

# RS485 TO WIFI ETH MQTT

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From Waveshare Wiki

Jump to: navigation, search

## Software Preparation

- EMQX MQTT (broker.emqx.io) ([http://www.emqx.io/online-mqtt-client#/recent\\_connections](http://www.emqx.io/online-mqtt-client#/recent_connections))

## Hardware Preparation

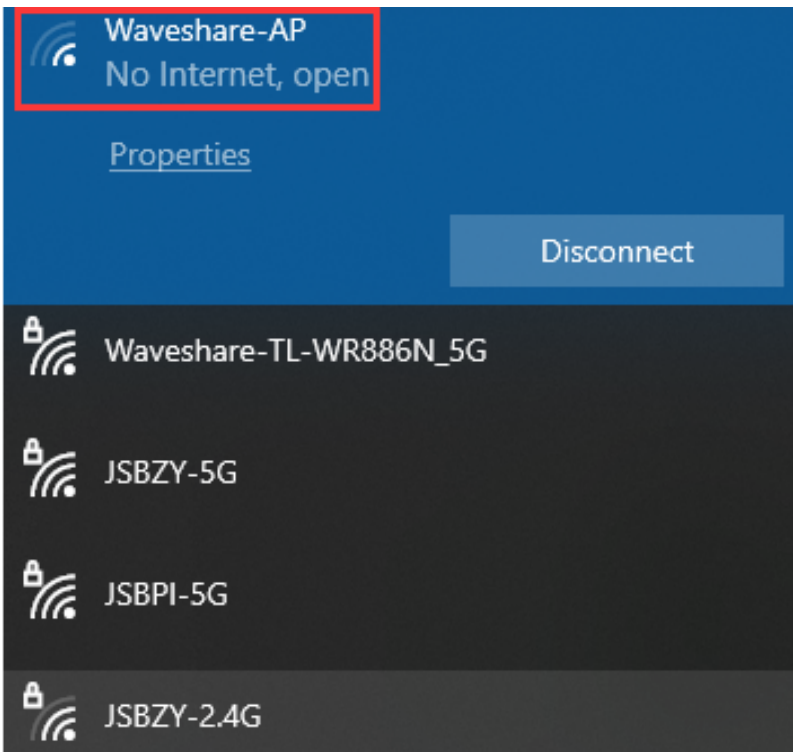
- RS485 TO WIFI/ETH (<https://www.waveshare.com/rs485-to-wifi-eth.htm>)
- PC
- RS232 RS485 TO ETH/RS485 TO ETH/USB TO RS485 (Devices with onboard RS485) (<https://www.waveshare.com/rs232-485-to-eth.htm>)



(/wiki/File:Eth-485-485-wifi.png)

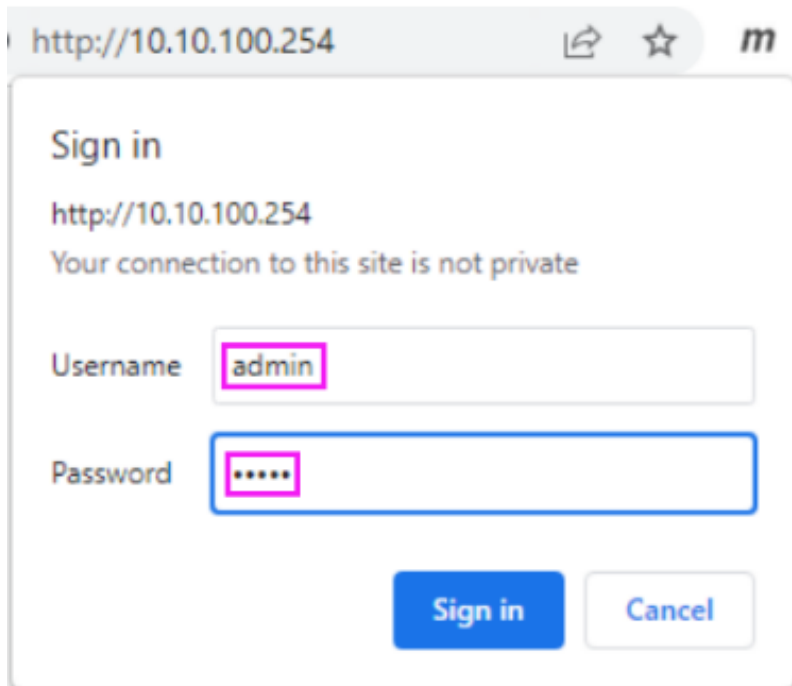
## Log In To The Configuration Page

Open the wireless network connection and search for the network. The "Waveshare- AP" (xxxx is the last four digits of the MAC address) as shown in the figure below is the default network name of Service Set Identifier (SSID).



(/wiki/File:RS485\_TO\_WIFI\_ETH\_MQTT02.png)

Enter the address in the computer browser: "10. 10.100 254"; the management page of RS485 TO WIFI/ETH will appear on the webpage -> Enter the user name and password with "admin".



(/wiki/File:RS485\_TO\_WIFI\_ETH\_MQTT03.png)

If your browser fails to connect after entering "10. 10.100.254", you can use the following

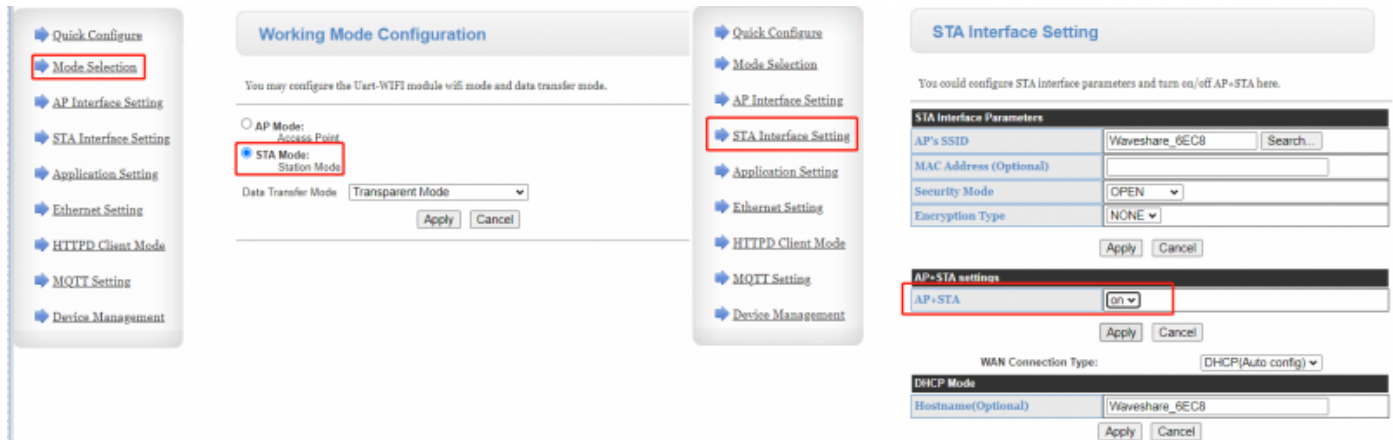
IP address:"10.10.100.222".



(/wiki/File:RS485\_TO\_WIFI\_ETH\_MQTT04.png)

## Connect To The Internet WAN

Please enable AP+STA mode, as shown below:



(/wiki/File:STA%2BAP.png)

Connect to the WiFi hotspot for Internet access (you can also open the network port and connect the network cable to the Internet)

The screenshot shows a network configuration page with a table of detected WiFi hotspots and a 'Quick Configure' sidebar. The table lists various SSIDs, BSSIDs, RSSI values, channels, encryption types, and authentication methods. The 'Quick Configure' panel is currently set to 'WiFi Mode' and 'STA Mode'. The 'AP's SSID' is set to 'Waveshare\_D928'. The 'Security Mode' is set to 'OPEN' and the 'Encryption Type' is set to 'NONE'. The 'Apply' button is highlighted.

SSID	BSSID	RSSI	Channel	Encryption	Authentication	Network Type
406	50:fa:34:4c:ad:ea	94%	1	AES	WPA2PSK	Infrastructure
71mm	b4:8f:3b:f9:78:31	100%	10	AES	WPA2PSK	Infrastructure
Xiao	ec:41:18:a7:06:99	91%	11	AES	WPA2PSK	Infrastructure
0xET9498E99CB2E5AFBA	24:69:68:89:65:da	63%	4	AES	WPA2PSK	Infrastructure
Redmi_3F2C	5c:02:14:f3:8f:ea	81%	6	AES	WPA2PSK	Infrastructure
0xE544A7E78B97E4BA8CE78B97	99:76:9f:9a:18:94	78%	1	AES	WPA2PSK	Infrastructure
333	24:c2:24:ea:38:74	76%	2	AES	WPA2PSK	Infrastructure
	6e:61:58:21:56:b4	78%	6	AES	WPA2PSK	Infrastructure
0xE99A4E5A301E5AE98E80081E78E	64:64:4a:e3:cb:4b	68%	2	AES	WPA2PSK	Infrastructure
dumbdumbdun	8c:a6:df:c4:ca:84	63%	6	AES	WPA2PSK	Infrastructure
Xiaomi406	94:64:4a:a3:65:01	63%	6	AES	WPA2PSK	Infrastructure
YNLYXYXHY	2c:b2:1a:6a:1b:92	69%	4	AES	WPA2PSK	Infrastructure
0xE48B9CE5DC97E5A58AE5A090E846	34:96:72:1c:04:95	55%	11	AES	WPA2PSK	Infrastructure
marlinking	d9:76:e7:95:5f:60	42%	1	AES	WPA2PSK	Infrastructure
Lyle	1c:60:de:bc:68:8c	42%	1	AES	WPA2PSK	Infrastructure
marlinking111	e2:76:a7:35:5f:60	44%	1	AES	WPA2PSK	Infrastructure
mFI_07E472	4c:bc:98:07:e4:72	50%	5	AES	WPA2PSK	Infrastructure
BREEZE	68:77:24:99:37:a2	47%	6	AES	WPA2PSK	Infrastructure
0x2AE5A49CE79CABE4B93E794A52A	6e:77:24:99:37:a2	50%	6	NONE	OPEN	Infrastructure
	72:77:24:99:37:a2	47%	6	AES	WPA2PSK	Infrastructure
B404	48:8e:ec:0f:11:a2	42%	6	AES	WPA2PSK	Infrastructure
0xESA8E8E9E9CE9EB2A7E9B5B7	99:76:9f:2e:b3:4d	42%	11	AES	WPA2PSK	Infrastructure
Xiaomi_B39C	24:c2:24:aa:83:9d	34%	1	AES	WPA2PSK	Infrastructure
Q	8c:53:c3:59:7c:c1	39%	1	AES	WPA2PSK	Infrastructure
CMCC-Ryxc	08:60:83:89:34:a8	39%	3	AES	WPA2PSK	Infrastructure
0xE8AFB4E4BD40E5E8E8E9E8B7E595	9c:9d:7e:84:05:04	34%	3	AES	WPA2PSK	Infrastructure
ChinaNet-XvHZ	30:fb:b8:26:e5:84	34%	6	AES	WPA2PSK	Infrastructure
504-1CASC3	a2:66:aa:96:c7:47	31%	8	AES	WPA2PSK	Infrastructure
102	44:9f:71:4b:68:29	31%	11	AES	WPA2PSK	Infrastructure
xiaocheng	28:e1:27:81:2c:00	28%	6	AES	WPA2PSK	Infrastructure
TPGuest_0044	56:75:95:7e:80:44	26%	11	AES	WPA2PSK	Infrastructure
SKHY306	a4:39:b3:14:71:16	26%	11	AES	WPA2PSK	Infrastructure
B204	34:fc:a1:88:8e:3f	26%	11	AES	WPA2PSK	Infrastructure
0xE78CAA78CAA	54:75:95:6d:80:44	24%	11	AES	WPA2PSK	Infrastructure
	3c:cd:57:67:b3:9a	13%	1	AES	WPA2PSK	Infrastructure
	BSSID	Signal:%%	0	AES	WPA2PSK	Ad Hoc

(/wiki/File:RS485\_TO\_WIFI\_ETH\_MQTT005.png)

STA mode has the same function as an external network cable. Please turn on WiFi and turn off the hotspot.

192.168.0.198

中文 English

Quick Configure  
Mode Selection  
AP Interface Setting  
STA Interface Setting  
Application Setting  
Ethernet Setting  
HTTPD Client Mode  
**MQTT Setting**  
Device Management

### MQTT Setting

Set MQTT Function

MQTT Setting	
Open the MQTT	ON ▾
Version(3.1.1)	V3.1.1 ▾
Server Address	<input type="text"/>
Server Port	undefined
Heart Beat(0-65535/0 means off)	<input type="text"/>
Client ID(Can be empty)	<input type="text"/>
Username(Can be empty)	<input type="text"/>
Password(Can be empty)	<input type="text"/>
Pub Mode	mode1(Pure transparent transmission mode) ▾
Sub Mode	mode1(Pure transparent transmission mode) ▾
Open the Will	ON ▾
Will Topic	<input type="text"/>
Will QOS	QOS0 ▾
Will Retained	ON ▾
Will Message(Can be empty)	undefined

Apply Cance

MQTT Pub Topic

(/wiki/File:Wifi\_MQTT.png)

Easy-to-use Online MQTT Client|Try Now (emqx.io) ([http://www.emqx.io/online-mqtt-client/#/recent\\_connections/0350e24b-cb34-442c-95a2-6c037ce66fcf](http://www.emqx.io/online-mqtt-client/#/recent_connections/0350e24b-cb34-442c-95a2-6c037ce66fcf))

Enter the MQTT Setting to configure:

10.10.100.254/home.html

中文 English

- Quick Configure
- Mode Selection
- AP Interface Setting
- STA Interface Setting
- Application Setting
- Ethernet Setting
- HTTPD Client Mode
- MQTT Setting**
- Device Management

### MQTT Setting

Set MQTT Function

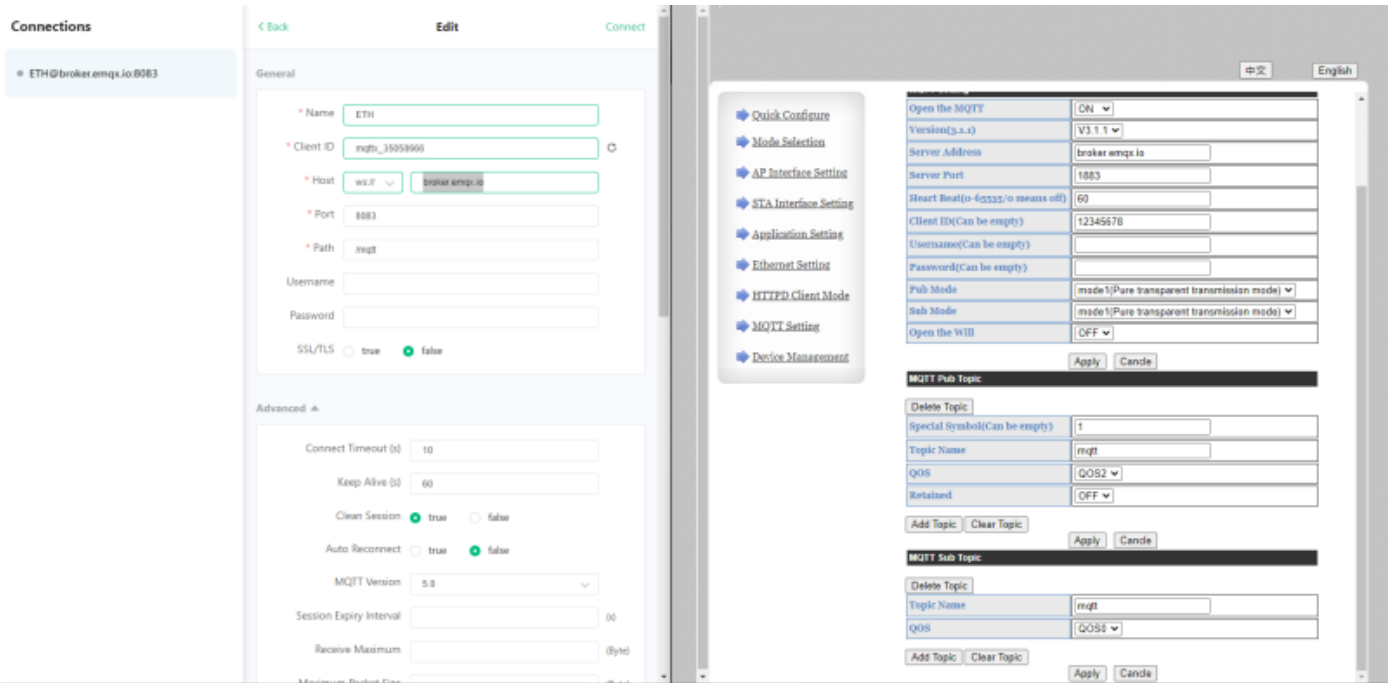
MQTT Setting	
Open the MQTT	ON
Version(3.1.1)	V3.1.1
Server Address	
Server Port	undefined
Heart Beat(0-65535/0 means off)	
Client ID(Can be empty)	
Username(Can be empty)	
Password(Can be empty)	
Pub Mode	mode1(Pure transparent transmission mode)
Sub Mode	mode1(Pure transparent transmission mode)
Open the Will	ON
Will Topic	
Will QOS	QOS0
Will Retained	ON
Will Message(Can be empty)	undefined

Apply Cancele

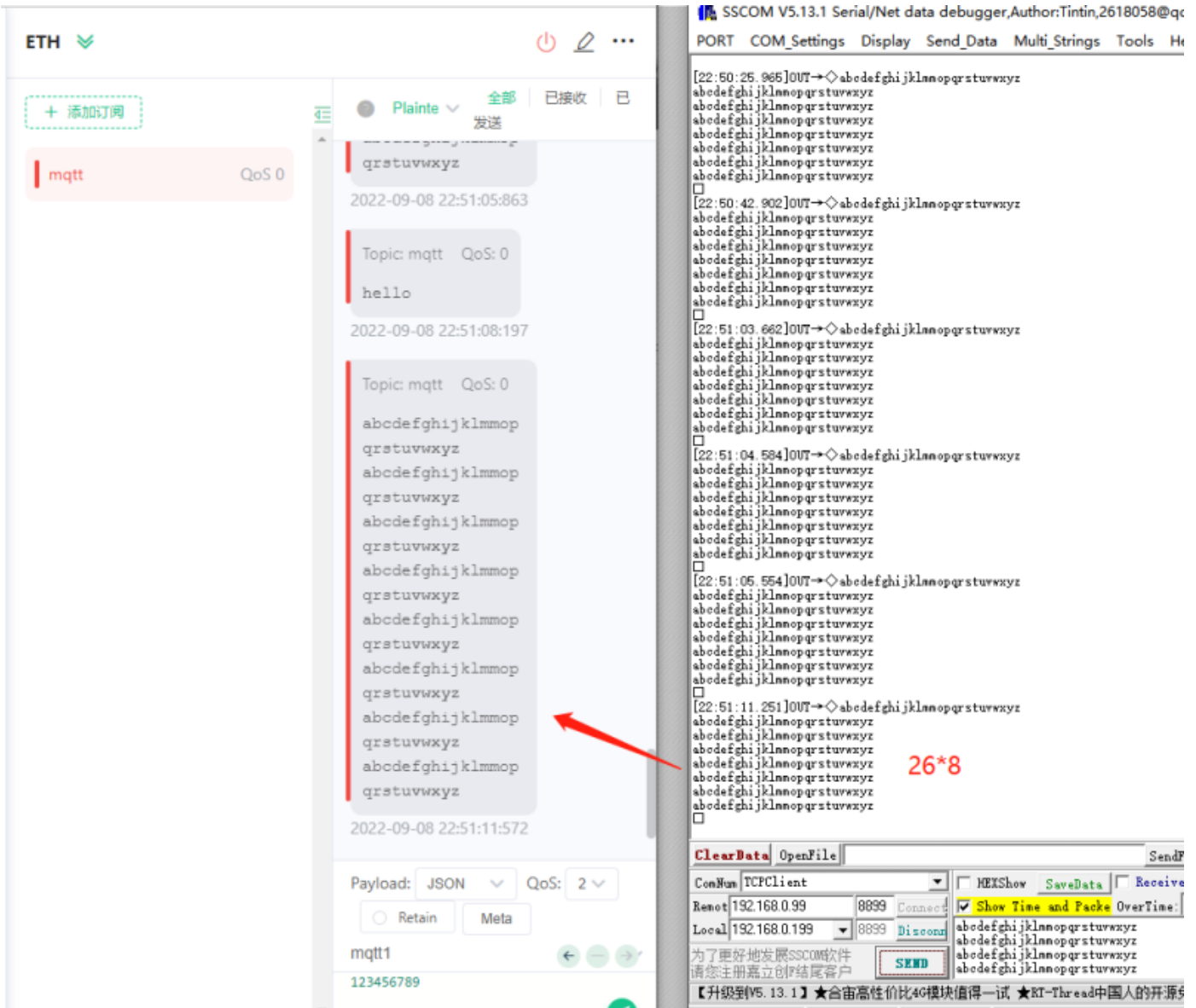
MQTT Pub Topic

(/wiki/File:RS485\_TO\_WIFI\_ETH\_MQTT007.png)

Communicate via MQTT and EMQX MQTT platform:



(/wiki/File:RS485\_TO\_WIFI\_ETH\_MQTT008.png)





(/wiki/File:RS485\_TO\_WIFI\_ETH\_MQTT009.png)

Tips: STA and ETH cannot be opened at the same time.

*Retrieved from "[https://www.waveshare.com/w/index.php?title=RS485\\_TO\\_WIFI\\_ETH\\_MQTT&oldid=72738](https://www.waveshare.com/w/index.php?title=RS485_TO_WIFI_ETH_MQTT&oldid=72738)  
([https://www.waveshare.com/w/index.php?title=RS485\\_TO\\_WIFI\\_ETH\\_MQTT&oldid=72738](https://www.waveshare.com/w/index.php?title=RS485_TO_WIFI_ETH_MQTT&oldid=72738))"*

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