



How to setup the WA232E Serial WiFi adapter **(based on Windows 10, 32/64-bit)**

This step-by-step guide explains how to get started using the Serial RS232 WiFi Adapter part WA232E.

This product has many more advanced features and functions than described in this guide so you should consider this guide only as a quick-start guide to help you get started with the basic functions.





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Configuring the parameters

The WA232E's parameters can be configured several ways:

- Web browser over WiFi
- Configuration utility software (included) over WiFi
- Serial RS232 port

We will here describe each one of these methods.

The default network settings are:

Adhoc mode (Simple AP), DHCP enabled
SSID: Serial2WiFi_ab_cd (ab_cd is the last 4 numbers of the MAC address)
No Security
IP: 192.168.0.3
Socket port: 5000
Channel: 11
Log in ID: admin
Log in password: admin

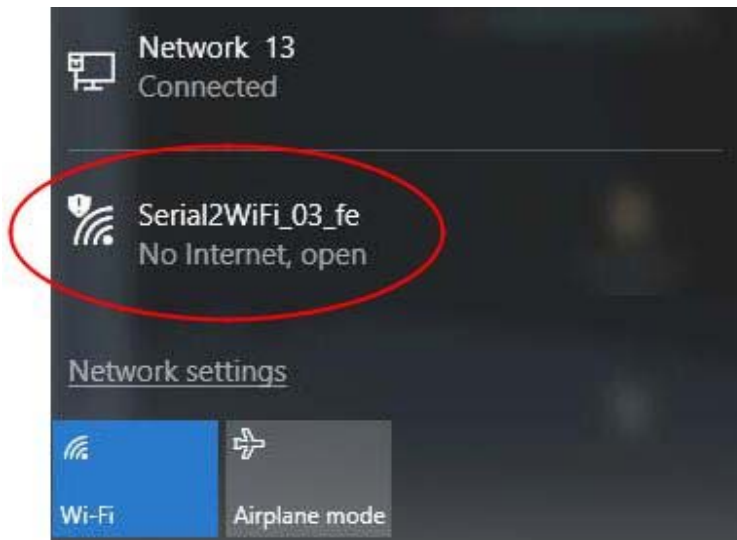
The default COM port settings are:

Baud rate: 9600 bps
Data bit: 8
Parity: none
Stop bit: 1
Flow control: none



Configuring the parameters using a Web browser

Use your WiFi adapter's connection manager or Windows WiFi manager to connect to the adapter. In this example we use Windows connection manager:





The WA232E has DHCP enabled by default so make sure your wireless network has “Obtain an IP address automatically” selected. Go to “Control Panel\All Control Panel Items\Network Connections”, right-click wireless network and click “Properties”. Select “Internet Protocol Version 4 (TCP/IPv4)” and click “Properties”.

Internet Protocol Version 4 (TCP/IPv4) Properties

General Alternate Configuration

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

☒ Obtain an IP address automatically

☐ Use the following IP address:

IP address:

Subnet mask:

Default gateway:

☒ Obtain DNS server address automatically

☐ Use the following DNS server addresses:

Preferred DNS server:

Alternate DNS server:

☐ Validate settings upon exit

Advanced...

OK Cancel



Open Internet Explorer and enter the IP address <http://192.168.0.3>. You should now see the login screen.

The default username is: admin

The default password is: admin

The screenshot shows a web browser window with the address bar displaying <http://192.168.0.3/index.htm>. The page title is "Index". The browser menu bar includes File, Edit, View, Favorites, Tools, and Help. The web page has a blue header with the text "Serial WiFi Converter". Below the header, the word "Login" is displayed. The login form consists of two input fields: "Username:" with the text "admin" entered, and "Password:" with five dots entered. A "Login" button is located to the right of the password field.



Below are screenshots of the default configuration pages (firmware v_0.7.4.0103):

The screenshot displays the 'Serial WiFi Converter' web interface in a browser window. The address bar shows 'http://192.168.0.3/basic.htm'. The interface has a blue header with the title 'Serial WiFi Converter' and a 'Logout' link. Below the header is a navigation bar with tabs: 'Basic' (selected), 'Advanced', 'Security', 'WiFi', 'WiFi Wizard', 'RTC', and 'Status'. The 'Basic' tab contains three sections: 'Serial Settings', 'Serial to Network Settings', and 'Static IP Settings'. Each section contains various configuration fields with dropdown menus and text input boxes, along with helpful hints in blue text.

