

## Technical Datasheet Input / Output Module - Modbus RTU Protocol to Modbus TCP Protocol

The IO modules communicate via RS485. The port can drive distances up to max 700 meters without the use of any repeater (*this feature however also depends on the signal strength of the Modbus Slave Device*).

The 1 Port Modbus RTU RS485 to Modbus TCP Ethernet module is sturdy, low power usage and easy to use.

### 1 Port Modbus RTU – 1 port Modbus TCP Module: -



This converter module is DIN rail mountable and FR grade.

The design of the modules incorporates '**resettable Fuses**' to safeguard against reverse polarity connection both for **Power** and **Communication** port.

## Specifications

### General –

<b>I/O Connectors</b>	2 Pin 5.08 mm pitch pluggable screw terminals.
<b>Dimensions</b>	70 mm L x 110 mm B x 50 mm H
<b>Power</b>	Input Power – 24 AC / DC Typical Power Consumption – 5W
<b>Operating Temperature</b>	0 – 60° C (32 ~ 140°F)
<b>Storage Temperature</b>	-20 - 70° C (-4 ~ 158°F)
<b>Storage Humidity</b>	5 ~ 95 % RH, non – Condensing



## Certifications

### Modbus RTU –

This side acts as a '**Modbus Master**' for connecting Slave devices over Modbus RTU RS485.

### No of Devices

Up to 12 Slave devices in **Daisy chain**

### Modbus TCP -

This side acts as a slave for the Host Device like the Gateway etc.

