



UC-ETH-RS485

Veawe manufactures various products for industrial use like

- ✓ **USB to RS485, RS232to RS485, RS485 to RS485 Repeater**
- ✓ **Isolated RS232 to RS485, RS485 to RS485 Repeater, RS232 to RS232**
- ✓ **Ethernet to RS485, Dual RS232, Dual RS485**
- ✓ **Remote IO modules, 4 Input 20mA /10V, 24 DI, DO, etc**
- ✓ **0 – 20mA / 0 – 10V simulator with display**
- ✓ **Surge protection devices for RS485, 230V AC, 24V DC**

Table of Contents

Features.....	2
Electrical characteristics.....	3
Hardware Connection.....	3
Mounting.....	3
Electrical connection.....	3
First Time Settings.....	4
Settings for PC.....	4
Default Parameters.....	4
Web based configuration.....	4
Local IP Configuration.....	5
RS485 Settings.....	5
ModbusTCP to Modbus RTU.....	6
Transparent Serial Connection.....	6
Web to Serial.....	6
Misc Configuration.....	7
Reboot.....	7

Features

- * Works with all type of industrial equipments
 - PC, PLC, SCADA, HMI, AC/DC Drives, Genset, UPS, Development Kits, etc.
- * RS485 Rx and Tx light indications for easy visibility and troubleshooting
- * RJ45 Status light indications, RJ45 built-in 2KV isolation
- * User Friendly Configuration Software
- * Easy to use web page configuration option
- * Unique MAC address
- * Compact design suitable for both DIN Rail and Wall mount
- * Dimension in mm – 110 x 74 x 35
- * Support 10/100M, TCP Server, TCP Client, UDP, Httpd Client, Web socket
- * Supports Transparent Mode data transmission
- * Supports Modbus TCP to Modbus RTU protocol conversion
- * ESD and Surge protection for Ethernet, RS485 and Power
- * Supports all Baud Rates from 300 to 250 kBaud.
 - varies on cable length
- * Supports up-to 256 receivers on the bus
 - also depends on the other devices connected in the RS485 network
- * ESD protection for RS485 pins
 - ±15-kV Human-Body Model (HBM)
 - ±8-kV IEC1000-4-2, Contact Discharge
 - ±15-kV IEC1000-4-2, Air-Gap Discharge
- * 12~24V DC Supply
- * 1 Year Warranty against any manufacturing defects

Electrical characteristics

Power Input	12V DC ~ 24V DC (not more than 30V DC max. Reverse polarity protected)
Operating Temperature	-40 ~85 °C
Working Current	200mA Max
RS485 in Receive input	$\pm 12V$ between A and B max
RS485 in Transmit output	A pulled up to +5V, B pulled down to 0V
RS485 Termination	120 Ω between A and B built-in

Hardware Connection

Mounting

The module can be mounted in all standard **35mm** DIN Rail channels and as well in Wall with screws. Pull the clip out one step for wall mounting