Serial Settings

- Device Name: Device name can be up to 16 characters.
- Data Baud Rate:
- Data Bits:
- Data Parity:
- Stop Bits:
- Flow Control:
- RS485:

Serial to Network Settings

- Operation Mode:
- Connection Type:
- Transmit Timer (ms): Please enter an integer between 10~65535.
- Server/Client Mode:
- Server Listening Port: Please enter an integer between 1024~65535.
- TCP Server Connections: This is effective only for TCP server under Socket or VCOM 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.
- Client Connection Mode:

Static IP Settings

- Static IP Address:
- Static Default Gateway:
- Static Subnet Mask:
- Static DNS Server:



←

→

http://192.168.0.3/advanced

Advanced

File

Edit

View

Favorites

Tools

Help

Serial WiFi Converter

Logout

Basic

Advanced

Security

WiFi

WiFi Wizard

RTC

Status

Firmware Upgrade

Image path:

Browse...

Please specify the image file path for firmware upgrade.

Upgrade

E-mail & Auto Warning Report Settings

SMTP Server Address/IP:

asix.com.tw

Please enter host name or IP address(e.g. google.com or 10.4.1.100).

Security:

SSL

SMTP Server Port:

465

From E-mail Address:

ds@asix.com.tw

To E-mail Address 1:

to1@asix.com.tw

To E-mail Address 2:

to2@asix.com.tw

To E-mail Address 3:

to3@asix.com.tw

Cold Start:

Disable

Authentication Failure:

Disable

Local IP Address Changed:

Disable

Password Changed:

Disable

Save

Apply

Cancel

MODBUS Settings

Transfer Mode:

Transparent TCP

Server Port:

502

Response Timeout:

3000

Available range:10~65000ms.

Inter-Frame Delay:

10

Available range:10~500ms.

Inter-Character Delay:

10

Available range:10~500ms.

Save

Apply

Cancel

100%



←

→

http://192.168.0.3/security.h

Security

×

FileEditViewFavoritesToolsHelp

Serial WiFi Converter

Logout

BasicAdvancedSecurityWiFiWiFi WizardRTCTestStatus

Change Username Setting

New Username:

Apply

Cancel

Change Password Setting

Old Password:

New Password:

Confirm Password:

Apply

Cancel

Change SMTP Username & Password Setting

Username:

Password:

Save

Apply

Cancel

Google Nest Setting

Server URL/HostName:

Please enter firebase id(e.g. xxx.firebaseio.com).

Save

Apply

Cancel

Bluemix Setting

Server HostName:

Username:

Password:

Organization ID:

Length must be 6 bytes.

Type ID:

Length must be 5 bytes.

Device ID:

Length must be 11 bytes.

API Version:

Length should be less than or equal to 12 bytes.

100%



http://192.168.0.3/wifi.htm

wifi

File

Edit

View

Favorites

Tools

Help

Serial WiFi Converter

Logout

Basic

Advanced

Security

WiFi

WiFi Wizard

RTC

Status

System Settings

Network Mode:

AP

AP Channel:

11

Service Area Name/SSID:

Serial2WiFi_03_fe

Hide SSID:☐

Security Mode:

Open

WEP Encryption Key Settings

Key Length:

64 bits

Key Index Select:

Key Index 0

Key Index 0:

12345

Key Index 1:

67890

Key Index 2:

54321

Key Index 3:

09876

Please enter 5 ASCII codes or 10-digit hex for 64-bit key length.

AES/TKIP Encryption Key Settings

AES/TKIP Passphrase:

12345678

Please enter a string between 8~63 digits in length.

Save

Apply

Cancel

100%



←

→

http://192.168.0.3/wifi_wz.ht

wifi_wz

FileEditViewFavoritesToolsHelp

Serial WiFi Converter

Logout

BasicAdvancedSecurityWiFiWiFi WizardRTCTestStatus

Welcome to the WiFi Setup Wizard

Use site survey tool to join a WiFi AP.

ID	BSSID	SSID	TYPE	CH	SIGNAL	SECURITY
0	ae:f9:20:6e:f9:10	SETUP	Infra	11	-78	Open
1	00:0f:15:0c:c8:06	CoronaExtra	Infra	3	-82	WPA2 TKIP

Status: Scanning...ok

ScanNext



Serial WiFi Converter

Logout

Basic

Advanced

Security

WiFi

WiFi Wizard

RTC

Status

RTC Settings

RTC Time Setup:

☒ Manual

☐ NTP Server

Daylight Saving Time:

Disable

Note that the daylight saving time is supported only in NTP server mode.

Date&Time Settings

Date:

0

/0

/0

Please enter the year between 2000~2099, the month between 1~12, and the date between 1~31.

Time:

0

/0

/0

Please enter the hour between 0~23, the minute between 0~59, and the second between 0~59.

Note that the date and time are allowed to modify in manual mode.

