

SEW832 Modbus Gateway

User's Manual



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1.Introduction

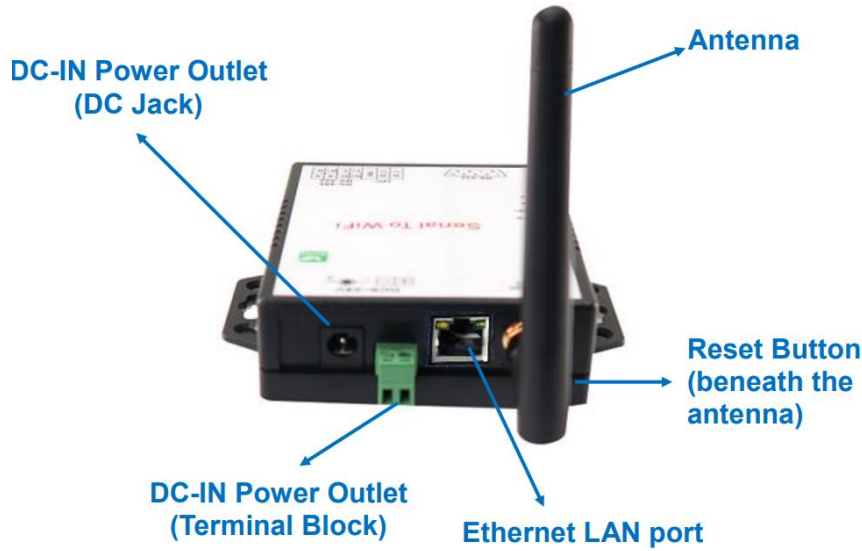
This SEW832 Ethernet+WiFi Modbus gateway provides the ways of connecting serial devices to both Ethernet and Wireless LAN (Wi-Fi 802.11 b/g/n). It is designed to operate serial ports through Ethernet (10/100Mbps) and wireless (Wi-Fi 802.11 b/g/n) over TCP/IP network. As the data is transmitted via Modbus protocol, therefore data acquisition and controlling is available to go through Intranet and Internet. There are two serial ports as one is a RS-232 and other one is RS-422/485. Configuration is easy to operate via web page setup.

This Modbus gateway is a high performance design composed with carefully selecting qualified components from reliable and certified sources. This operation manual will guide you to configure functions step by step.

This Modbus gateway provides RTU to TCP Slave, ASCII to TCP Slave ,TCP to RTU Slave , TCP to ASCII Slave Mode, and it also supports manual configuration via web browser.