Web Interface for Easy configuration and connection

### Additional Features: -

**Communication Port isolated**

**Input power reverse polarity safety**

**ESD Safety IEC 61000-4-2,  $\pm 30$ KV contact,  $\pm 30$ KV air**

**EFT IEC 61000-4-4, 50A (5/50ms)**

**750V isolation.**

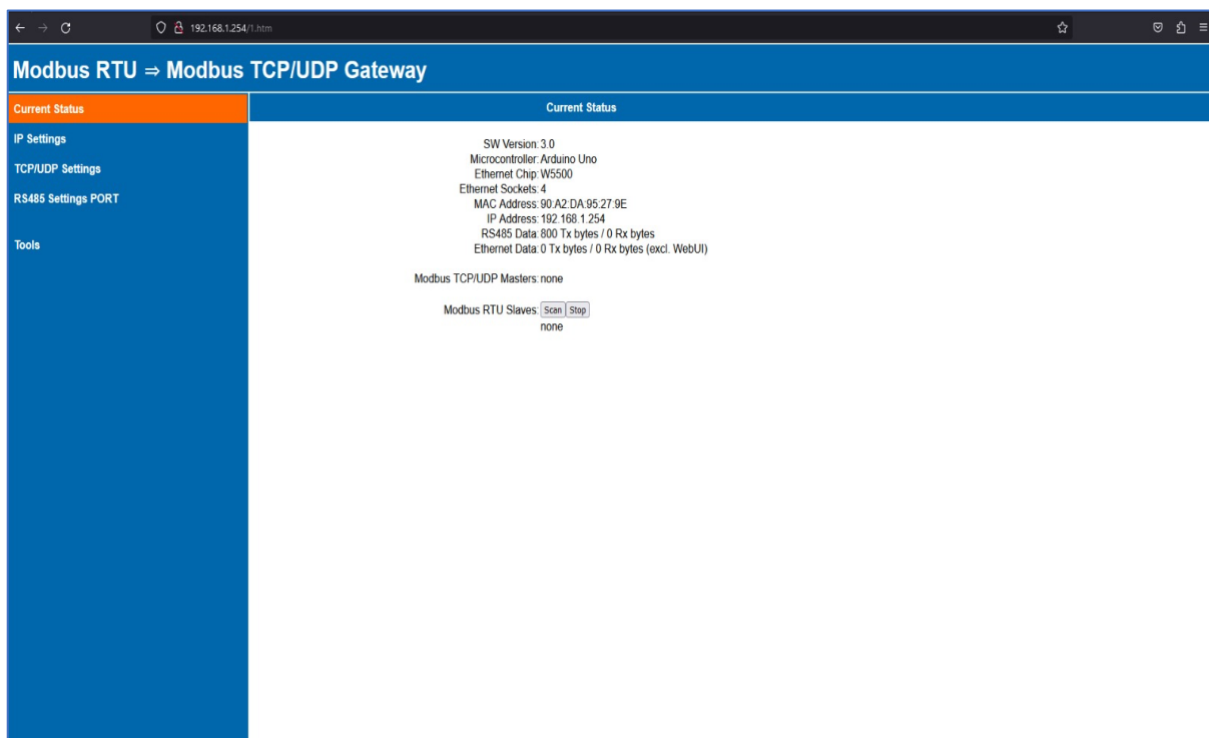
**CRC Error check.**

### Configuration Settings: -

- Connect 24 V AC/DC Supply to the Module.
- Connect MODBUS RTU Multiple Slave devices or Single devices to the A & B Terminal of Module.
- Connect MODBUS TCP Network Ethernet Cable to the Ethernet port of the module.
- Default IP Address of Module is "192.168.1.254".
- After connecting we are ready to simulate the RTU to TCP Conversion.
- Please enter "192.168.1.254" on your browser, make sure your device should in the same network of Module.
- After Entering above IP Address, you will find a webpage which has 5 pages for Configurations.

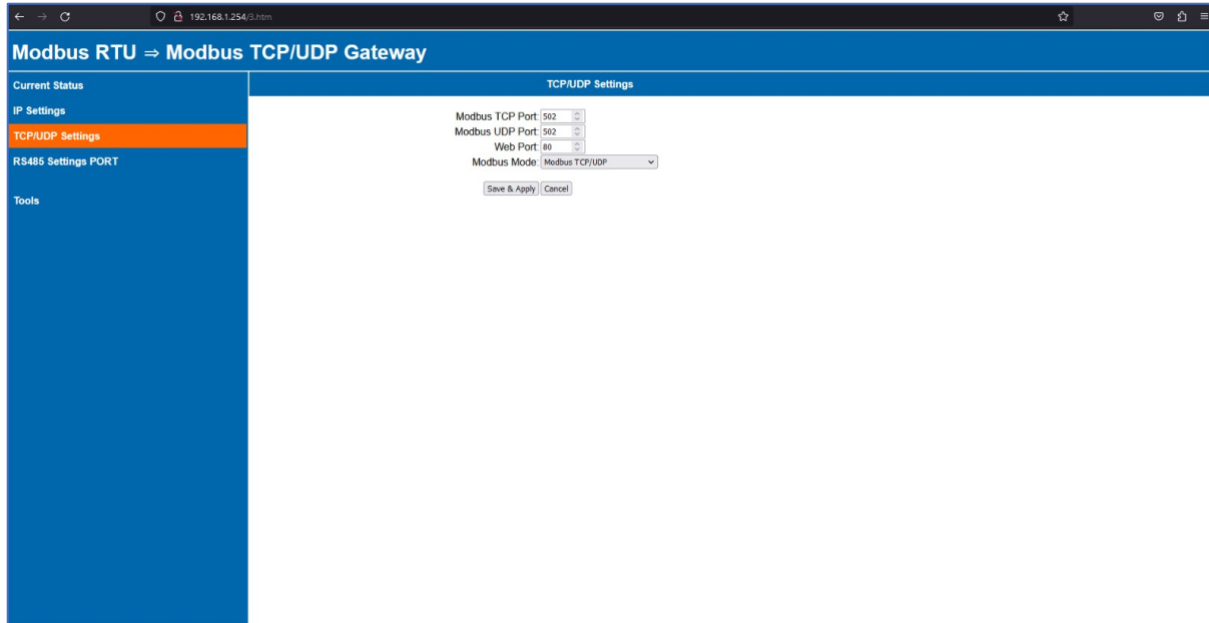
## Page Number 1

- On First page will get Current Status Information of module.
- MAC, IP, Ethernet Sockets, Ethernet chip, Ethernet Data are available on First page.
- Available Networked TCP/UDP Masters and a Scanner for Available RTU connected slave addresses will be printed on the page.
- One left Selection panel you can get other page information.
- IP Address Settings, TCP/UDP Settings, RS485 Settings and available Tools are placed on Left Selection Panel.