SNTP Client Settings

Time Zone:

GMT+8.0 Hong Kong, Singapore

NTP Server HostName/IP 1:

time.stdtime.gov.tw

NTP Server HostName/IP 2:

tick.stdtime.gov.tw

NTP Server HostName/IP 3:

tock.stdtime.gov.tw

Save

Apply

Cancel

100%



http://192.168.0.3/status.htm

Status

FileEditViewFavoritesToolsHelp

Serial WiFi Converter

Logout

BasicAdvancedSecurityWiFiWiFi WizardRTCTestStatus

System Status

Device Name:

DSM1

Device IP Address:

192.168.0.3

Firmware Version:

0.7.4.0103(Single)

WiFi MAC address(Hex):

0x000ec64003fe

Modem Status(Hex):

0x00

Protocol Type:

TCP

Connection Status:

Idle

Serial Port TX Count(Byte):

0

Serial Port RX Count(Byte):

0

Current Temperature(°C):

0.00

Current Relative Humidity(%):

0.00

Current Date:

0/0/0 Sunday

Current Time:

0:0:7

Image File Name:

ota_r2w_v0740103_20170427.bin

Cloud Connection Status:

No cloud service

RefreshStart

RefreshStop

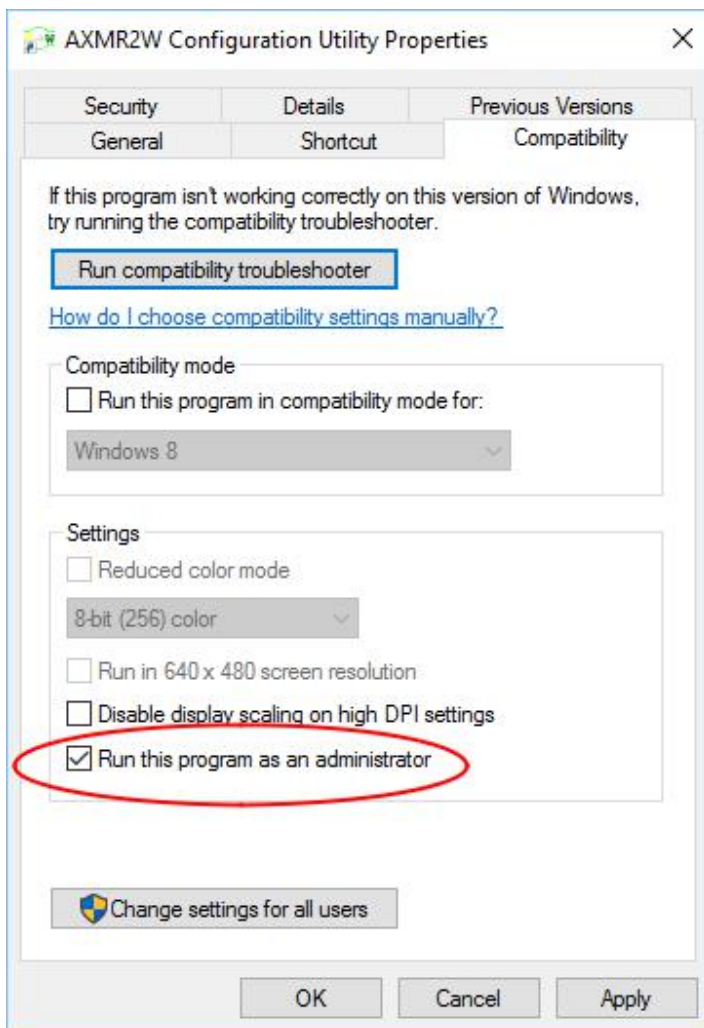
100%



Configuring the parameters using the software utility

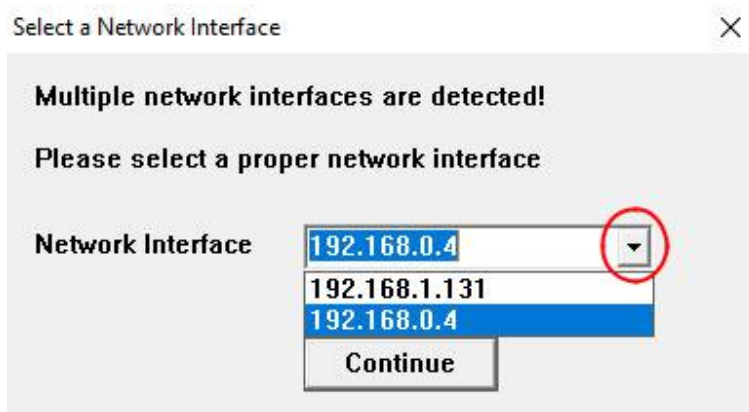
Install the software utility by executing the file “R2W_RS232-to-WiFi_Toolkit” (either the 32-bit version or the 64-bit version).

