radio button selected? YES NO

IP address: _____ . _____ . _____ . _____
 Subnet mask: _____ . _____ . _____ . _____
 Default gateway: _____ . _____ . _____ . _____

Set the IP address to 192.168.1.160. Click on OK.

Open Internet Explorer and enter the IP address 192.168.1.169 in the address bar.

Set the IP address to the desired address in the IP Setup panel, see section 8.3.

Repeat steps in section 5.2, restore the settings noted above.

6. Manual IP Address Assignment using the ARP Utility

Before installing the M7500CRD-IP, write down the MAC address for the network adaptor. The MAC address is the set of 6 two-digit numbers located underneath the barcode of the network adaptor.



MAC Address: _____ - _____ - _____ - _____ - _____ - _____

Open a Command window

Click on the Windows Start button

Click on the Run button

In the Run window, enter: cmd

At the command line, enter: `arp -s <IP Address> <MAC Address>`. For example to associate the IP Address 192.168.0.105 to the MAC address 00-20-4A-8F-2C you would enter: `arp -s 192.168.0.105 00-20-4A-8F-2C`

At the command line, enter: `telnet <IP Address> 1`. An error message will be displayed, this is normal.

At the command line, enter: `telnet <IP Address> 23`. Press the ENTER button. The MAX7500PRO should respond with the message \$INVALID_PARAMETER indicating that communication has been established.

7. Setup for remote access (advanced users only)

Follow the instructions for setup with a network, Section 4.

Open your router's setup software and navigate to the panel that controls Port Forwarding.

In the Port Forwarding panel, set port number 80 (HTTP service) to forward to the IP address of the M7500CRD-IP. If your system includes another component with a web-based interface using port 80, set the HTTP port for the M7500CRD-IP to any number between 4000 and 9999.

Test the M7500CRD-IP connection from an external network by entering the public IP address of your network into the address bar of your web browser. The public IP address for your network can typically be located in the DDNS Setup tab of your router setup software. There are also several online services (websites) that will provide you with your network's public IP address. Such services can typically be found by entering "what is my ip" into any search engine. If the HTTP port number for the M7500CRD-IP is set to other than 80 (for example, 4000), append :4000 to the public IP address.

8. Web Interface

8.1 Status Panel



The web browser interface does not automatically update. To ensure that the status information is current, refresh the web browser. The Status Panel displays the following information about the M7500PRO:

Outlet Bank Status

The ON/OFF status is indicated by the blue dot below the text. If the color of the dot is a light blue (as to appear as a lit LED), the outlet bank is ON

Input Trigger Status

Indicates the ON/OFF status of the DC Input Trigger.

Unit Power

Indicates the status of the Power Button on the front panel of the M7500PRO. In addition, the Unit Power control provides a means to trigger a turn-on or turn-off sequence. To initiate a power sequence, select the ON or OFF state from the pull-down menu and click on the Submit Changes button. After waiting for the longest turn-on or turn-off delay time, refresh the browser to verify that the outlet banks have switched.

Brightness

Indicates the brightness setting of the meter and display. To change the brightness, click on the number, enter the new value between 10 and 100 and click on Submit Changes.

Brightness

Indicates the brightness setting of the meter and display. To change the brightness, click on the number, enter the new value between 10 and 100 and click on Submit Changes.

Input Voltage

Indicates the present AC voltage at the wall outlet.

Current

Indicates the present total current draw of the system.

Unit Name / Location

Enter the name and / or location of the M7500PRO unit being controlled and click on Submit Changes.

8.2 Control Panel



The control panel is used to set up the outlet bank parameters and to control the outlet banks independently. After making a change to any parameter, click on the Submit Changes to Outlet Banks button.

Outlet Bank Name

Each outlet bank has a text field to identify the equipment connected.

Power

Indicates the current ON/OFF state of the outlet bank. To change the ON/OFF state of an outlet bank, select the desired state from the pull down menu and click on Submit Changes to Outlet Banks button.

Trigger

Indicates the trigger source for each outlet bank. To change the trigger source for an outlet bank, select the trigger source from the pull down menu and click on Submit Changes.

- Button – Outlet bank is triggered by the Power Button
- Trigger – Outlet bank is triggered by the DC Input Trigger
- None – Outlet bank is not triggered, always on.

Delay

Indicates the turn-on and turn-off delay for each outlet bank. To change the delay setting, enter the new delay time(s) and click on Submit Changes.