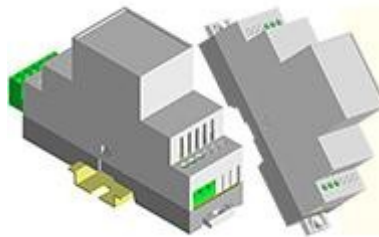


Fig 1 DIN Rail Mounting | Wall Mounting

Electrical connection

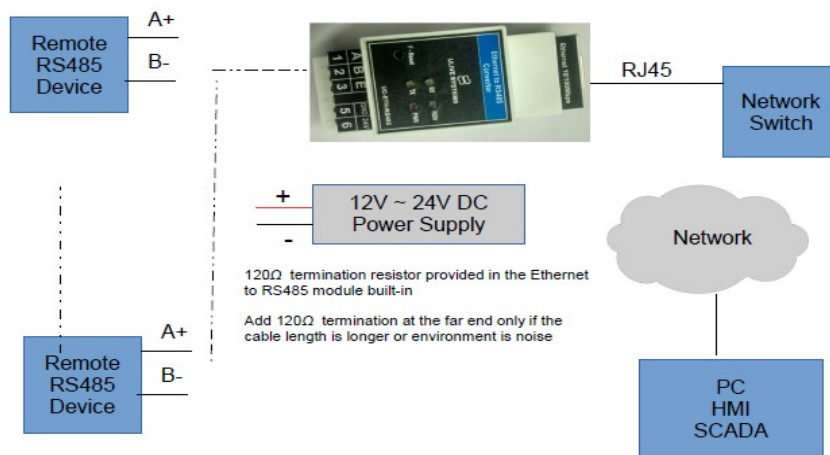


Fig 2 Typical connection example

Warning: connecting power terminals to RS485 terminals will damage the device permanently

First Time Settings

Settings for PC

* For connecting directly to a PC a cross over cable is required and PC network settings need to be changed as below.

In Network settings → Properties → Internet Protocol (TCP/IP)

Define a manual IP as below