After installation has finished, start the utility with administrator privileges. You do that by right-clicking the program icon and select “Properties”, then enable “Run this program as an administrator” and click “Apply” and “OK”:





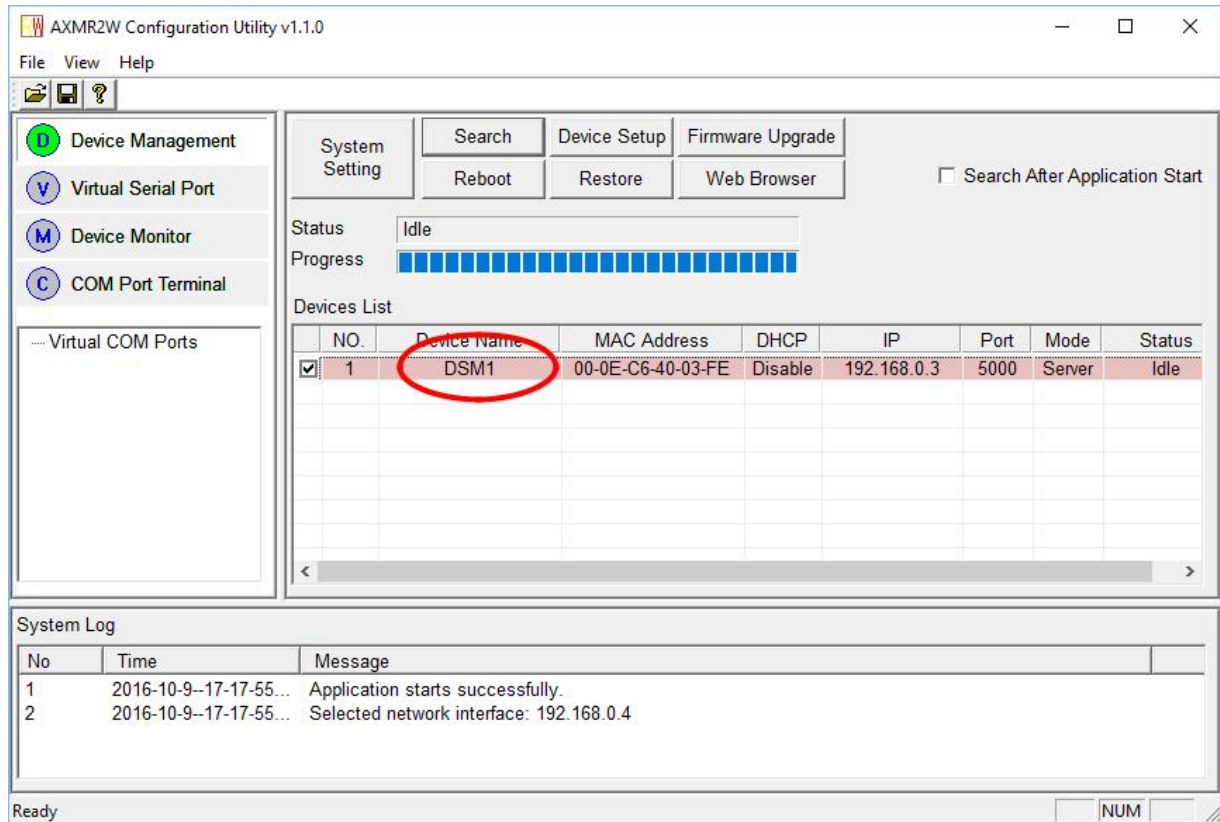
If your computer has more than one network connection you need to select the wireless network which is in the same subnet as the WA232E:



Use the up/down arrows to scroll through the IPs if there are more than two IPs.



Once the software is open, click the Search button and the software should find the WA232E:



Select the WA232E from the device list and click "Device Setup" and the settings window will open:



Device Setup

Network Setting

Serial Port Setting

WiFi Setting

DHCP Server Setting

NTP Setting

Device Name

DSM1

Operation Mode

Socket

MAC Address

00-0E-C6-40-03-FE

DHCP

Disable

Data Packet Type

☐ UDP

☒ TCP

Static IP

192.168.0.3

Server

Data Listening Port

5000

Client

Destination Port

5000

Destination Hostname/IP

192.168.0.2

Subnet Mask

255.255.255.0

Gateway

192.168.0.1

DNS Server

168.95.1.1

Transmit Timer

100

Domain Name

asix.com.tw

SMTP Configuration Parameters

From Address

ds@asix.com.tw

To Address 1

to1@asix.com.tw

To Address 2

to2@asix.com.tw

To Address 3

to3@asix.com.tw

Security

SSL

SMTP Security Port

465

Event Enable/Disable

IP Change

Disable

Cold Start

Disable

Password Change

Disable

Authentication Fail

Disable

User Name

user@asix.com.tw

Password

password

MODBUS Setting

Transfer Mode

Transparent TCP

Server Port

502

Response Timeout

3000

10~65000 ms

Inter-Frame Delay

10

10~500 ms

Inter-Character Delay

10

10~500 ms

Firmware File

ota_r2w.bin

Submit

Save

Load



Device Setup

Network Setting

Serial Port Setting

WiFi Setting

DHCP Server Setting

NTP Setting

Baud Rate

9600

Data Bits

8

Parity

None

Stop Bits

1

Flow Control

None

Submit

Save

Load



Device Setup

Network Setting | Serial Port Setting | WiFi Setting | DHCP Server Setting | NTP Setting

