

■ Features

- Modbus TCP to Modbus RTU in real time Converter
- 4 x RS485 (2W)
- Recommended four simultaneous client connections
- Safe power-up and watchdog-based auto-recovery

■ Specifications

Parameter	Description
Communication Interface	4 x RS485 (2W) 1 x 10/100Mbps Ethernet WiFi 802.11 a/b/g/n (Optional)
Communication Drivers	Modbus-TCP to Modbus RTU bi-directional transparent communication
Operating Modes	COMport - IP Mapping, COMport -TCP Port mapping, Auto Discovery on COM port via Dial SW
Enclosure / Protection	DIN Rail / Wall mount IP30
Operating Temperature	0 - 65 Deg. C
Power Input	Input Supply : 24VDC +/- 10%

■ Modbus RTU Ports Configuration

Modbus RTU ports can be configured in three modes using the “SEL ID” rotary switch.

- When the rotary switch is set to 1, all four COM ports operate in “Multi-IP” mode.
- When the rotary switch is set to any value other than 1 & 9, all four COM ports operate in “Multi-Port” mode.

■ Configuration Details

Mode - 1

Mode 1 – Multi-IP Mode (Switch Setting = 1)

This is “Multi-IP” mode, active when the rotary switch is set to 1 (except 9).

- In this mode, the Port ID of COM1 is applicable to all COM ports, but each port has an individual IP address
- The Modbus master can control RTU slaves using the IP address and corresponding slave ID. Each port supports up to 32 slaves simultaneously.

Note : If the switch setting is changed from Mode 1 to another mode (or vice versa), a power-off reset is required.

SP-500-MB Configuration

Mode: Multi-Port

Network Configuration

COM1 IP: 10.10.10.201

Subnet: 255.255.254.0

Gateway: 10.10.10.1

COM Port Numbers

COM1: 502

COM2: 503

COM3: 504

COM4: 505

Baud Rates

COM1: 115200

COM2: 9600

COM3: 19200

COM4: 9600

Turn-around Delay

Time to wait for slave response (50-5000 ms)

COM1: 600

COM2: 600

COM3: 600

COM4: 600

Save & Reboot

Logout

After 15 minutes of login or 5 minutes of inactivity, the session expires.

Mode - 2

Mode 2 – Multi-Port Mode (Switch Setting = Except 1 & 9) This “Multi-Port” mode, active when the rotary switch is set to any value except 1 and 9.

- In this mode, the IP address assigned to COM1 is applied to all ports, each using a different port number.
- The user can configure the baud rate.

The Modbus master can control RTU slaves using the IP address and corresponding slave ID. Each port supports up to 32 slaves simultaneously.

Supported Baud Rates :

9600, 19200, 38400, 57600, and 115200

Note : For COM4, do not set the baud rate higher than 57600.

SP-500-MB Configuration

Mode: Multi-IP

COM IP Addresses

Each COM uses a separate IP on port 502

COM1: 10.10.10.201

COM2: 10.10.10.202

COM3: 10.10.10.203

COM4: 10.10.10.204

Network Settings

Subnet: 255.255.254.0

Gateway: 10.10.10.1

Baud Rates

COM1: 115200

COM2: 9600

COM3: 19200

COM4: 9600

Turn-around Delay

Time to wait for slave response (50-5000 ms)

COM1: 600

COM2: 600

COM3: 600

COM4: 600

Save & Reboot

Logout

After 15 minutes of login or 5 minutes of inactivity, the session expires.

Mode - 3

An additional functionality is provided with the unit. If the operator does not know the unit's IP address, set the rotary switch to “9” and power-on reset the unit. It will enter Setting Mode, and the unit will display COM1 settings.

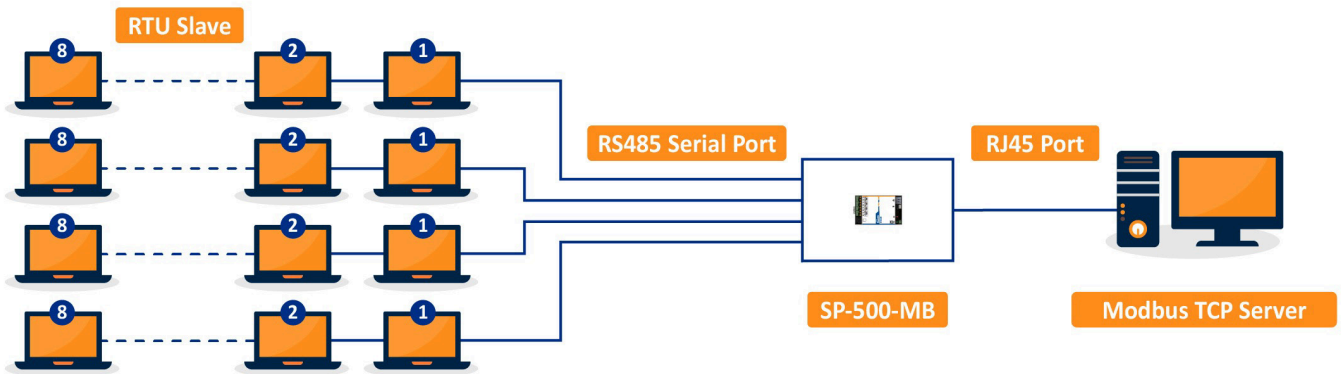
Default Settings :

