

# MSO-MBT3

## Serial to Ethernet Device

This Step-by-step guide explains how to get started using the MSO-MBT3 Serial to Ethernet converter.

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## Powering the converter.

The MS0-MBT3 converter can be powered by a 5 to 36VDC 1.5A (max) voltage by using a standard connector jack size of 5.5 x 2.1 x 11.5mm or through screw terminals.

When power is applied to the module the red “Power” LED should be solid ON and after the module has booted and is ready the green “Ready” LED should flash.

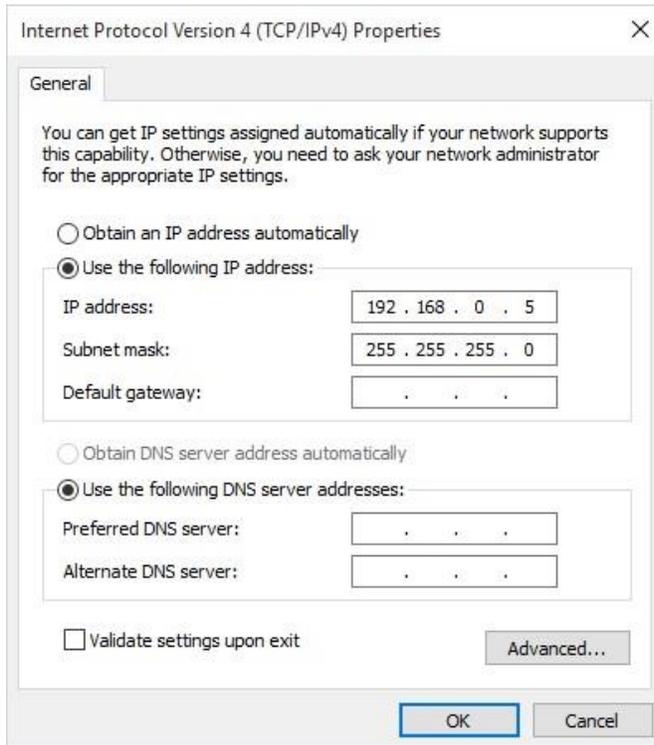
A standard 110-240VAC / 5VDC power adapter (included) can be used to power the module.



## Accessing the parameters using a web browser.

Connect the converter to your computer using a standard Ethernet cable.

Make sure the network connection to the MS0-MBT3 is set to a static IP address in the same subnet as the MS0-MBT3 such as 192.168.0.xxx as shown below.



The Default IP address of the MS0-MBT3 is:

**IP: 192.168.0.7**

**Netmask: 255.255.255.0**



You will now see the login screen.

**User: admin**

**Password: admin**

After the login screen the Status page should show up:

firmware revision: v3008



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Current Status	Properties	help
Local IP Config	Module Name: <b>MS0-MBT3</b>  Firmware Revision: 3008  Current IP Address: 192.168.0.77  MAC Address: d8-b0-4c-00-d6-0d  Run Time: 0day: 0hour: 0min  TX Count(ETH) : 0/0/0 bytes  RX Count(ETH) : 0/0/0 bytes  Conn Status(ETH) : LISTEN/LISTEN/LISTEN/	<ul style="list-style-type: none"> <li>• <b>Run time:</b> run time means the minutes since latest reboot</li> <li>• <b>TX/RX Count:</b> TX/RX count give us a calculation of the total byte we have been received or send.</li> </ul>
RS232		
RS485		
Web to Serial		
Misc Config		
Reboot		

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## Setting the Local IP Address

Once the home page of the device is opened, select the “Local IP Config” tab from the left hand navigation a shown. The following screen should appear.

The screenshot shows the 'Local IP Config' page with the following details:

- Header:** firmware revision: v3008, PYTHIA TECHNOLOGIES data transformation solutions, www.pythiatech.com
- Left Navigation:** Current Status, Local IP Config (selected), RS232, RS485, Web to Serial, Misc Config, Reboot
- Properties Section:**
  - IP type: Static IP (dropdown)
  - Static IP: 192 . 168 . 0 . 77
  - Submask: 255 . 255 . 255 . 0
  - Gateway: 192 . 168 . 0 . 254
  - Buttons: Save, Cancel
- Right Help Panel:**
  - IP type:** StaticIP or DHCP
  - StaticIP:** Module's static ip
  - Submask:** usually 255.255.255.0
  - Gateway:** Usually router's ip address
- Footer:** Copyright © 2015 · Pythia Technologies Incorporated

Once the configuration is changed, select the “Save” button and you will be prompted to reboot the device as shown below.