System Settings

Network Mode

AP

AP Channel

11

Service Area Name/SSID

Serial2WiFi_03_fe

Security Mode

OPEN

WEP Encryption Key Settings

Key Length

64 bits

Key Index Select

Key Index 0

Key Index 0

12345

Key Index 1

67890

Key Index 2

54321

Key Index 3

09876

Please enter 10-digit hex for 64-bit key length or 26-digit hex for 128-bit key length

AES/TKIP Encryption Key Settings

AES/TKIP Passphrase (8 ~ 63 digits)

12345678

Submit

Save

Load



Device Setup

Network Setting

Serial Port Setting

WiFi Setting

DHCP Server Setting

NTP Setting

IP Pool Start Address

192 . 168 . 0 . 4

IP Pool End Address

192 . 168 . 0 . 10

Subnet Mask

255 . 255 . 255 . 0

Default Gateway

192 . 168 . 0 . 3

Lease Time

1440

minutes

Status

Enable

Submit

Save

Load



Device Setup

Network Setting

Serial Port Setting

WiFi Setting

DHCP Server Setting

NTP Setting

NTP Server 1

time.stdtime.gov.tw

NTP Server 2

tick.stdtime.gov.tw

NTP Server 3

tock.stdtime.gov.tw

Time Zone

GMT+08.0 (Hong Kong, Singapore)