1.1 Product Views

Antenna Side



Serial Interface Side



Figure 1 Product Views

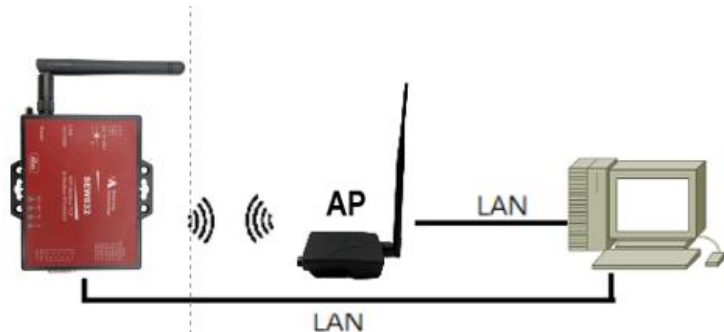
1.2 Wiring Architecture

1. RS-232

RS-232 Wiring

Serial Device

DB 9 ————— DB 9

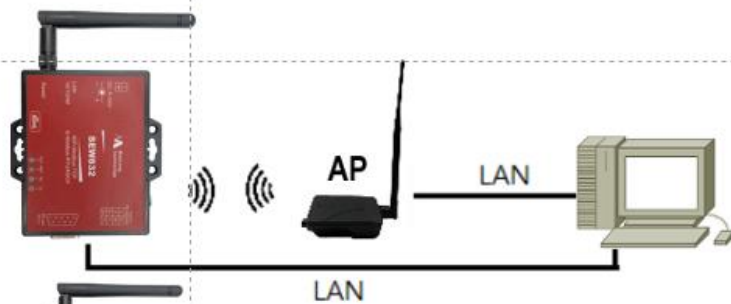


2. RS-422/RS-485

RS-422 Wiring

Serial Device

T- ————— R-
T+ ————— R+
R- ————— T-
R+ ————— T+



RS-485 Wiring
Serial Device

D+ ————— D+
D- ————— D-

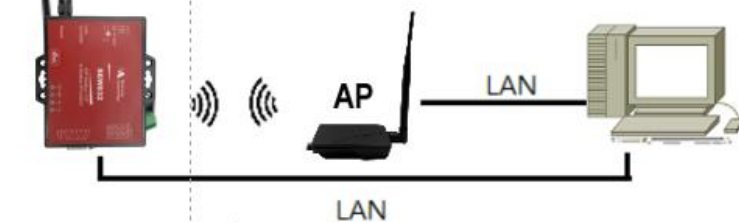


Figure 2 Wiring Architecture

2. Configuration

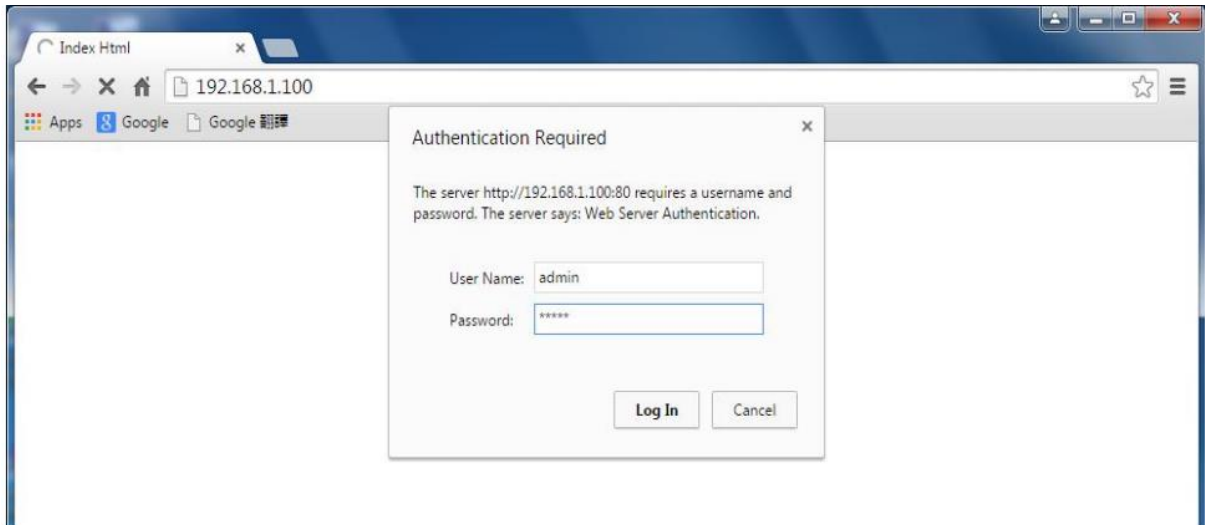
2.1 Configuration Via Web

Step1 → The first thing is to configure the Host PC's IP address

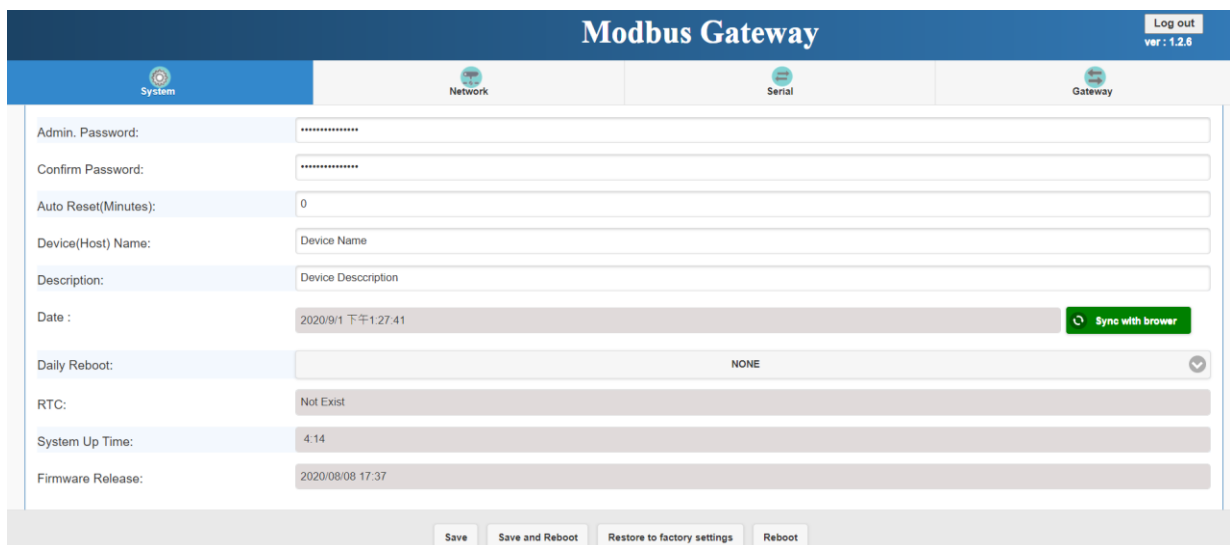
IP :192.168.1.xx

Step2 → Open a web page of configuration <http://192.168.1.100>

Step3 → Default *User name: "admin" and Password: "admin"*



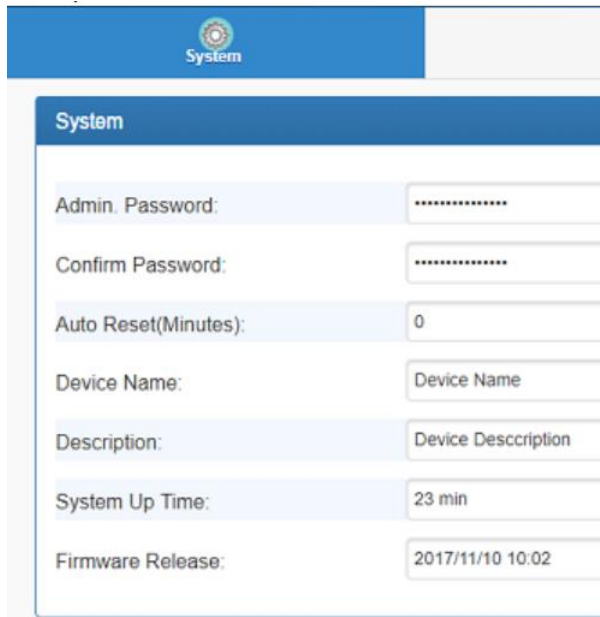
Step4 → And now you have successfully connected to this Modbus gateway