## Page Number 2

- Second page is setup for custom user IP address settings.
- User can input custom IP, Gateway, Subnet & DNS.



The screenshot shows a web browser window with the address bar displaying '192.168.1.254/1.htm'. The page title is 'Modbus RTU ⇒ Modbus TCP/UDP Gateway'. On the left sidebar, the 'TCP/UDP Settings' menu item is highlighted in orange. The main content area is titled 'TCP/UDP Settings' and contains the following configuration options:

- Modbus TCP Port: 502
- Modbus UDP Port: 502
- Web Port: 80
- Modbus Mode: Modbus TCP/UDP (selected from a dropdown menu)

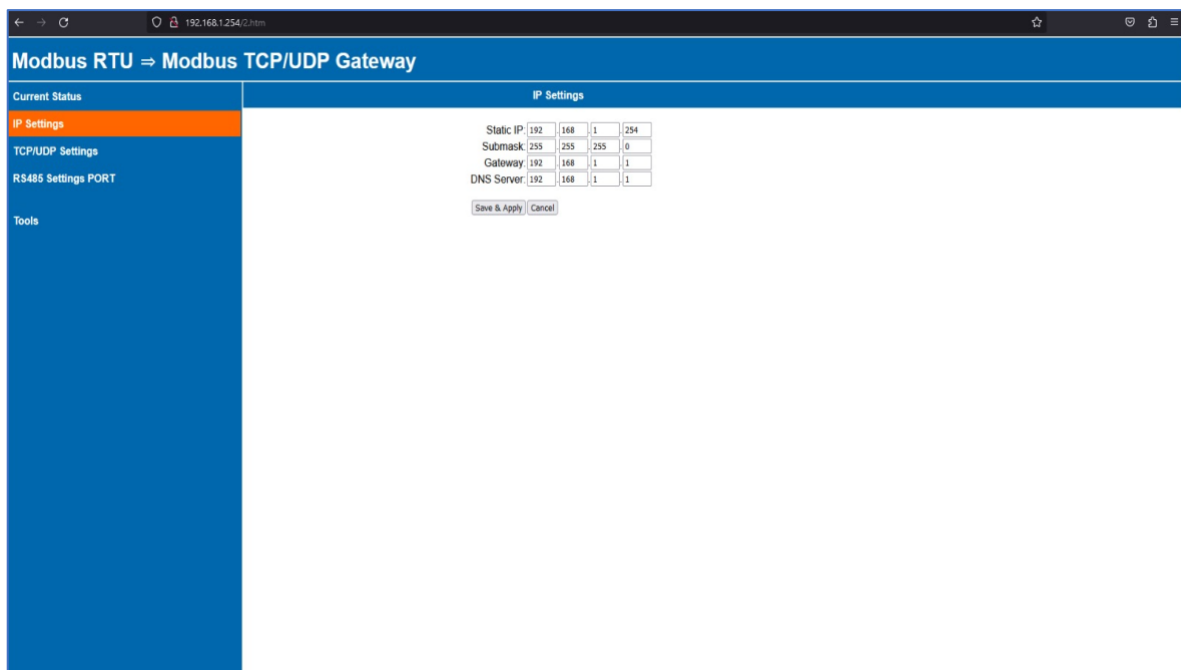
At the bottom of the settings area are two buttons: 'Save & Apply' and 'Cancel'.

## Page Number 3

- Third Page is setup for TCP/UDP Settings Configuration.
- TCP Port, UDP Port & Web Port can be set from this page.
- Modbus Selection can be done from third page.
- Modbus Mode:

1) Modbus TCP/UDP

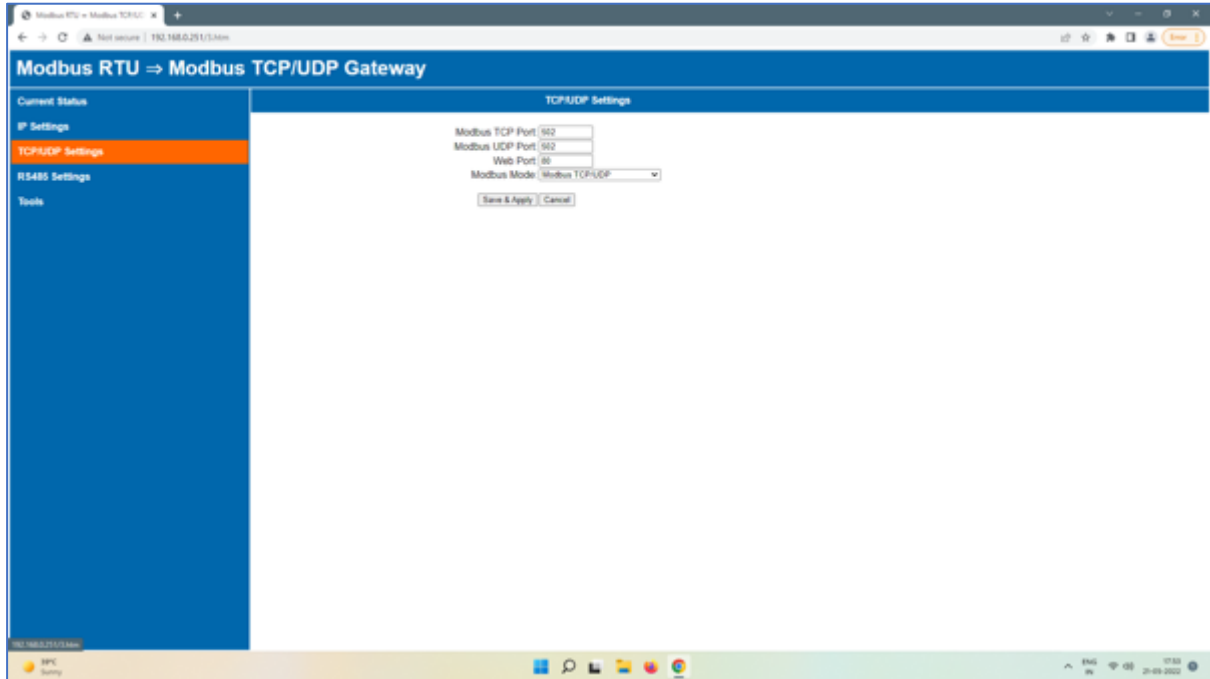
2) Modbus RTU over TCP/UDP



The screenshot shows the same web browser window, but now the 'IP Settings' menu item in the left sidebar is highlighted in orange. The main content area is titled 'IP Settings' and displays the following network configuration in a table:

Static IP	192	168	1	254
Submask	255	255	255	0
Gateway	192	168	1	1
DNS Server	192	168	1	1

At the bottom of the settings area are two buttons: 'Save & Apply' and 'Cancel'.