RTC Time Setup

Manual

Daylight Saving Time

Disable

Submit

Save

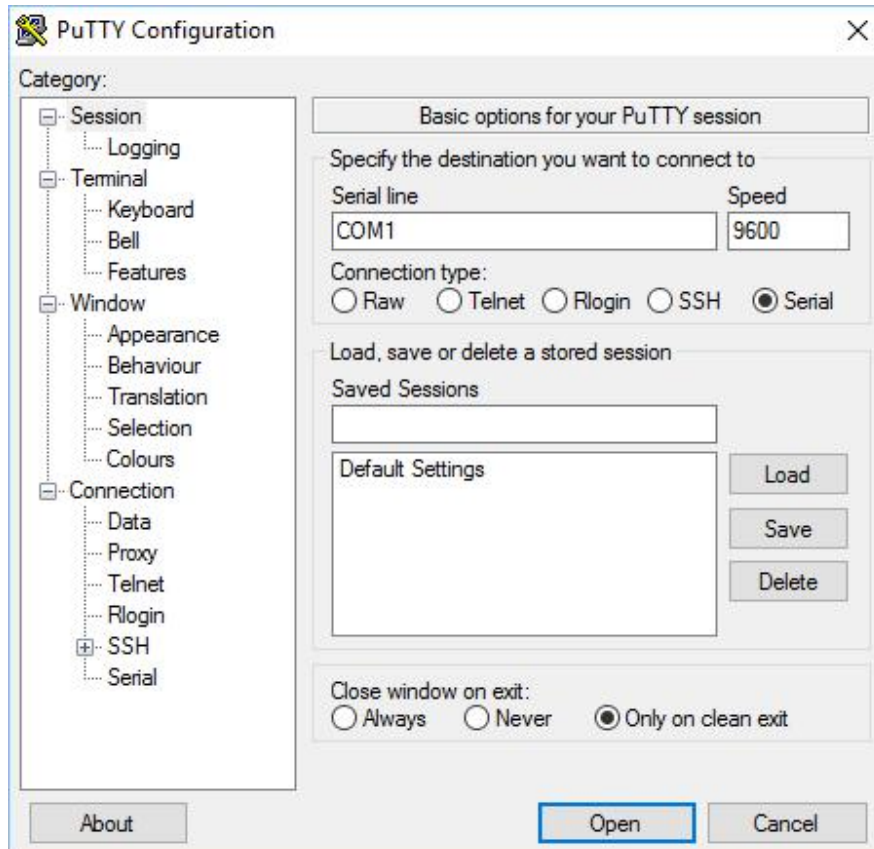
Load

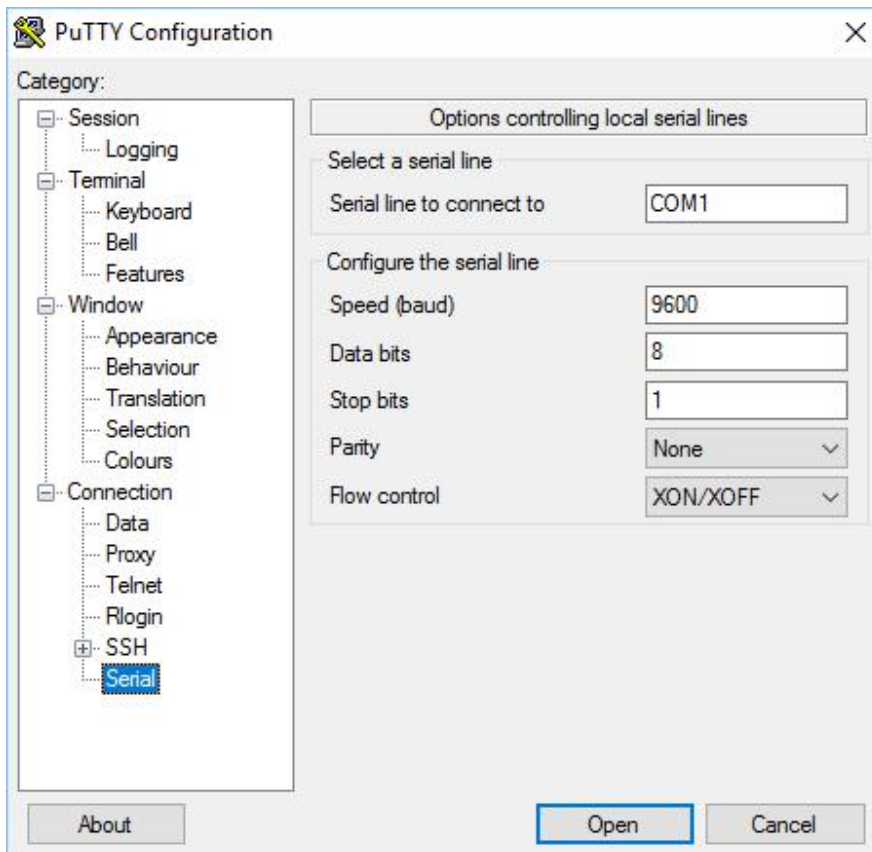


Configuring the parameters over the RS232 serial port

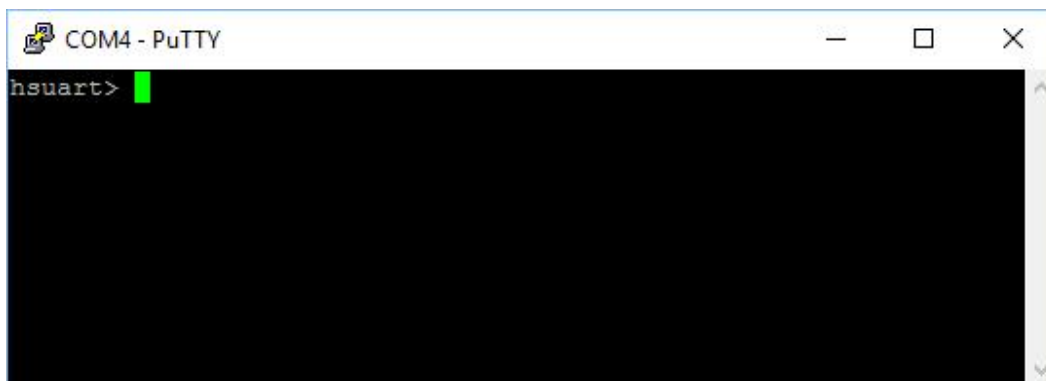
Connect the WA232E to your computer via the serial port.

Create a connection to the WA232E by using a terminal software such as Putty or Tera Term. Below is an example for the settings:





When the connection is established, enter +++ and press the Enter key on your keyboard to access the WA232E. (The +++ will not show up in TeraTerm's/PuTTY's window). NOTICE THAT ON SOME KEYBOARDS YOU NEED TO ENTER THE +++ AND PRESS ENTER BY USING THE MAIN KEYBOARD, NOT THE SMALL NUMBER PAD.



You are now ready to enter commands. Please refer to the datasheet for a complete list of commands, or enter 'help' to get the help menu.



Example for changing the IP address:

First use the “setip” command to set the desired IP address then use the “saveconfig” and “reboot” commands to save and reboot the adapter. After this you will need to login to the adapter again using the +++ command. Once you are logged in you can check the new settings using the “ipconfig” command.

```
COM4 - PuTTY
hsuart> setip 192.168.0.5
Ok
hsuart> saveconfig
Ok
hsuart> reboot
System reboot!
█
```