2.2 Configuration Sections

2.2.1 System Setup

1. System: Where one can change Password, set up Auto Reset time and modify Device Name, Description of device etc.



The screenshot shows the 'System' configuration page. It features a blue header with the 'System' title and a circular icon. Below the header, there are several configuration fields:

Admin. Password:	*****
Confirm Password:	*****
Auto Reset(Minutes):	0
Device Name:	Device Name
Description:	Device Description
System Up Time:	23 min
Firmware Release:	2017/11/10 10:02

2. Appearance of Wireless and Ethernet setup:

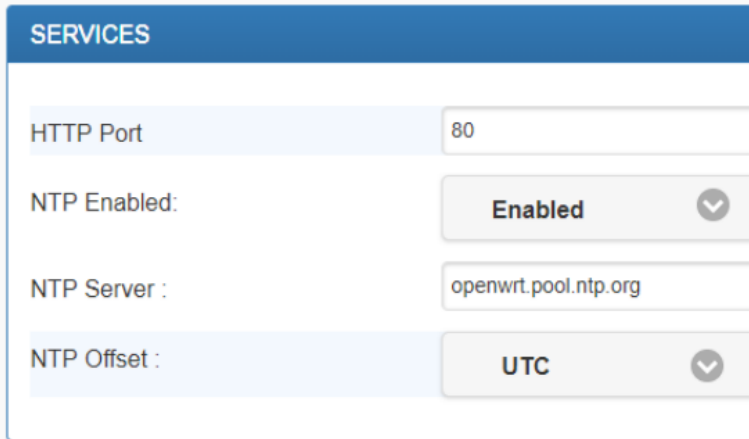


The screenshot shows two configuration sections: 'Wireless' and 'Ethernet'. Each section contains several configuration fields:

Wireless	
IP Address:	10.0.0.1
Subnet Mask:	255.255.255.0
Gateway:	192.168.1.1
MAC Address:	9c:65:f9:24:55:56

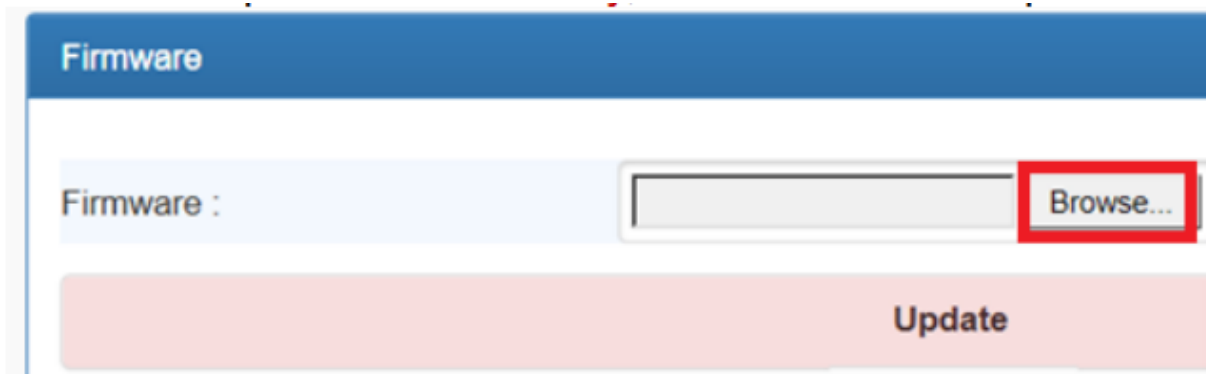
Ethernet	
IP Address:	192.168.1.199
Subnet Mask:	255.255.255.0
Gateway:	192.168.1.1
MAC Address:	9c:65:f9:24:2a:36

3. NTP: Enable / Disable NTP function; Set up NTP server and Time Zone.



4. Firmware update:

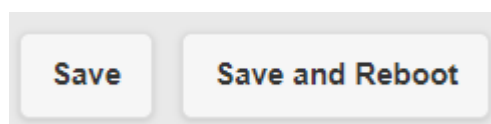
(1) If necessary, click “Browse” to open file manager



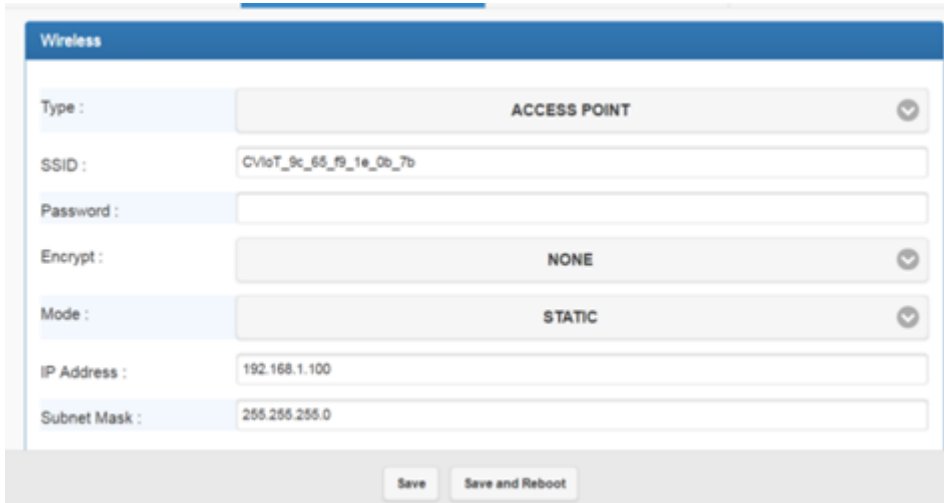
(2) Select the file with specified version and click “Confirm” button.