IP address	192.168.0.1
Subnet mask	255.255.255.0
Default gateway	192.168.0.1

Default Parameters

IP:	192.168.0.7
username:	admin
password:	admin
baud rate:	115200, 8, N, 1
Local TCP Port:	23
Work mode:	TCP Server, None
RS485 Timeout, Len:	0,0
Web config port:	80

Web based configuration

You can use a web browser to view and change the IP and Serial settings

Go to the address 192.168.0.7 in the web browser and enter default user name and password as above

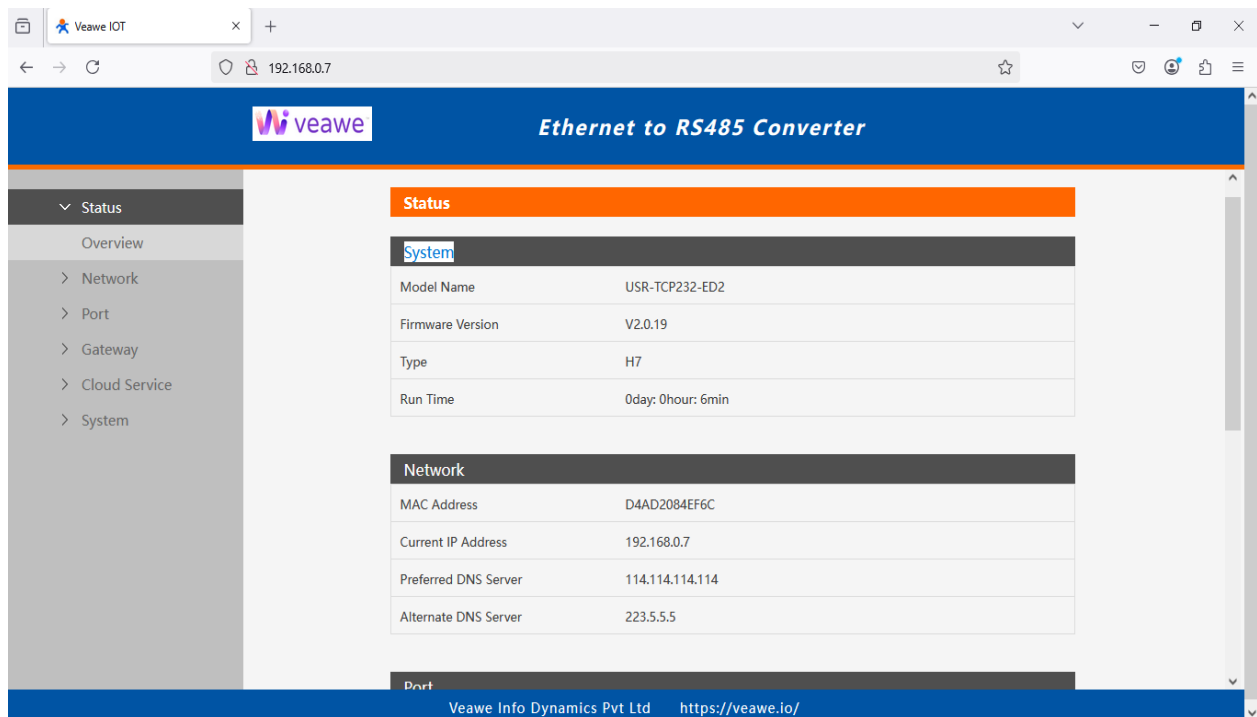
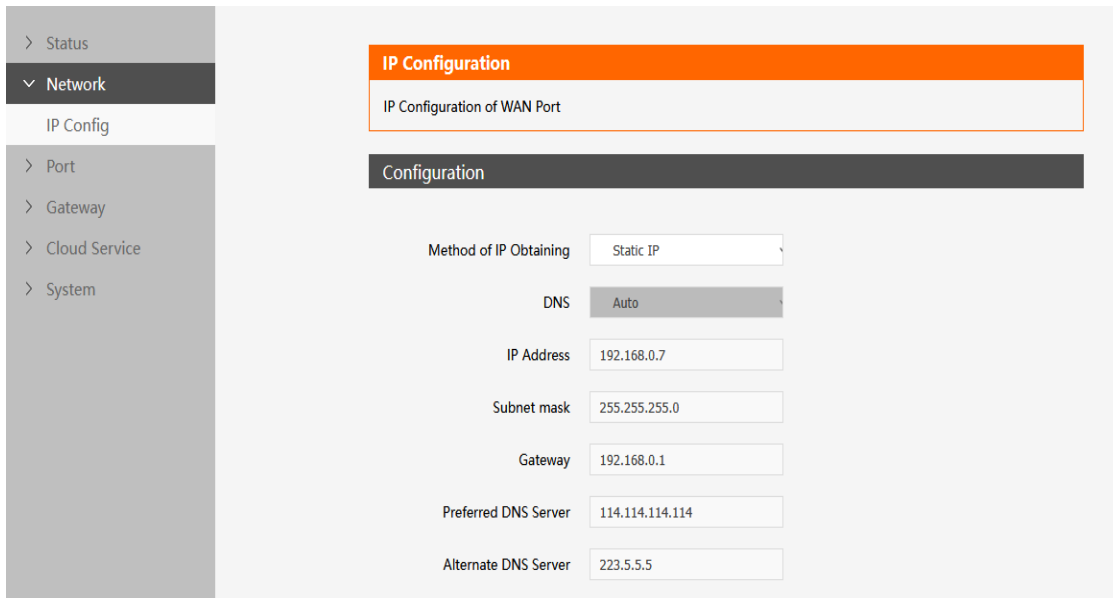