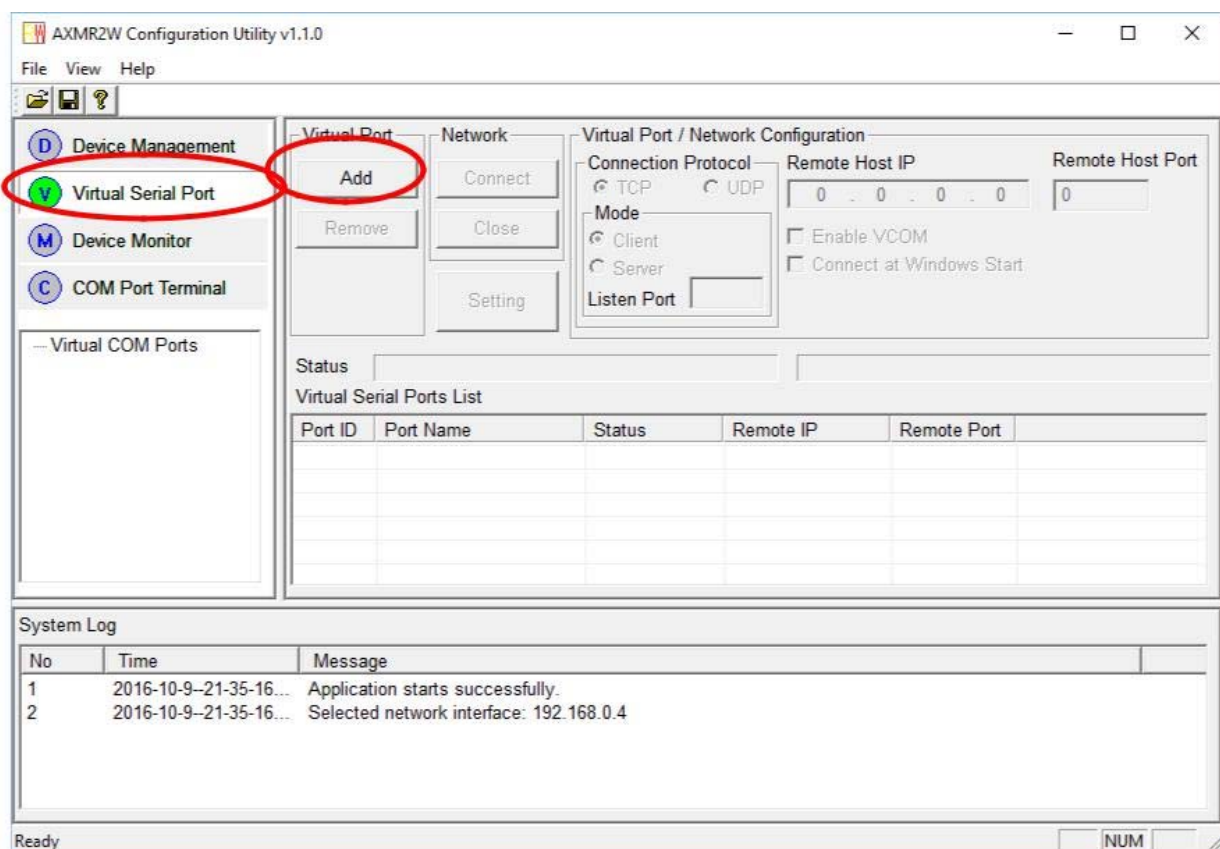

Creating a virtual COM port with the software utility

A virtual COM port can be created by using the AXMR2W Configuration Utility or it can be created by using alternative VCOM software such as PortShare, Fabulatech or USC-VCOM as described later in this setup guide.

First we show how to create a virtual COM port with the included configuration utility.

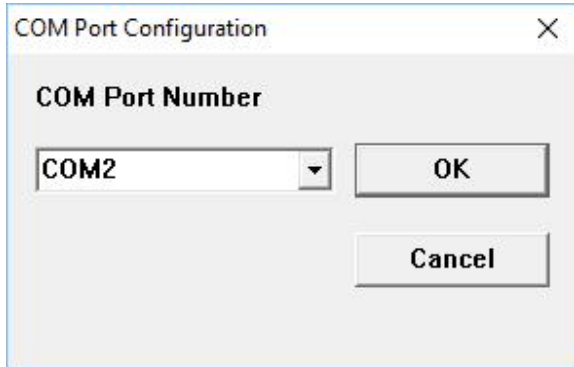
Make sure the WA232E is connected to the WiFi network.