(3) When the selected file name appears on the input column, click “Update” button.

5. Up to now, Setup is successfully configured. Please click “Save” this page before “Save and Reboot” for permanent web pages.



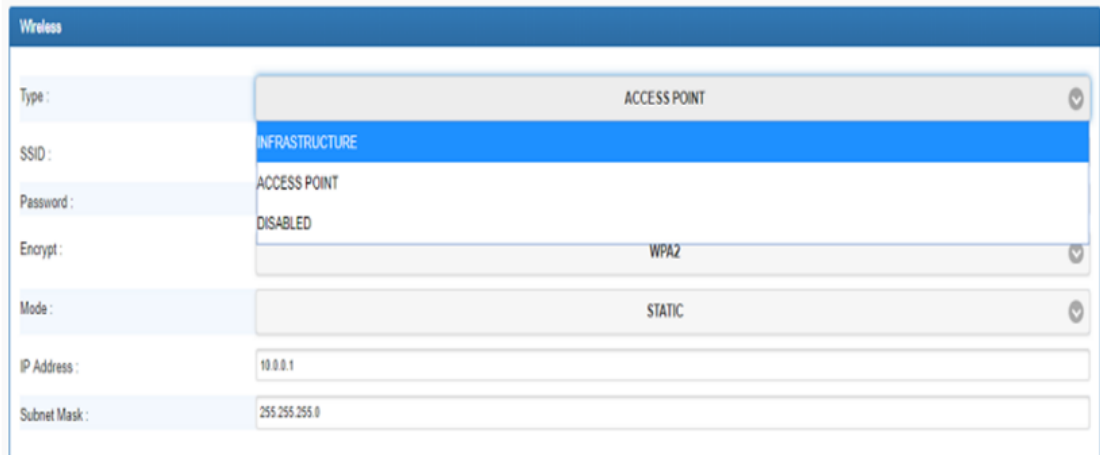
2.2.2 Network Setup



The screenshot shows the 'Wireless' configuration page. The 'Type' dropdown is set to 'ACCESS POINT'. The SSID field contains 'C/loT_9c_65_f9_1e_0b_7b'. The 'Encrypt' dropdown is set to 'NONE'. The 'Mode' dropdown is set to 'STATIC'. The IP Address field contains '192.168.1.100' and the Subnet Mask field contains '255.255.255.0'. At the bottom, there are 'Save' and 'Save and Reboot' buttons.

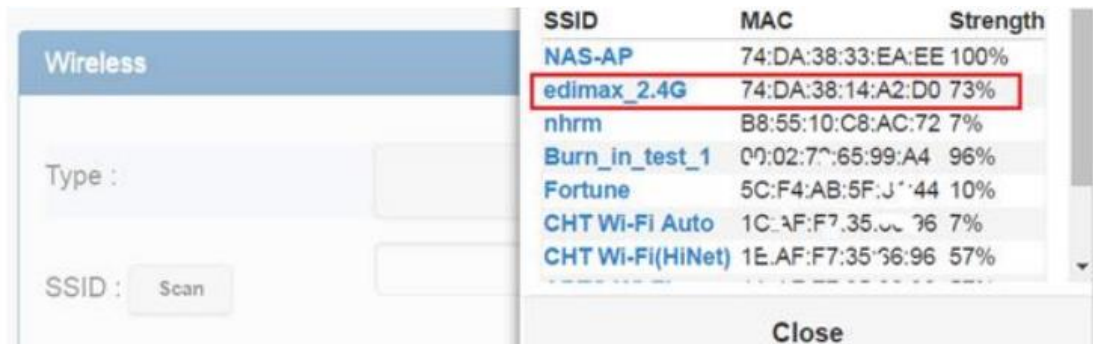
1. Wireless section:

(1) Type: to select “INFRASTRUCTURE” or “ACCESS POINT”