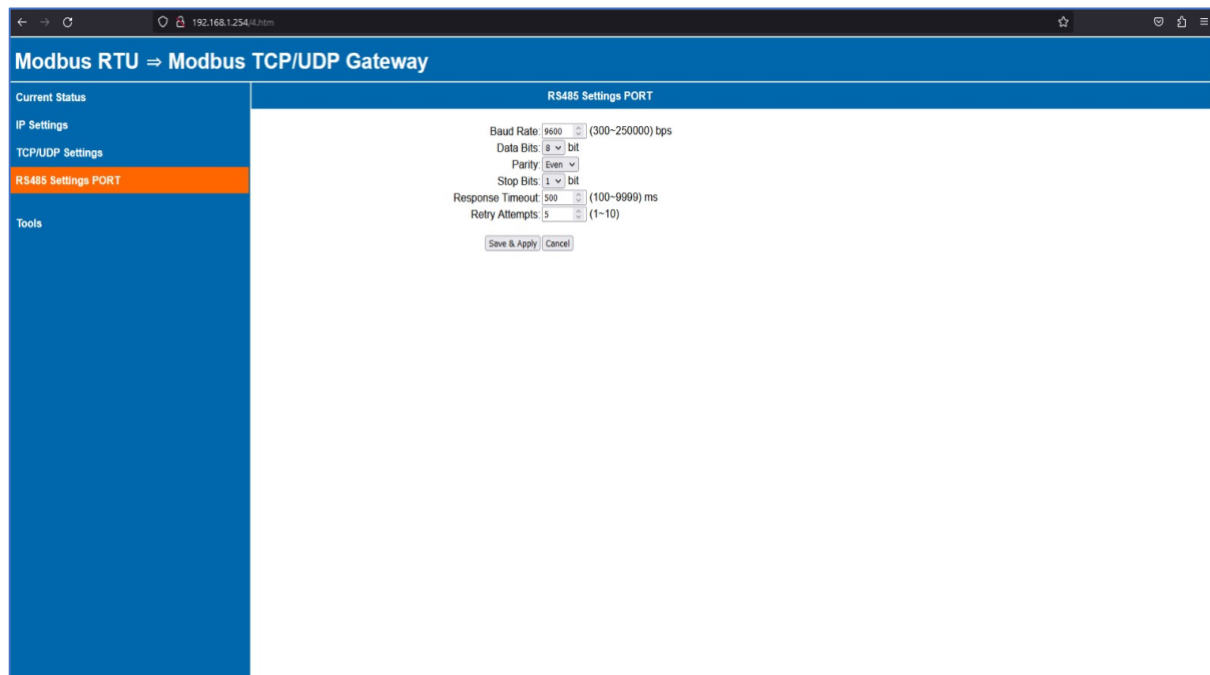
The screenshot shows a web browser window with the address bar displaying "192.168.0.251/1.htm". The page title is "Modbus RTU ⇒ Modbus TCP/UDP Gateway". On the left sidebar, the "TCP/UDP Settings" menu item is highlighted in orange. The main content area is titled "TCP/UDP Settings" and contains the following fields:

- Modbus TCP Port: 502
- Modbus UDP Port: 502
- Web Port: 80
- Modbus Mode: Modbus TCP/UDP (selected in a dropdown menu)

At the bottom of the settings area are two buttons: "Save & Apply" and "Cancel".

## Page Number 4

- On fourth page RS485 configuration can be applied by user.
- Baud rate selections, Data Bits, Parity, Stops Bits, Response timeout, retry attempts are configured on this page.



The screenshot shows the same web browser window, but the "RS485 Settings PORT" menu item in the left sidebar is highlighted in orange. The main content area is titled "RS485 Settings PORT" and contains the following fields:

- Baud Rate: 9600 (range 300-250000) bps
- Data Bits: 8 bit
- Parity: Even
- Stop Bits: 1 bit
- Response Timeout: 500 (range 100-9999) ms
- Retry Attempts: 5 (range 1-10)

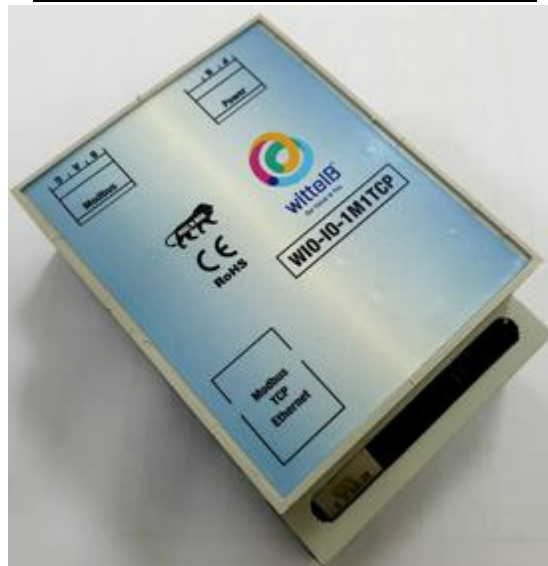
At the bottom of the settings area are two buttons: "Save & Apply" and "Cancel".

## Page Number 5

- Fifth page is Tools Page.
- It gives user to set Factory Default settings, MAC Address Generation, & System Reboot.



## Converter with Enclosure



### Contact us: -

**Augmatic Technologies Pvt. Ltd.,**  
**Plot no 6, Shah Industrial Estate II,**  
**Kotambi,**  
**Vadodara – 391510.**  
**Email – Sales@wittelb.com**