- On – Turn-On delay after the selected trigger is activated
- Off – Turn-Off delay after the selected trigger is de-activated

8.3 IP Setup Panel

IP / Gateway / Firmware	IP / Gateway Settings
Power Cycle	<p>This section displays current firmware versions for the device and webserver as well as the version for the webpages. It also gives the ability to configure basic networking parameters for the device. The Telnet Port Number and Connection Timeout (in seconds) both have a range of 0 - 65535.</p> <p>Device Firmware: REVISION_L Webserver Firmware: V1.00.00_BN0006 Webpage Version: V1.00.00_BN0007</p> <p>DHCP: <input type="checkbox"/> Disabled</p> <p>IP Address: <input type="text" value="192"/> . <input type="text" value="168"/> . <input type="text" value="1"/> . <input type="text" value="170"/></p> <p>HTTP Port: <input type="text" value="80"/></p> <p>Subnet Mask: <input type="text" value="255"/> . <input type="text" value="255"/> . <input type="text" value="255"/> . <input type="text" value="0"/></p> <p>Default Gateway: <input type="text" value="192"/> . <input type="text" value="168"/> . <input type="text" value="10"/> . <input type="text" value="1"/></p> <p>Name Server: <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/> . <input type="text" value="0"/></p> <p>Telnet - Port Number: <input type="text" value="9999"/> Connection Timeout: <input type="text" value="60"/></p> <p>Configuration Password: <input type="password" value="*****"/></p> <p><input type="button" value="Submit Changes"/> <input type="button" value="Restart Webserver"/></p> <p>After submitting changes, the webserver will need to be restarted to reset the device's IP configuration. Once the request has been submitted to the webserver to reset, the browser will need to be directed to the device's new IP address.</p>
DC Output Trigger	
Email Alerts	

DHCP

Enable or disable DHCP mode.

IP Address

- With DHCP enabled, this will display the dynamically assigned IP address
- With DHCP disabled, allows the user to assign the IP address

Subnet Mask

Displays the current subnet mask.

Default Gateway

Displays the current default gateway address, typically the internal IP address of your network router.

Name Server

Displays the current name server address.

Telnet Port Number

The assigned port number for Telnet connections. Default is port 23. A Telnet session may be used to enter text commands directly to the M7500PRO serial port. The Telnet Port assignment may be changed.

Connection Timeout

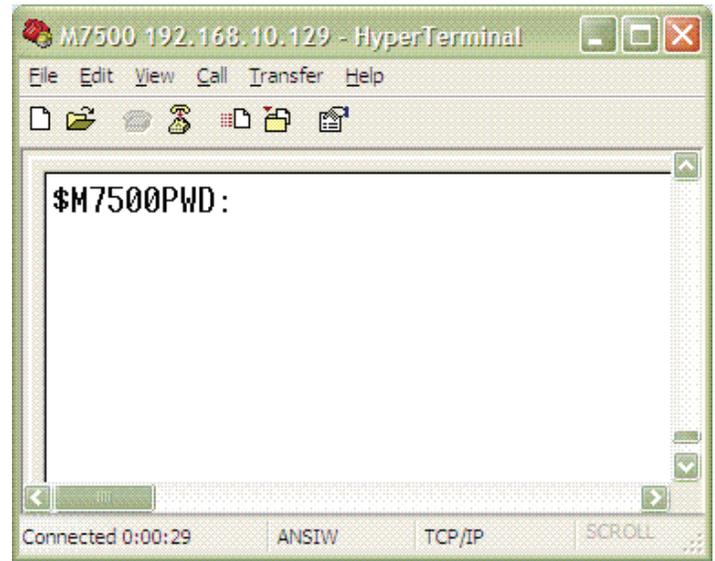
The Telnet connection will disconnect after a period of inactivity.

HTTP Port Number (new feature)

The assigned port number for HTTP (web browser) connections. Default is port 80. The HTTP port assignment may be changed to allow multiple web-based equipment interfaces to operate on the same network. For external access, the selected port number will be entered in the Port Forwarding setup of your router.

Configuration Password

When a password is entered, the user will be prompted to enter the password.



Telnet Interface Password Entry

If no password is entered, there will be no prompt for password entry. By default, there is no password entry. The password may be changed by resetting the card by pressing the reset button for 2 seconds.

8.4 Email Alerts Panel

IP / Gateway / Firmware	Email Alerts
Power Cycle	<p>This section is used to set up email configurations for the delivery of alerts. In the case of a device alert the designated addresses will be sent an e-mail to inform them of the alerts selected.</p> <p>Send From Address: <input type="text"/></p> <p>Send to Address: <input type="text"/></p> <p>Send to Additional Email: <input type="text"/></p> <p>Username: <input type="text"/></p> <p>Password: <input type="password" value="*****"/></p> <p>Enable Server Authentication: <input type="checkbox"/> Disabled</p> <p>Email Server: <input type="text"/> Domain/URI <input type="text"/></p> <p>Email alerts to receive:</p> <p>Over-voltage Shutoff Alert: <input type="checkbox"/> Disabled</p> <p>Under-voltage Shutoff Alert: <input type="checkbox"/> Disabled</p> <p>Recover from Fault Alert: <input type="checkbox"/> Disabled</p> <p><input type="button" value="Submit Changes"/> <input type="button" value="Send Test E-mail"/></p>
DC Output Trigger	
Email Alerts	

Send From Address

Email alerts from the M7500CRD-IP will be addressed from this email.

Send to Address

Email alerts are sent to this address.

Send to Additional Email

Email alerts are sent to this address.

Username

The username of the internet service account

Password

The password for the internet service account

Enable Server Authentication

Contact your internet service provided for details.

Email Server

- DOMAIN/URL – Enter the SMTP server name for your email server. Contact your Internet Service Provider for details
- ADDRESS – Enter the IP address for your email server. Contact your Internet Service Provider for details.

Over-voltage shutoff alert

If enabled, an email alert will be sent when the M7500PRO shuts off due to an over-voltage condition.

Under-voltage shutoff alert

If enabled, an email alert will be sent when the M7500PRO shuts off due to an under-voltage condition.

Recover from fault

If enabled, an email alert will be sent when the M7500PRO turns back on after a fault condition.

8.5 Power Cycle Panel

IP / Gateway / Firmware	Power Cycle Settings			
Power Cycle	This section is used to set up power cycles for the listed banks. The delay for the cycle can range from 1 to 59 minutes. If the power cycle is stopped, outlets must be switched on manually or by starting a new power cycle			
DC Output Trigger	Bank	Delay	Countdown	Select
Email Alerts	Bank 1	<input type="text" value="5"/>	<input type="text" value="0"/>	<input type="checkbox"/>
	Bank 2	<input type="text" value="4"/>	<input type="text" value="0"/>	<input type="checkbox"/>
	Bank 3	<input type="text" value="3"/>	<input type="text" value="0"/>	<input type="checkbox"/>
	Bank 4	<input type="text" value="2"/>	<input type="text" value="0"/>	<input type="checkbox"/>
	Bank 5 HC - 1	<input type="text" value="1"/>	<input type="text" value="0"/>	<input type="checkbox"/>
	Bank 5 HC - 2	<input type="text" value="1"/>	<input type="text" value="0"/>	<input type="checkbox"/>
	Cycle All Outlets • Cycle Selected Outlets • Stop Power Cycle			

The Power Cycle function will temporarily shut off power to the designated outlet banks to force a hard-reset of the connected equipment. Power is restored to the outlet bank after the designated delay time.

Delay

Sets the delay time (in minutes) that the outlet bank will be shut off. If the outlet bank is switched during the power cycle delay, the power cycle is terminated.

Countdown

Indicates the amount of minutes until the outlet bank is switched back on. Refresh your internet browser to see the current values.

Select

Selects outlet banks to be cycled.

Cycle Selected Outlets

Initiates a power cycle for the selected outlet banks.

Cycle All Outlets

Initiates a power cycle for all outlet banks.

Stop Power Cycle

Stops all power cycles. Power must be manually restored.

8.6 DC Output Trigger Panel

WARNING: M7500PRO Firmware prior to revision L does not function with the DC Output Trigger Power control. Contact Panamax customer service if you intend to use this feature.

IP / Gateway / Firmware	DC Output Trigger Settings	
Power Cycle	This section is used to set up the DC Output Trigger state, Trigger source, as well as the on and off delays. The delays can range from 0 to 240 seconds.	
DC Output Trigger	DC Output Trigger Power	<input type="text" value="Off"/>
Email Alerts	Trigger Source	<input type="text" value="None"/>
	Delay	<input type="text" value="On"/> <input type="text" value="5"/> <input type="text" value="Off"/> <input type="text" value="0"/>
	<input type="button" value="Submit Changes"/>	

DC Output Trigger Power

Indicates the current state of the DC Output Trigger. To change the state, select the desired state (on or off) from the pull-down menu and click on Submit Changes.

Trigger Source

Selects the trigger source for the DC Output Trigger

- Button – Outlet bank is triggered by the Power Button
- Trigger – Outlet bank is triggered by the DC Input Trigger
- None – Outlet bank is not triggered, always on.

Delay

On – Turn-On delay after the selected trigger is activated

Off – Turn-Off delay after the selected trigger is de-activated

9. Telnet Interface

Telnet sessions are used to interface directly with the serial port of the M7500PRO. Any terminal emulation program that can connect to a TCP/IP (socket/winsock) can be used. Telnet sessions are also used to interface the M7500PRO to control hardware such as a home automation system. Refer to the M7500PRO manual for details on the command, query and response protocol.