Fig 3 Current Status

Local IP Configuration

Select Static IP or DHCP for the Ethernet to RS485 Converter



IP Configuration

IP Configuration of WAN Port

Configuration

Method of IP Obtaining: Static IP

DNS: Auto

IP Address: 192.168.0.7

Subnet mask: 255.255.255.0

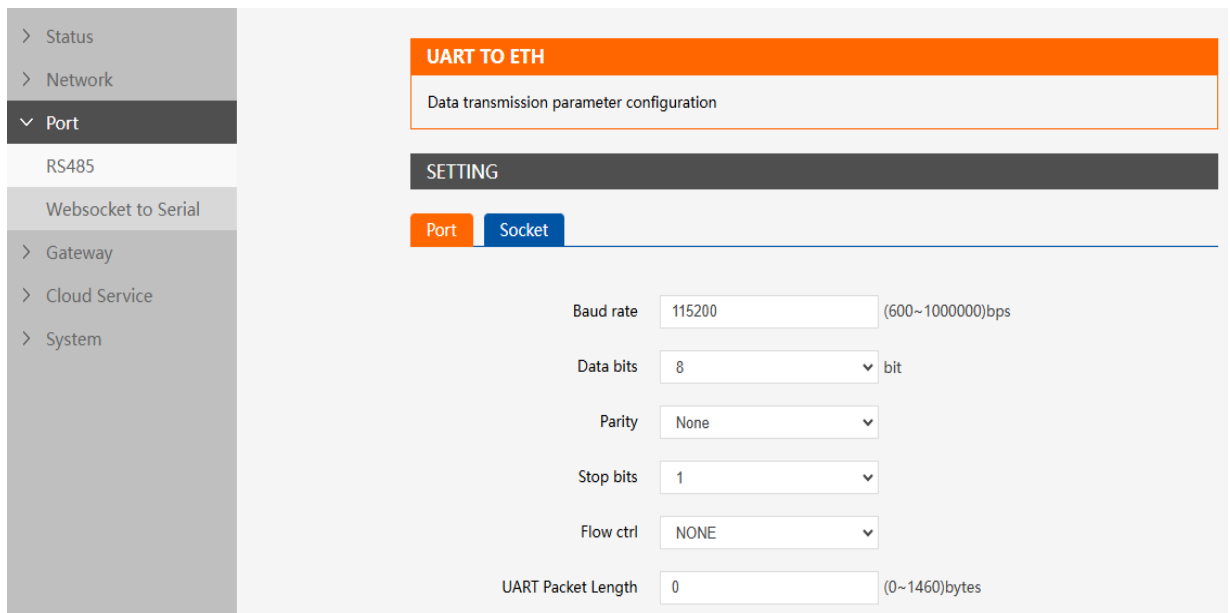
Gateway: 192.168.0.1

Preferred DNS Server: 114.114.114.114

Alternate DNS Server: 223.5.5.5

Fig 4 IP Settings

RS485 Settings



UART TO ETH

Data transmission parameter configuration

SETTING

Port Socket

Baud rate: 115200 (600~1000000)bps

Data bits: 8 bit

Parity: None

Stop bits: 1

Flow ctrl: NONE

UART Packet Length: 0 (0~1460)bytes

Fig 5 RS485 Settings

RS485 serial port settings can be changed like Baud Rate, Data Size, Parity and Stop bit

Note: Do not change the Flow Control and RS485 from default RS485

When RS485 Packet Time / RS485 Packet Length

0/0

*automatic packet mechanism.**User defined/User defined**Fixed packet mechanism***Recommended 0/0 for most protocols***In auto mode**RS 485 Packet Time = 4 Bytes time (e.g @ 115200 Baud ~350 usec)**RS485 Packet Length = 1460 Bytes**Data will be transmitted if any one of the above condition is met**In fixed packet mode**RS 485 Packet Time = User defined milli Seconds**RS485 Packet Length = User defined Bytes**Data will be transmitted if any one of the above condition is met***ModbusTCP to Modbus RTU**

Module supports Modbus TCP to Modbus RTU mode.

This option can be selected from

RS485 Settings → Work Mode:

This option is suitable for Modbus TCP servers requiring a connection to remote RTU device

Transparent Serial Connection

For transparent serial data transmission over TCP select the Work mode option to none

RS485 Settings → Work Mode:

This option is suitable for Custom serial protocols, Ascii terminals, Virtual COM ports, Telnet server connections, Modbus RTU over telnet

Web to Serial

This option is handy for testing the interface

*Fig 6 Send and receive data using webpage*

Top window display the received data from the serial interface.

Bottom window can be used to type and send ascii or hex data

Misc Configuration

> Status
 > Network
 > Port
 RS485
 Websocket to Serial
 > Gateway
 > Cloud Service
 > System
 System Setting
 Management
 Log

SYSTEM SETTING

Set System Parametes

SETTING

System Setting

Model Name: USR-TCP232-ED2

Websocket Port: 6432 (1~65535)

Websocket Direction: UART1

Log Switch: OFF (port:6433)

Webserver Port: 80 (1~65535)

User Name: admin

Fig 7 Additional settings

Web page user name, password, MAC ID can be changed

Reboot

Module needs to be Reboot from web page for the saved changes to be applied

> Status
 > Network
 > Port
 > Gateway
 > Cloud Service
 > System
 System Setting
 Management
 Log

Management

Firmware upgrade/Reset/Restart

Firmware upgrade

Firmware file:

Reset

Reset:

Restart

Restart: