WiFi to RS-422/485 adapter user manual



- 2. Start to use the adapter
- 2.1 Please fasten the external antenna to the adapter and switch RS-422 or RS-485 in right side.
- 2.2 There're two power inputs, mini USB or blue 2 ports block terminal. Please switch to choose one way to power the adapter. The max. voltage is 27 VDC input from the blue block terminal. **Please connect the power cable with the terminal block before power on.**
- 2.3 COM port default setting:
 - Baud rate: 115200 bps
 - Data bit: 8
 - Parity: none
 - Stop bit: 1
 - Flow control: none

2.4 Network default setting:

- Simple AP and support DHCP
- SSID: Serial2WiFi_ab_cd (ab or cd means the last 4 code of the Mac. address)
- No Security
- IP: 192.168.0.3
- Socket port: 5000
- Channel: 11
- Log in ID: admin
- Log in password: admin
- 2.5 Power switch: mini USB side by default. The user will switch to the blue 2 ports block terminal side if the power input comes from other sources.
- 2.6 DCE/DTE switch: DCE side. The switch will swap TX,RX,CTS,RTS of the COM port. Generally, DCE side for PC or NB setup. The user will test and switch to the correct side for the remote device.
- 3. Configuration: Please choose one way and download the "TeraTerm" tool for testing.
- 3.1 Web page: The user will setup the adapter via PC, NB or Smart phone.

Step1: Connect the simpleAP named "Serial2WiFi_ab_cd" Step2: http://192.168.0.3 on browser Step3: Log in Username: admin Password: admin

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You can configure the WiFi and COM port parameters from the web page. Please press "Apply" when setup and the adapter will reboot.

3.2 PC software:

Step1: Please connect the simpleAP named "Serial2WiFi_ab_cd"

Step2: Execute AXR2W Configuration Utility with the administrator authority.

Step3: Search the WiFi device, double click the item and the setup page display.

| Decke Munitar DeCP Server TPTP Server COM Port Terminal Insui COM Ports Terminal Trail COM Ports Terminal Termin | Device Management Virtual Serial Port | System Setting | Search IP Search | Device Setup Web Browser | Reboot Restore | Firmware Upgrade | □ Use Ext □ Search | ternal Brow After Applic | ser ation Start | |
|--|--|----------------------------|--|-----------------------------|-------------------|---------------------|-----------------------|-----------------------------|--------------------|--------------|
| IFIP Sever Image: Sever | Device Monitor DHCP Server | Status Ic Progress | | | | | | | | |
| Log 2016-510-95444 Application starts successfully: 2016-510-95444 Selected metwork interface: 192 168 0.4 Please check the right network | FTP Server 20M Port Terminal ual COM Ports | | D.SM1 | 00-0E-C6-40-02 | -17 Disable | 192.168.0 | 3 5000 | Server | Chulus Idle | Double click |
| 2016-510-55444 Application starts successfully. 2016-510-55444 Selected network interface: 192.168.0.4 Please check the right network | Log | | | | | | | | | |
| Please check the right network | 2016-5-109-54-44 2016-5-109-54-44 | Application Selected ne | starts successful rtwork interface: 1 | ly. 92.168.0.4 | | | | | | |
| | Please | e cheo | ck the | e right | t net | wor | k | | | |

Date: 2019.04.12

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| Device Setup > | Device setup | X Device setup | Device Setup |
|---|--|--|---|
| Network Setting Serial Port Setting W/Fi Setting DHCP Server Setting | Network Setting Serial Port Setting WiFi Setting DHCP Server Setting | Network Setting Serial Port Setting WiFi Setting DHCP Server Setting | Network Setting Serial Port Setting W/Fi Setting DHCP Server Setting |
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| Submit Save Load | Submit Save Load | Submit Save Load | Submit Save Load |

Network setting

Serial port setting

WiFi setting

DHCP Server Setting

- 3.3 RS-232:
 - Step1: Connect the adapter via WiFi and connect the RS-232 connector

Step2: Execute COM port tool software Step3: Set baud rate: 115200 bps Step4: Key in "+++" and then Enter

Step5: Log in the device and setup

| era Term: New connection | | | | | | | | |
|--------------------------|--|--|--|--|--|--|--|--|
| © TCP/IP | Host: 192.168.2.99 | | | | | | | |
| | TCP port#: 23 Protocol: UNSPEC - | | | | | | | |
| | ✓ Telnet | | | | | | | |
| Serial | Port: COM34: USB Serial Port (COM34) 🔹 | | | | | | | |
| | OK Cancel Help | | | | | | | |