The screenshot shows the 'Reboot/Reset' page with the following details:

- Header:** firmware revision: v3008, PYTHIA TECHNOLOGIES data transformation solutions, www.pythiatech.com
- Left Navigation:** Current Status, Local IP Config (selected), RS232, RS485
- Reboot/Reset Section:**
  - Reboot/Reset Module
  - Reset Module (button)
- Right Help Panel:**
  - Reboot:** Click to make your config take effect

## Setting the Parameters for Port 0 (RS232)

Select the RS-232 tab from the left hand navigation and adjust the properties as necessary. When finished select the “Save” button and reboot the module as instructed.

**Baud Rate** - type in the defined baud rate of the attached serial device. Range: 110-256Kbps

**Data Size** – select the defined data size of the attached serial device. Range: 5,6,7,8

**Parity** - select the defined parity of the attached serial device. Range: Odd, Even, Mark, Space

**Stop Bits** - select the defined stop bits of the attached serial device. Range: 1,2

**Flow Control and RS485** – select the correct flow control.

Range: None, Hardware and RS485. **(Typically set to None)**

**Local Port** - set the local IP port for the device you are emulating.

Range: 1 – 65535 **(Port 502 is default for Modbus TCP communications)**

**Remote Port** - when in Client mode, set the port of the remote device you intend to communicate

Range: 1 – 65535 **(Port 502 is default for Modbus TCP communications)**

**Work Mode (left)** – select Client or Server mode operations on left.

Range: UDP Mode, TCP Client, UDP Server, TCP Server **(Typically set for TCP Server)**

**Work Mode (right)** – select Modbus TCP for Modbus RTU to Modbus TCP Operation. Otherwise = None

Range: None, Modbus TCP **(Typically set Modbus TCP)**

**Remote Server Address** – when in Client mode (Work Load left), define the IP address of the remote device you intend to communicate

**Timeout** – enter a value < 256. A value of 0 dictates no timeout. **(default = 0)**

**UART Packet Time** – enter value < 256. **(default = 0)**

**UART Packet Length** – enter a value <=1460 **(default = 0)**

**Sync Baudrate (RF2217 similar)** - **(default = checked)**

## Setting the Parameters for Port 1 (RS485)

Select the RS-485 tab from the left hand navigation and adjust the properties as necessary. When finished select the “Save” button and reboot the module as instructed.

**Baud Rate** - type in the defined baud rate of the attached serial device. Range: 110-256Kbps

**Data Size** – select the defined data size of the attached serial device. Range: 5,6,7,8

**Parity** - select the defined parity of the attached serial device. Range: Odd, Even, Mark, Space

**Stop Bits** - select the defined stop bits of the attached serial device. Range: 1,2

**Flow Control and RS485** – select the correct flow control.

Range: None, Hardware and RS485. **(Typically set to RS485)**

**Local Port** - set the local IP port for the device you are emulating.

Range: 1 – 65535 **(Port 502 is default for Modbus TCP communications)**

**Remote Port** - when in Client mode, set the port of the remote device you intend to communicate

Range: 1 – 65535 **(Port 502 is default for Modbus TCP communications)**

**Work Mode (left)** – select Client or Server mode operations on left.

Range: UDP Mode, TCP Client, UDP Server, TCP Server **(Typically set for TCP Server)**

**Work Mode (right)** – select Modbus TCP for Modbus RTU to Modbus TCP Operation. Otherwise = None

Range: None, Modbus TCP **(Typically set Modbus TCP)**

**Remote Server Address** – when in Client mode (Work Load left), define the IP address of the remote device you intend to communicate