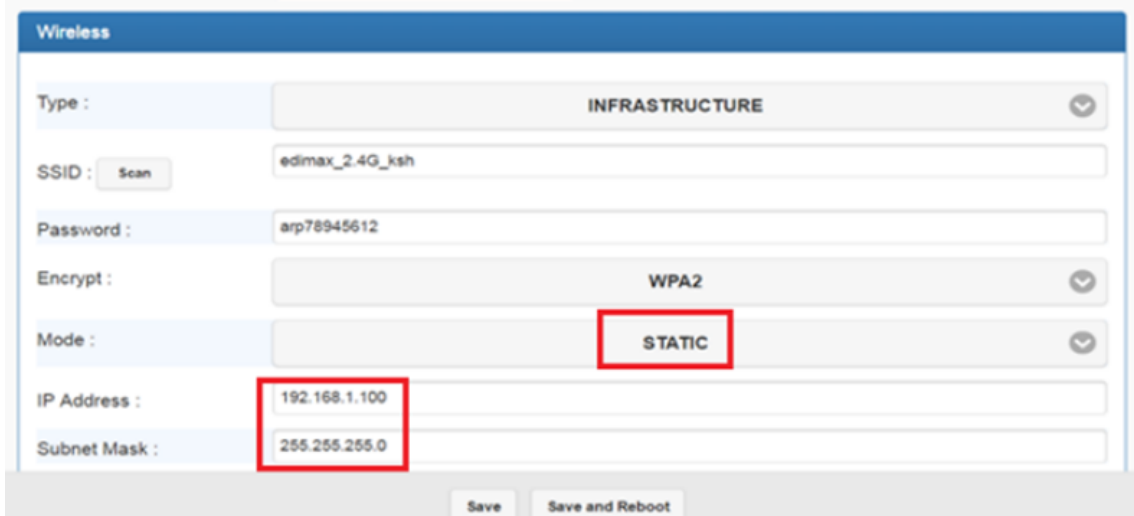


The screenshot shows the 'Wireless' configuration page with the 'Type' dropdown menu open. The menu options are 'INFRASTRUCTURE' (highlighted in blue), 'ACCESS POINT', and 'DISABLED'. The 'Encrypt' dropdown is set to 'WPA2'. The IP Address field contains '10.0.0.1' and the Subnet Mask field contains '255.255.255.0'.

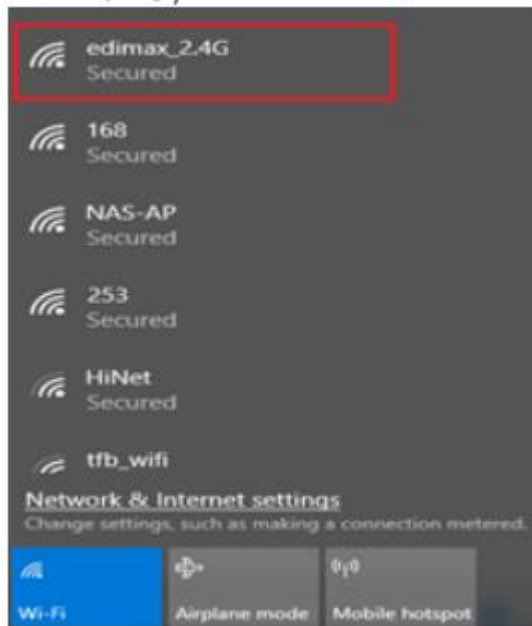
(2) When selected “INFRASTRUCTURE”, go to SSID, click “Scan” will get list of available SSID, select one to link.



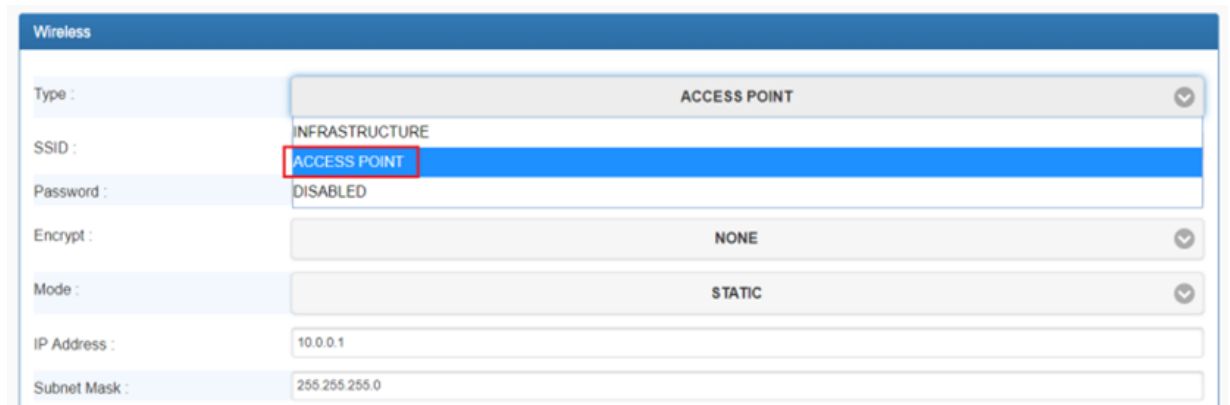
(3) Input password for the AP and assign STATIC IP address



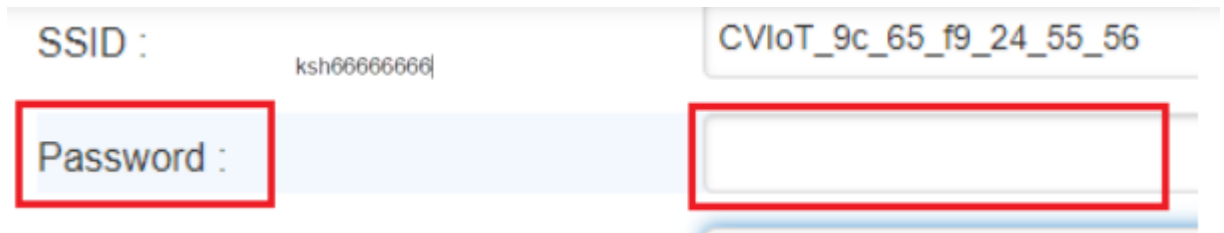
(4) In NB/PC, choose same SSID to link. NB/PC must close Ethernet in advance



- When selected “ACCESS POINT”, Converter acts as an Access Point which is allowed to be connected by PC /NB /Smart Phone/ PAD. It supports DHCP server function. Soft AP broadcasts its SSID “CVIoT_XX_XX_XX_XX_XX_XX”. PC /NB /Smart Phone/PAD should connect to this SSID and then open web browser with default IP for Converter setup.



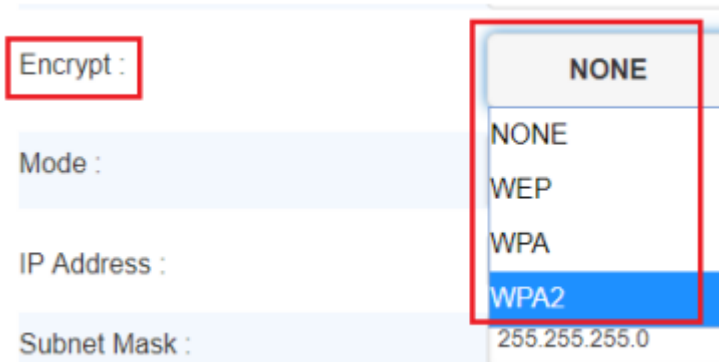
3. Password: Key in selected AP log in password



SSID : ksh66666666 CVIoT_9c_65_f9_24_55_56

Password :

4. Encrypt



Encrypt : **NONE**

Mode :

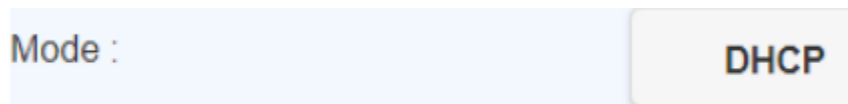
IP Address :

Subnet Mask : 255.255.255.0

- NONE
- WEP
- WPA
- WPA2**

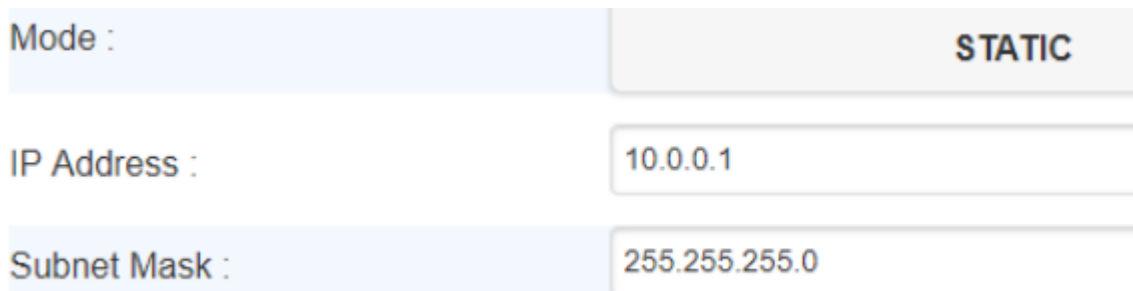
5. Mode: IP Address

(1) "DHCP": Let AP to assign IP address to itself



Mode : DHCP

(2) "STATIC": To input assigned IP address, Subnet Mask.

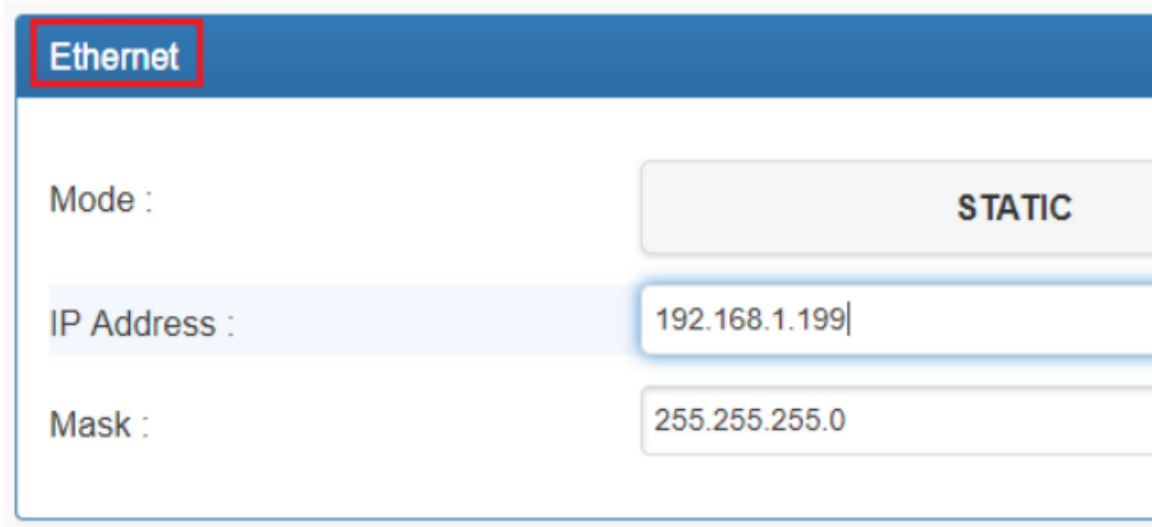


Mode : STATIC

IP Address : 10.0.0.1

Subnet Mask : 255.255.255.0

6. Ethernet: select STATIC or DHCP to assign IP address.



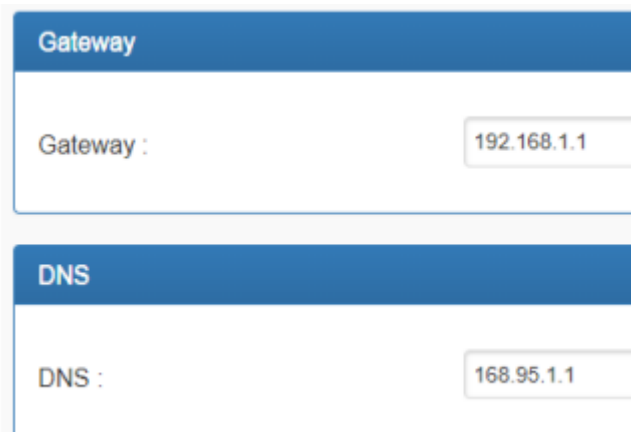
Ethernet

Mode : **STATIC**

IP Address : 192.168.1.199

Mask : 255.255.255.0

7. Gateway and DNS: To check with MIS for right IP address.



Gateway

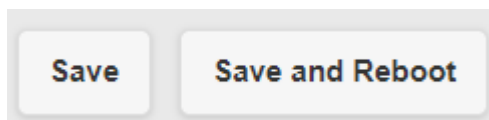
Gateway : 192.168.1.1

DNS

DNS : 168.95.1.1

※The Gateway must be set with correct IP enable to connect with Internet.

8. Up to now, Setup is successfully configured. Please click “Save” this page before permanent change of configuration.

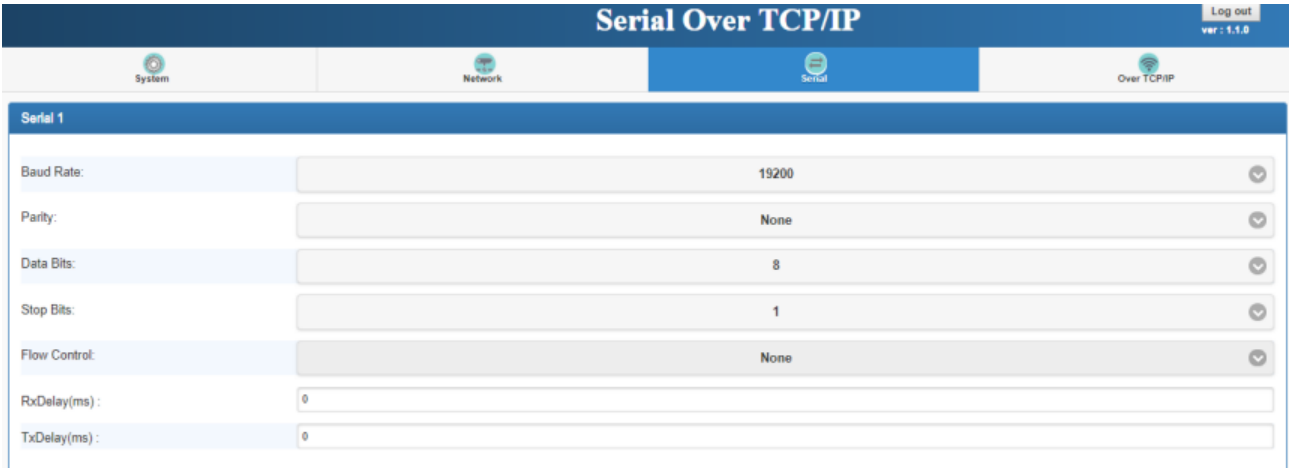


Save **Save and Reboot**

2.2.3 Serial Port Setup

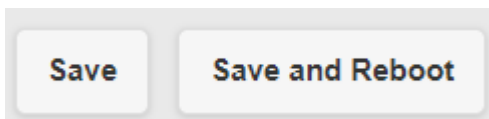
Input each parameters to match with the remote terminal units.

1. Baud Rate
2. Parity
3. Data Bits
4. Stop Bits
5. Flow Control
6. RxDelay(ms)
7. TxDelay(ms)



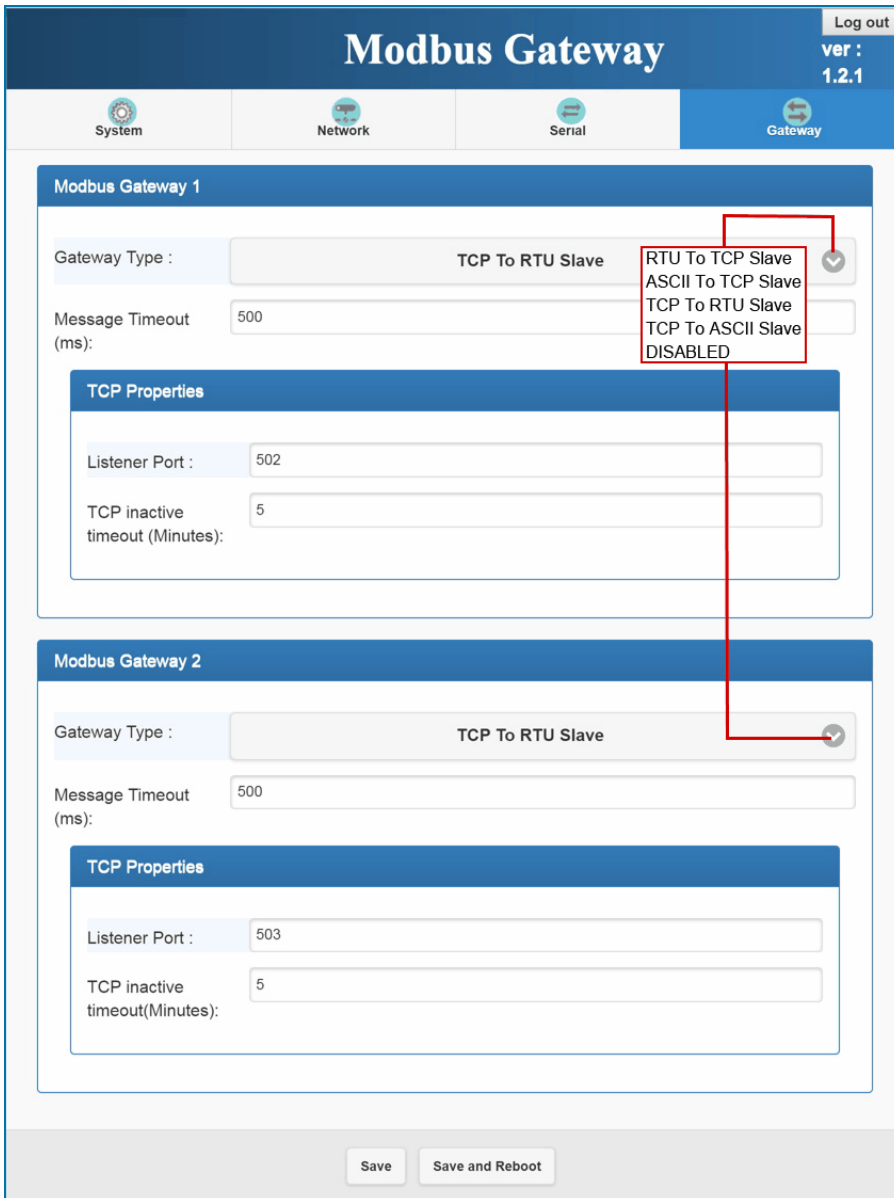
Serial Over TCP/IP		Log out ver: 1.1.0	
System	Network	Serial	Over TCP/IP
Serial 1			
Baud Rate:	19200		
Parity:	None		
Data Bits:	8		
Stop Bits:	1		
Flow Control:	None		
RxDelay(ms):	0		
TxDelay(ms):	0		

9. Click “Save” this page before permanent pages



2.2.4 Modbus Setup

1. TCP to RTU/ASCII Slave



2. RTU/ASCII to TCP Slave

Modbus Gateway
Log out
ver :
1.2.1

System
Network
Serial
Gateway

Modbus Gateway 1

Gateway Type : RTU To TCP Slave ▼

Message Timeout (ms):

TCP Slave map

No.	ID Start	ID End	IP[:Port] <small>(ex:192.168.1.100 or192.168.1.100:502)</small>
1	<input style="width: 30px;" type="text" value="1"/>	<input style="width: 30px;" type="text" value="32"/>	<input style="width: 100px;" type="text"/>
2	<input style="width: 30px;" type="text" value="33"/>	<input style="width: 30px;" type="text" value="64"/>	<input style="width: 100px;" type="text"/>
3	<input style="width: 30px;" type="text" value="65"/>	<input style="width: 30px;" type="text" value="96"/>	<input style="width: 100px;" type="text"/>
4	<input style="width: 30px;" type="text" value="97"/>	<input style="width: 30px;" type="text" value="128"/>	<input style="width: 100px;" type="text"/>
5	<input style="width: 30px;" type="text" value="129"/>	<input style="width: 30px;" type="text" value="160"/>	<input style="width: 100px;" type="text"/>
6	<input style="width: 30px;" type="text" value="161"/>	<input style="width: 30px;" type="text" value="192"/>	<input style="width: 100px;" type="text"/>
7	<input style="width: 30px;" type="text" value="193"/>	<input style="width: 30px;" type="text" value="224"/>	<input style="width: 100px;" type="text"/>
8	<input style="width: 30px;" type="text" value="225"/>	<input style="width: 30px;" type="text" value="255"/>	<input style="width: 100px;" type="text"/>

Modbus Gateway 2

Gateway Type : RTU To TCP Slave ▼

Message Timeout (ms):

TCP Slave map

No.	ID Start	ID End	IP[:Port] <small>(ex:192.168.1.100 or192.168.1.100:502)</small>
1	<input style="width: 30px;" type="text" value="1"/>	<input style="width: 30px;" type="text" value="32"/>	<input style="width: 100px;" type="text"/>
2	<input style="width: 30px;" type="text" value="33"/>	<input style="width: 30px;" type="text" value="64"/>	<input style="width: 100px;" type="text"/>
3	<input style="width: 30px;" type="text" value="65"/>	<input style="width: 30px;" type="text" value="96"/>	<input style="width: 100px;" type="text"/>
4	<input style="width: 30px;" type="text" value="97"/>	<input style="width: 30px;" type="text" value="128"/>	<input style="width: 100px;" type="text"/>
5	<input style="width: 30px;" type="text" value="129"/>	<input style="width: 30px;" type="text" value="160"/>	<input style="width: 100px;" type="text"/>
6	<input style="width: 30px;" type="text" value="161"/>	<input style="width: 30px;" type="text" value="192"/>	<input style="width: 100px;" type="text"/>
7	<input style="width: 30px;" type="text" value="193"/>	<input style="width: 30px;" type="text" value="224"/>	<input style="width: 100px;" type="text"/>
8	<input style="width: 30px;" type="text" value="225"/>	<input style="width: 30px;" type="text" value="255"/>	<input style="width: 100px;" type="text"/>

Save
Save and Reboot

2.2.5 Reset Button

If any chance you forgot the login password or have incorrect settings making this Device inoperable, upon the power is on and the “SYS” LED light on, use a point tip to press this button and hold it for more than 20 seconds the release the point tip. The Device will reboot and all the parameters will be reset to the factory default.