4. Virtual COM port driver: Execute the utility by "Administrator" authority.

| Monton Remove Close Oligin By DrdCe Server Setting Enable Flow Control Packet By TFIP Server Status Connect at Windows Start COM Port Terminal Virtual Serial Ports List COM Port Configuration Virtual COM Ports Port ID Port Configuration Virtual Cold Ports Status COM Port Configuration Virtual Cold Ports Virtual Serial Ports List COM Port Number COM1 OK COM2 COM2 COM2 COM2 COM3 [in used] COM4 [in used] COM4 [in used] COM4 [in used] COM6 [in used] COM6 [in used] COM5 [in used] COM6 [in used] COM6 [in used] COM4 [in used] COM6 [in used] COM6 [in used] COM5 [in used] COM6 [in used] COM6 [in used] COM6 [in used] COM6 [in used] COM6 [in used] COM6 [in used] COM6 [in used] COM6 [in used] COM6 [in used] COM6 [in used] COM6 [in used] COM7 [in used] COM7 [in used] COM7 [in used] COM6 [in used] COM6 [in used] COM7 [in | | Virtual Port | -Network Connect | Virtual Port / Netwo Connection Protoc | work Configuration | |
|--|-------------------|-----------------------------|---------------------|---|--|--|
| B) DHCP Server B) TFTP Server C) COM Port Terminal Virtual Scribing Virtual Serial Ports COM Port Configuration Virtual COM Ports OMI OK Com/l Com/l | M Device Monitor | Remove | Close | Client | Enable Flow Control Packet | |
| Status Status Virtual COM Port Servinal Virtual Serial Ports List - Virtual COM Ports Port ID Port ID Port Name Status COM Port Number COMI OK COM3 (in used) CoM4 (in used) COM6 (in used) COM6 (in used) Vom Time Message No Time 1 2016-5-10-10-18-57 Selected network interface: 192 168.0.4 COM6 (in used) COM11 COM10 (in used) COM11 COM11 | DHCP Server | | Setting | Listen Port | | |
| Virtual COM Ports Port ID Port Name Status Re COM Port Number OK COM 1 COM | COM Port Terminal | Status Virtual Serial Po | orts List | | COM Port Configuration X | |
| ystem Log No Time Message COMS (in used) COMS (in used) COM | | | | | COM1 Image: Complexity of the sector of th | |
| | System Log | Message | arts successfully | 2.168.0.4 | COM5 (in used) COM5 (in used) COM7 (in used) COM8 (in used) COM8 (in used) COM8 (in used) | |

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- 5. LED indication:
- 5.1 Red: Power On or Off
- 5.2 Blue: Wifi Status

| Running Image | WiFi Mode | Status LED Indicator | WiFi State | | |
|---------------|-----------|---------------------------|---------------|--|--|
| | Station | Off | Disconnect | | |
| Default | Station | Blinking by 0.5sec period | BSS connected | | |
| | AP | Blinking by 0.5sec period | Running | | |
| | Station | Off | Disconnect | | |
| Upgrade | Station | Always light | BSS connected | | |
| | AP | Blinking by 2sec period | Running | | |

6. Reset button:

Press the "Reset" button over 5 seconds, the WiFi adapter will reset to default value. The LEDs will be off for some time and then reboot to the default value. The function is the same ad the software reset.

7. RS-422/485 Connection: 4 ports of terminal block

7.1 Pin-out:

Terminator, only 1 in the loop if necessary.



7.2 RS-485: Half Duplex, 2 Wires, RX+ (A), RX-(B)





7.3 RS-422: Full Duplex, 4 Wires, RX+ (A), RX-(B), TX+, TX-



8. Command set:

Usage: ipconfig

Usage: setip <IP address>

Usage: setnetmask <netmask>

Usage: setgateway <gateway IP address>

Usage: setdns <DNS IP address>

Usage: setmode <mode>

<mode>: 0: SERVER 1: CLIENT

Usage: r2wmode <mode>

<mode>

0: Socket

1: VCOM

2: RFC2217

3: Modbus Gateway

Usage: setsrvport <port number>

Usage: setdstport <port number>

Usage: setdsthn <host name | IP address>

Usage: connectype <protocol>

<protocol>: 0: TCP 1: UDP

Usage: connstatus

Usage: wifi_connect [SSID] [WPA PASSWORD / WEP KEY(5 or 13)] [WEP KEY ID]

SSID = 1 ~ 32 ASCII characters

WPA PASSWORD = 8 \sim 63 ASCII characters

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        ASCII WEP KEY = 5 (WEP64) or 13 (WEP128) ASCII characters
        WEP KEY ID = 0 ~ 3
Usage: wifi_disconnect
Usage: wifi_mode [MODE]
        MODE = 1(STA), 2(AP)
Usage: wifi_scan
Usage: wifi_jbss <INDEX>
        INDEX = Index of bss scan table, maximum 24 BSSs supported
Usage: wifi_on
Usage: wifi_off
Usage: wifi_channel <CHANNEL>
        CHANNEL = 1 ~ 13
Usage: wifi_ssid <SSID>
        SSID = 1 ~ 32 ASCII characters
Usage: wifi_enc <ENC_MODE>
        ENC_MODE = 0(OPEN)
                   1(WEP)(AP mode not support)
                   2(WPA2_AES_PSK)
Usage: wifi_keyid <INDEX>
        INDEX = 0 ~ 3
Usage: wifi_wepkey <INDEX> <KEY>
        INDEX = 0 ~ 3
        KEY = 5 or 13 ASCII characters
Usage: wifi_wpakey <KEY>
        KEY = 8 ~ 63 ASCII characters
Usage: reboot
Usage: urdatamode
Usage: setdef
Usage: saveconfig
Usage: ping <IP address>
Usage: wifi_info
Usage: wifi_ap <ssid> <channel> <wep/wpa key> <wep key index>
        <ssid>: 1~32 ASCII characters
        <channel>: 1~14
        <wep/wpa key>: WEP(5/13 ASCII characters) or WPA(8~63 ASCII characters) k
ey
        <wep key index>: WEP key index, 0~3
Usage: ur_config <baud_rate> <databits> <stop_bits> <parity> <flow_contrl>
        <baud_rate>:
                     1200 bps
                     2400 bps
                     4800 bps
                     9600 bps
                     19200 bps
                     38400 bps
                     57600 bps
                     115200 bps
                     921600 bps
        <databits>: 7 or 8 bits
```

<stop_bits>: 1 or 2 bit(s)

<parity>: 0 = none, 1 = odd, 2 = even

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<flow_contrl>: 0 = disable, 1 = enable CTS/RTS flow control Usage: dhcpclient <status> <status>: 0: disable 1: enable Usage: setdhcpsrv <status> <status>: 0: disable 1: enable Usage: ntpsrv <time zone> <ntp server1> <ntp server2> <ntp server3> <time zone> 0: GMT-12.0 Eniwetok, Kwajalein 1: GMT-11.0 Midway Is., Samoa 2: GMT-10.0 Hawaii 3: GMT-9.0 Alaska 4: GMT-8.0 Los Angeles, Tijuana 5: GMT-7.0 Denver Arizona 6: GMT-6.0 Chicago, Mexico City 7: GMT-5.0 New York, Bogota 8: GMT-4.0 Santiago 9: GMT-3.0 Brasilia, Montevideo 10: GMT-2.0 Fernando de Noronha 11: GMT-1.0 Azores 12: GMT+0.0 Lisbon, London 13: GMT+1.0 Berlin, Paris 14: GMT+2.0 Helsinki, Cairo 15: GMT+3.0 Moscow, Nairobi 16: GMT+4.0 Abu Dhabi, Baku 17: GMT+5.0 Karachi, Islamabad 18: GMT+6.0 Almaty, Dhaka 19: GMT+7.0 Bangkok, Jakarta 20: GMT+8.0 Hong Kong, Singapore 21: GMT+9.0 Seoul, Tokyo 22: GMT+10.0 Melbourne, Sydney 23: GMT+11.0 Solomon Is. 24: GMT+12.0 Fiji, Wellington Usage: rtcts <mode> 1: NTP server <mode>: 0: manual Usage: time <hour> <minute> <second> <hour>: 0~23 <minute>: 0~59 <second>: 0~59 Usage: date <year> <month> <date> <year>: 2000~2099 <month>: 1~12 <date>: 1~31 Usage: getths Usage: setems <e-mail server domain name> Usage: setemf <e-mail address> Usage: setemt1 <e-mail address> Usage: setemt2 <e-mail address> Usage: setemt3 <e-mail address> Usage: setemsc <SecurityType> <PortNumber> <SecurityType>:

0=No security

User Manual V1.2 1=SSL 2=TLS 3=Auto <PortNumber>: 25 or 587 for regular transfer port 465 for SSL port Usage: setemac <UserName> <PassWord> Usage: emconfig Usage: setaw <cold start> <authentication fail> <ip changed> <password changed> <cold start>: 0: Disable 1: Enable <authentication fail>: 0: Disable 1: Enable 0: Disable 1: Enable <ip changed>: <password changed>: 0: Disable 1: Enable Usage: jtagoff <status> <status>: 0: enable 1: disable Usage: getotaname Usage: countryid <id> <id>: 0=World wide 13(2G_WORLD: 1~13) 1=Europe(2G_ETSI1: 1~13) 2=Japan(2G_MKK1: 1~14) 20=United States(2G_FCC2: 1~13) Otherwise=Unavailable Usage: dhcpsrv <start addr> <end addr> <lease> Usage: transmitimer <time> <time>: time in ms, available value range is 10~65535 ms Usage: dhcpstbl Usage: scpincode <status> <status>: 0: disable 1: enable Usage: cloud <hostname> Usage: mbtcp <xferMode> <port> <xferMode>: 0: MODBUS TCP 1: Transparent TCP <port>: TCP server port number, default is 502 Usage: mbst <ResponseTimeOut> <InterFrameDelay> <InterCharDelay> <ResponseTimeOut>: Response timeout(10~65000ms) <InterFrameDelay>: Interval time of frame sending(10~500ms) <InterCharDelay>: Inter-Character timeout for frame receiving(10~500ms) Usage: wifi_simple_config <pinCode>

9. Online help: "help" command (Available for RS-232 setup only)

10. One to one connection: The two WiFi adapters will be connected directly without access point.

Simple AP

Connect directly Max. 4 clients

Station mode TCP Client (Host IP is the same as the TCP server)