**Timeout** – enter a value < 256. A value of 0 dictates no timeout. **(default = 0)**

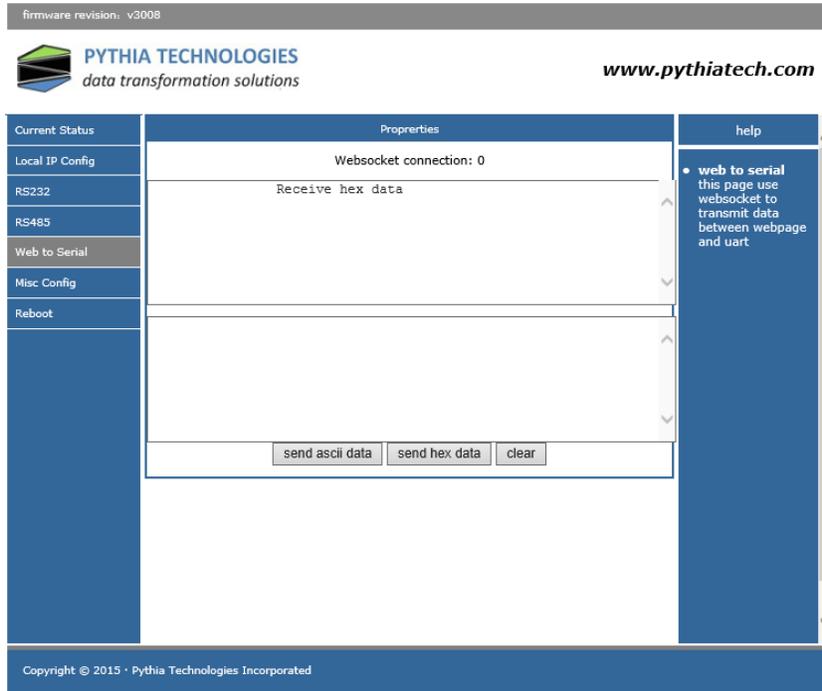
**UART Packet Time** – enter value < 256. **(default = 0)**

**UART Packet Length** – enter a value <=1460 **(default = 0)**

**Sync Baudrate (RF2217 similar) - (default = checked)**

## Setting the Web to Serial Parameters

*Note: This function is not supported at this time.*



firmware revision: v3008

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Current Status	Properties	help
Local IP Config	Websocket connection: 0	<ul style="list-style-type: none"><li>web to serial this page use websocket to transmit data between webpage and uart</li></ul>
RS232	Receive hex data	
RS485		
Web to Serial		
Misc Config		
Reboot		
	<input type="button" value="send ascii data"/> <input type="button" value="send hex data"/> <input type="button" value="clear"/>	

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## Setting Miscellaneous Configuration Properties

Select the Misc Config tab from the left hand navigation and adjust the properties as necessary. When finished select the “Save” button and reboot the module as instructed.

The screenshot shows the 'Misc Config' tab selected in the left navigation menu. The main content area displays the 'Properties' configuration form. The form includes the following fields and values:

- Module name: MS0-MBT3
- Reserved: 6432
- Webserver port: 80
- Module id (use for identify module): 1 (1~65535)
- Module id type: 0 (0/1/2/3)
- MAC address: d8-b0-4c-00-d6-0d
- User name: admin
- Password: admin
- Buffer data before connected:
- Reset timeout: 0 second

At the bottom of the form are 'Save' and 'Cancel' buttons. A help sidebar on the right provides additional information:

- module name**: max length is 15 char
- Web port**: default 80
- ID and ID type**: we could use it for D2D
- Mac address**: user could modify this MAC address
- Buffer data**: default not checked, buffer data before tcp connection established
- reset timeout**: default 0, 0-60 mean no timeout, >60 mean when there is no data received during this time, the device will restart

**Module Name** – The user may elect to change the device name as it appears on the home page.

**Reserved** – **DO NOT CHANGE THIS PROPERTY.**

**Webserver Port** – The user may elect to change the assigned port of the web page (**default = 80**)

**Module ID** – The user may elect to change the ID of the module. When using Modbus TCP, this equates to the Slave ID.

**Module ID Type** – **DO NOT CHANGE THIS PROPERTY.**

**MAC Address:** Users may elect to change the MAC address of the device. **ONLY EXPERIENCED IT PROFESSIONALS SHOULD CONSIDER CHANGING THIS PROPERTY.**

**User Name and Password:** Users may elect to change the default user name and password for the device. (**Default = admin / admin**)

**Buffer data before connected** – buffer data before the TCP connection established (**default = unchecked**)

**Reset Timeout** – A value of > 60 means that when no data received during this time, the device will automatically restart. A value of < 60 equates to the timeout being disabled.