Default IP : 192.168.1.100

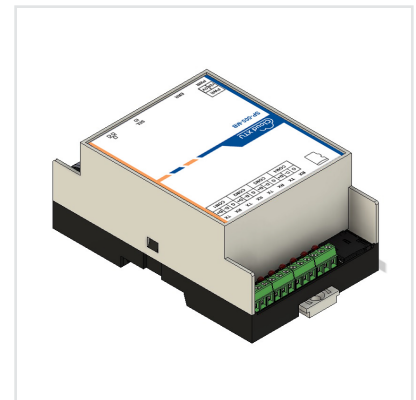
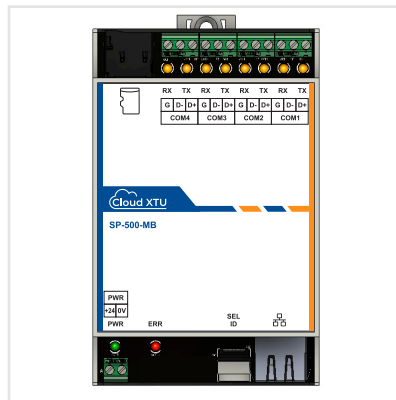
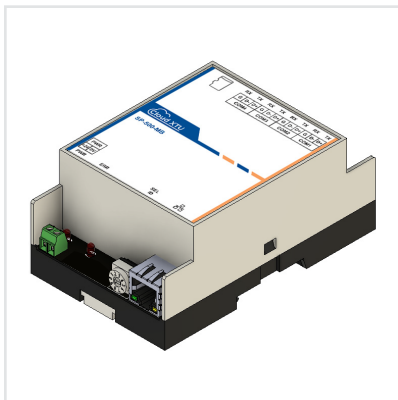
Default Subnet : 255.255.255.0

Gateway : 192.168.1.1

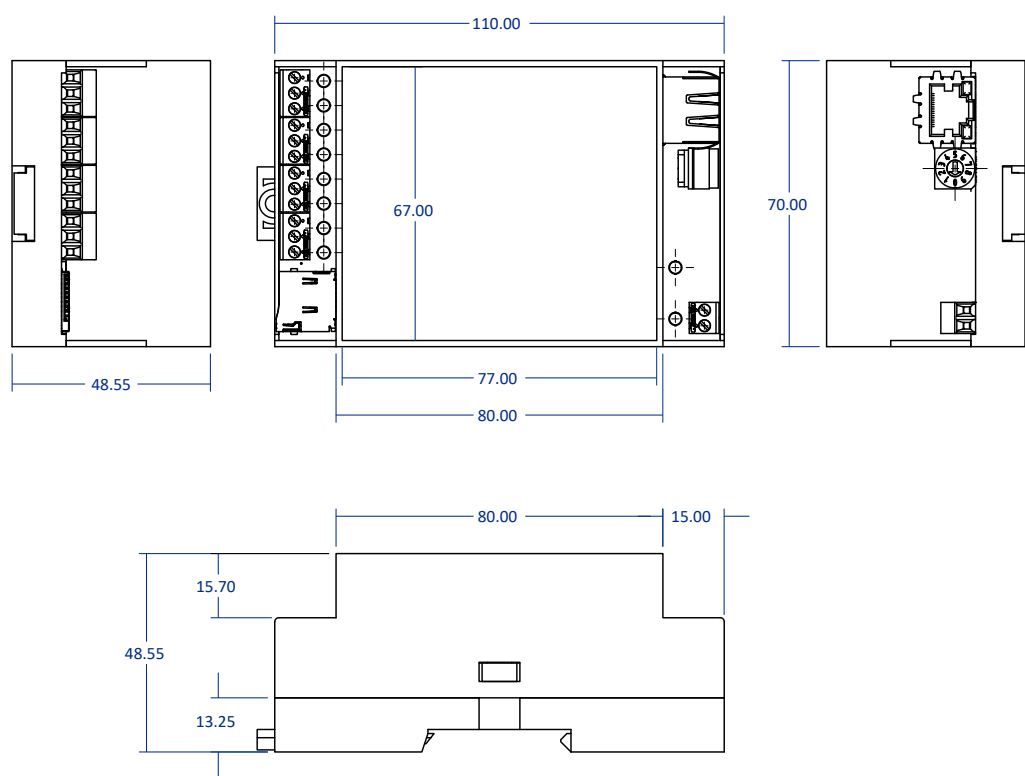
■ Functioning SP-500-MB



■ Product I/O View



■ Mechanical Drawings (Unit = mm)



■ Ordering Codes

Model Number	Description
SP-500-MB	Modbus TCP to Modbus RTU in real time Converter, 4 x RS485 (2W), 1 x 10/100Mbps Ethernet