




WiFi RS-422/485 Serial Adapter

Model: S2W485IV2 (Internal antenna)

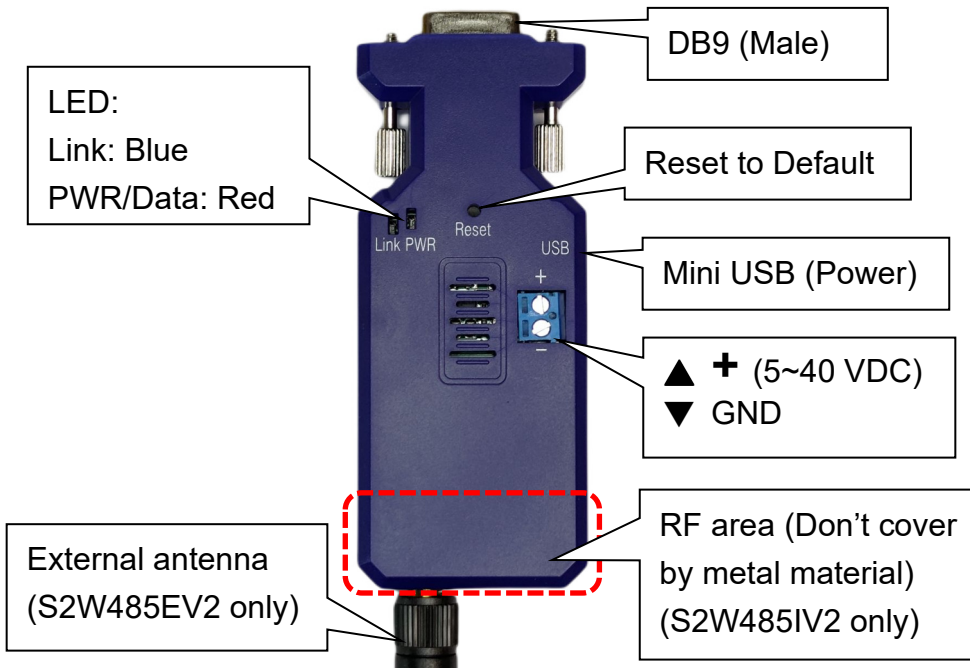
Model: S2W485EV2 (External antenna)

1. Package content:

<p>WiFi RS-485 adapter</p>  <p>White Box Dimension: 11 x 6 x 5 (cm) Total Package Weight: 108 g (Internal antenna); 116 g (External antenna)</p> 	<p>Package Contents:</p> <ul style="list-style-type: none"> ● WiFi RS-485 adapter x 1 ● A4 User manual x 1 ● Mini USB Cable x 1 ● 6P Terminal block x 1  <p>The antenna is for S2W485EV2 only.</p>
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2. Profile:

2.1 Top view:

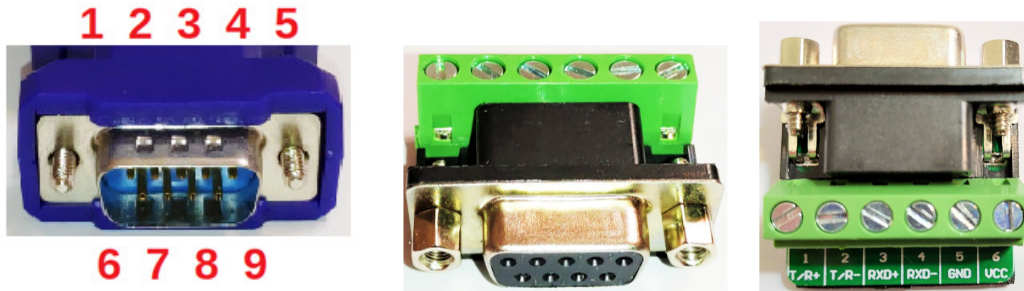


2.2 Rear Side:



Slide switch for RS-485 or RS-422

2.3 DB9 connector (Male) & 6P Terminal block



No.	Function	Remark
1	A (RX+)	D+, A=Y (RS-485)
2	B (RX-)	D-, B=Z (RS-485)
3	Y (TX+)	
4	Z (TX-)	
5	GND	
6	Vin-1	5-40VDC, Vin-1 or Vin-2 choose one
7	N/A	
8	N/A	
9	Vin-2	5-40VDC, Vin-1 or Vin-2 choose one

3. Power supply:

3.1 Voltage: 5~40 VDC, **Don't exceed the limit.**

3.2 There're 3 ways to power the adapter: Mini USB, 2P Terminal Block (Blue) and pin9 of DB9, please choose one. **Don't power the adapter by more than one source.**

3.3 The mini USB to type A cable is inside the standard package.

4. Specifications:

4.1 Default value:

- Baud rate: 9,600 bps
- Data bit: 8
- Parity: none
- Stop bit: 1
- Flow control: none
- SSID: S2W232-abcd (abcd means the last 4 code of the Mac. address)
- Configuration Webpage IP: 192.168.0.3
- Socket: TCP server, Port: 5000
- Log in ID: admin, PWD: admin

4.2 Serial Port:

- Baud Rate: 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200, 230400 bps
- Data bit: 5,6,7,8

- Parity: none, even, odd
- Stop bit: 1,1.5,2
- Flow control: None, RTS, CTS, RTS+CTS

4.3 Support Wi-Fi 2.4 GHz 802.11b/g/n

4.4 Transmit Power:

- 802.11b: +19dBm(Max.@11Mbps , CCK)
- 802.11g: +18dBm(Max.@54Mbps , OFDM)
- 802.11n: +16dBm(Max.@HT20 , MCS7)

4.5 Receive Sensitivity:

- 802.11b: -85 dBm(@11Mbps , CCK)
- 802.11g: -70 dBm(@54Mbps , OFDM)
- 802.11n: -68 dBm(@HT20 , MCS7)

4.6 Operating Current (work with 3.3V power supply)

- AP: 74mA (average), 285mA (peak)
- STA: 32mA (average), 196mA (peak)

4.7 Support WPA/WPA2 security mode.

4.8 Socket: TCP Server, TCP Client, UDP Server, UDP Client

4.9 Wireless Network Type: AP, Station, AP+Station

4.10 Security: WPA-PSK/WPA2-PSK

4.11 Encryption: TKIP, AES

4.12 User Configuration: Webpage setting

4.13 Support TCP Server/Client, Http Client, Https Client

4.14 Operation Temperature: -20 °C to +85 °C

4.15 Dimensions: 81.6 mm (L) x 31.75 mm (W) x 17 mm (H), Antenna: 10 cm

4.16 Antenna Gain: max. 2 dB (default)

Remark: All contents are subject to change without notice.

5. Configuration:

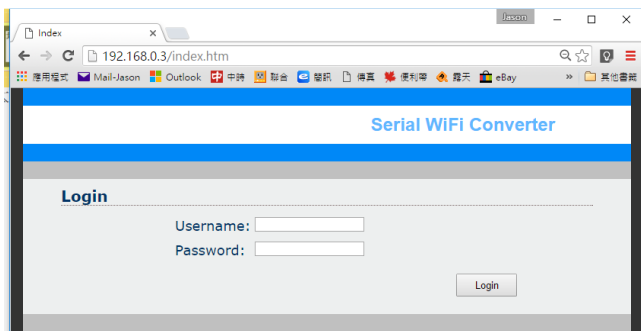
Step1: Connect the SSID of the adapter named "S2W232-abcd"

Step2: http://192.168.0.3 on browser

Step3: Log in

Username: admin

Password: admin



Serial WiFi Converter [Logout](#)

Basic Advanced WiFi WiFi Wizard Status

Serial Settings

Device Name:
Device name can be up to 16 characters.

Data Baud Rate:

Data Bits:

Data Parity:

Stop Bits:

Flow Control:

Serial to Network Settings

Server/Client mode:

Operation Mode:

Connection Type:

Server/Client Mode:

Server Listening Port:
Please enter an integer between 10~65535.

TCP Server Connections:
This is effective only for TCP server under Socket or VCOM mode.

<input type="text" value="230400"/> 115200 57600 38400 19200 9600 4800 2400 1200	<input type="text" value="5"/> 6 7 8	<input type="text" value="None"/> Odd Even
--	---	--

Baud rate Data bits Parity

<input type="text" value="1"/> 1.5 2	<input type="text" value="None"/> RTS CTS RTS+CTS
--	--

Stop bit Flow control

Operation Mode:

Connection Type:

Server/Client Mode:

Client Destination Host Name/IP:
Please enter host name or IP address(e.g. google.com or 10.4.1.100).

Client Destination Port:
Please enter an integer between 1024~65535.

Connection Type:
TCP
UDP
Http client

TCP Server Connections:
 1
 2
 3
 4

Operation Mode:

Connection Type:

Server Listening Port:
 Please enter an integer between 10~65535.

Client Destination Host Name/IP:
 Please enter host name or IP address(e.g. google.com or 10.4.1.100).

Client Destination Port:
 Please enter an integer between 1024~65535.

HTTP client request method:
 GET
 POST

HTTP client request content-type:
 application/x-www-form-urlencoded
 application/json
 multipart/form-data
 text/xml

HTTP client request transport type:
 HTTP_TRANSPORT_OVER_TCP
 HTTP_TRANSPORT_OVER_SSL

Firmware upgrade:

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Logout

Basic **Advanced** WiFi WiFi Wizard Status

Firmware Upgrade

Image url:
 Please input the image url path for firmware upgrade.

Site survey for station configuration:

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Basic Advanced WiFi **WiFi Wizard** Status

Welcome to the WiFi Setup Wizard

Use site survey tool to join a WiFi AP.

ID	BSSID	SSID	TYPE	CH	SIGNAL	SECURITY
0	d4:5d:64:9d:52:d8	ASUS_D8_2G	Infra	11	-24	WPA2_PSK
1	40:9b:cd:a9:65:56	CHT48617	Infra	1	-54	WPA2_PSK
2	f8:1d:0f:3b:53:28	liao	Infra	6	-87	WPA_WPA2_PSK
3	78:44:76:de:cf:08	flyflyhomewifi	Infra	11	-89	WPA2_PSK
4	40:9b:cd:16:c6:63	.1.Free Wi-Fi	Infra	10	-94	OPEN
5	40:9b:cd:16:c6:61	CHT Wi-Fi(HiNet)	Infra	10	-95	OPEN
6	bc:4d:fb:65:eb:f8	ruel ying	Infra	11	-98	WPA_WPA2_PSK

Status: Scanning...OK

WiFi setting list:

Serial WiFi Converter

Basic Advanced WiFi WiFi Wizard Status Logout

System Status

Device Type: WiFi to RS232

WiFi Mode: AP mode

WiFi Connect SSID: -

Network Mode: TCP Server

Firmware Version: 0.0.0.8

WiFi MAC address(Hex): 84:cc:a8:60:ba:45

Client 1 IP & MAC: IP: 192.168.0.4, MAC: 68:14:01:8c:5f:e5

Client 2 IP & MAC: -

Client 3 IP & MAC: -

Client 4 IP & MAC: -

Client 5 IP & MAC: -

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Basic Advanced WiFi WiFi Wizard Status Logout

System Settings

Network Mode: AP

Max connect device: 8

AP Channel: 8

Service Area Name/SSID: S2W23260ba45 Hide SSID:

Security Mode: Open

AES/TKIP Encryption Key Settings

AES/TKIP Passphrase: 12345678
Please enter a string between 8-63 digits in length.

Static IP Settings

Static IP Address: 192.168.0.3

Static Default Gateway: 192.168.0.3

Static Subnet Mask: 255.255.255.0

Static DNS Server: 168.95.1.1

DHCP Settings

DHCP: Disable

Save Apply

Network Mode: AP

Security Mode: Open

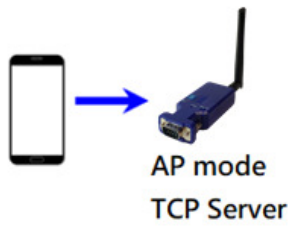
Network Mode: AP

Max connect device: 8

AP Channel: 8

6. Network topology

6.1 AP mode (Default)



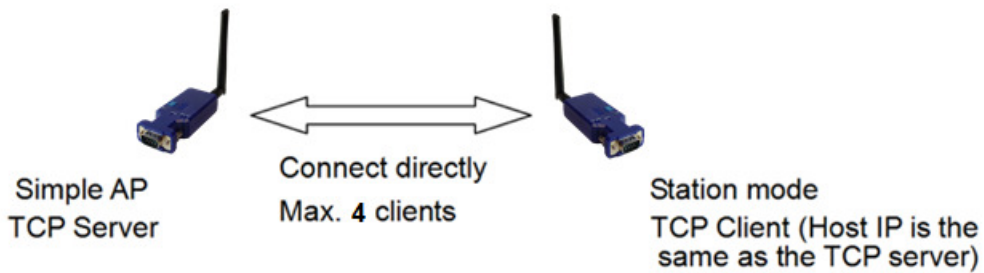
6.2 Station mode



6.3 TCP Client



6.4 One to up to 4 broadcast



7. 3rd party test software

7.1 Teraterm: TCP client, COM port (ASCII only)

<https://ttssh2.osdn.jp/index.html.en>

7.2 AccessPort: COM port (Hex, ASCII)

<http://www.sudt.com/en/ap/>

7.3 Sockettest: TCP server or Client

<https://sourceforge.net/projects/sockettest/>

7.4 Virtual COM port driver-1

<https://www.virtual-serial-port.org/>

7.5 Virtual COM port driver-2

<http://www.eterlogic.com/Products.VSPE.html>

8. Test APP: The APP is used for the configuration and the data transmission test.

Download:

Android APP



iOS APP



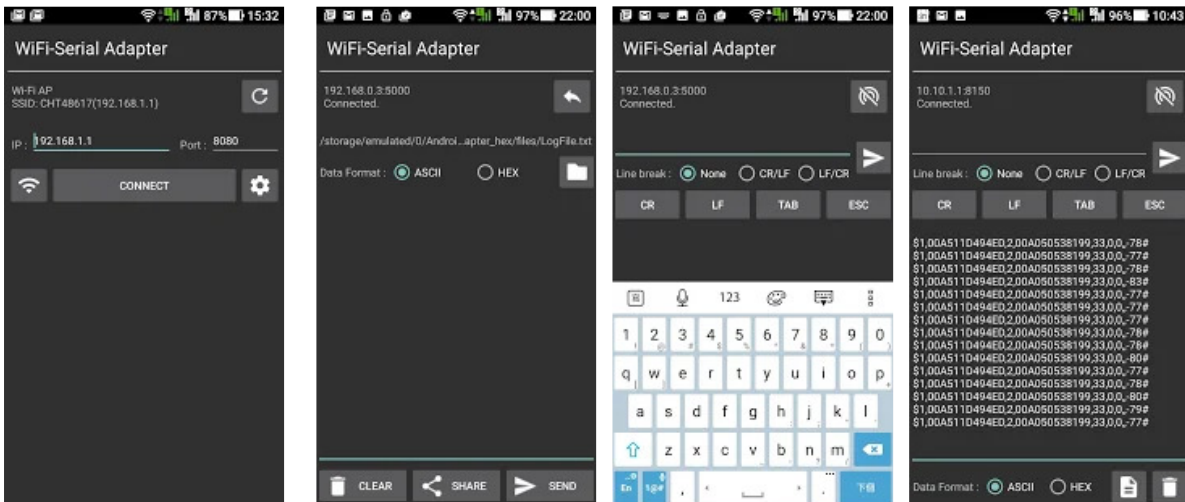
Android:

https://play.google.com/store/apps/details?id=com.ucconnect.uctcpipadapter_hex

iOS:

<https://apps.apple.com/us/app/tcp-ip-to-serial-terminal/id1238054234?l=zh&ls=1>

Screenshot of the APP:



9. AT command mode: There're two kinds, Uconnect & ESP32 version

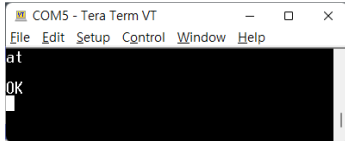
9. AT command mode: There're two kinds of commands, Uconnect & ESP32 version

9.1 Uconnect: Type “+++” via RS-232 (9,600; 8-N-1) when power on and “hsuart>” display. “help” command will list the command which supports all the functions on the web page.



```
COM5 - Tera Term VT
File Edit Setup Control Window Help
hsuart>Usage: ipconfig
Usage: setip <IP address>
Usage: setnetmask <netmask>
Usage: setgateway <gateway IP address>
Usage: setdns <DNS IP address>
Usage: setmode <mode>
```

9.2 ESP32: Power off the adapter → press the reset button → power on the adapter over 5 seconds when two LED solid on → release the button → Key in “at” or “AT” and reply “OK”. The default setting of ESP32 is 115,200 bps, 8-N-1. The adapter supports all ESP32 original AT command.



```
COM5 - Tera Term VT
File Edit Setup Control Window Help
at
OK
```

Link: https://docs.espressif.com/projects/esp-at/en/latest/esp32/AT_Command_Set/