Go to the “Virtual Serial Port” menu and click the “Add” button:

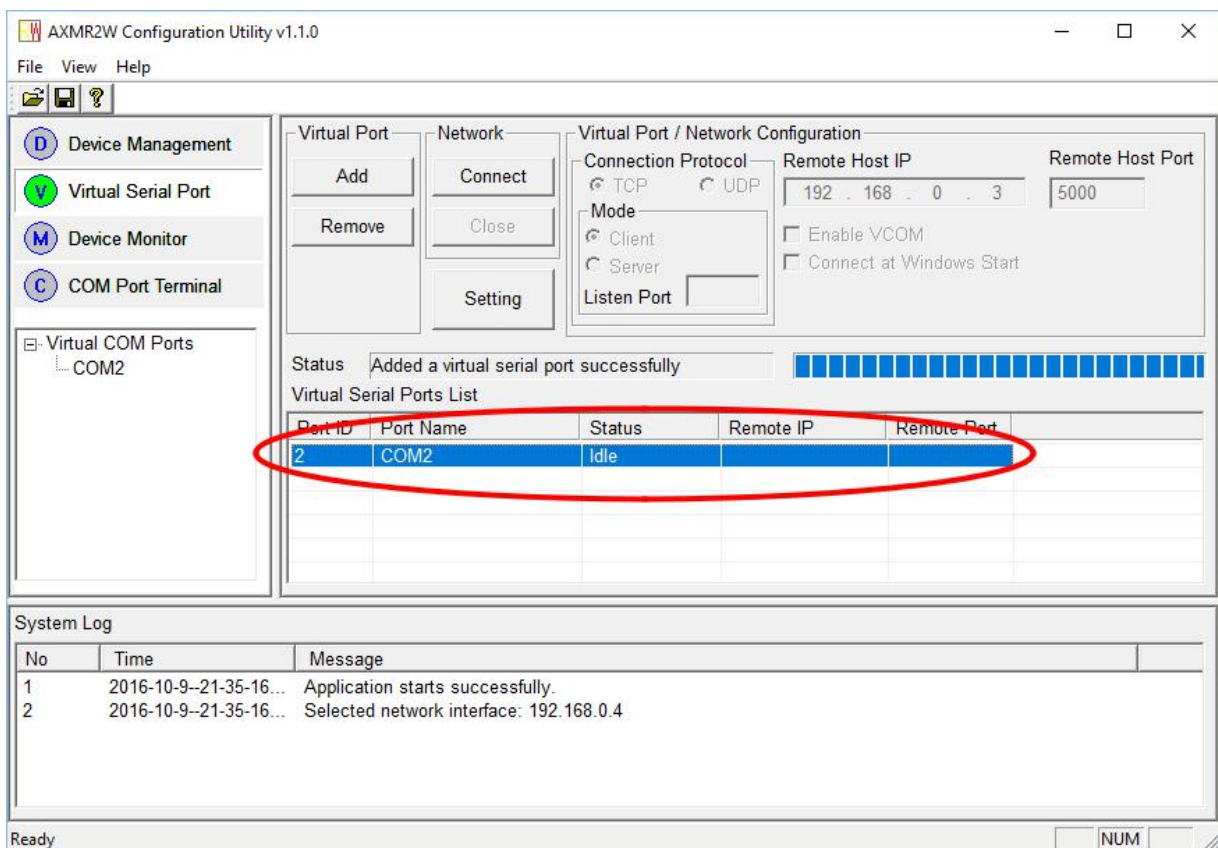




Select a COM port number:

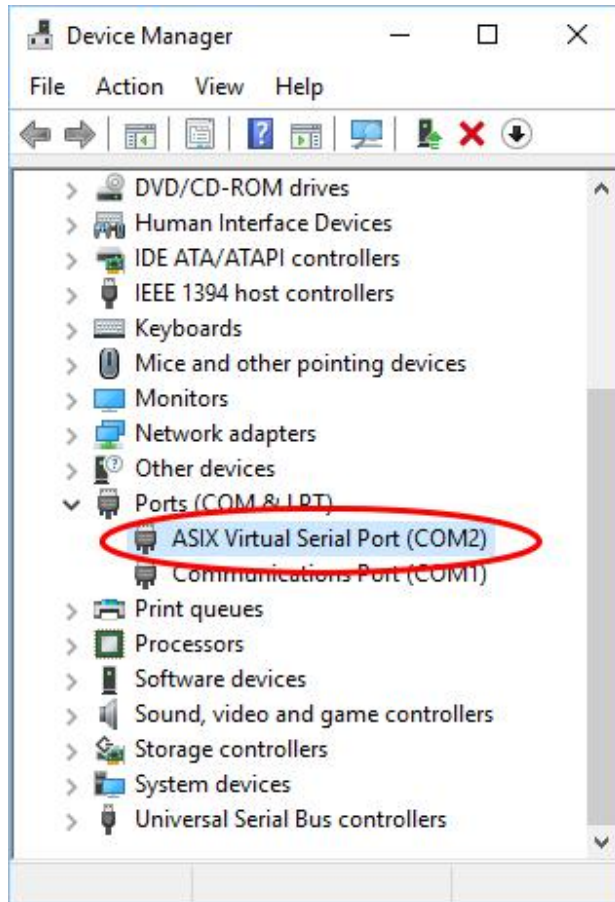


The COM port should now be listed in the Virtual Serial Ports List:



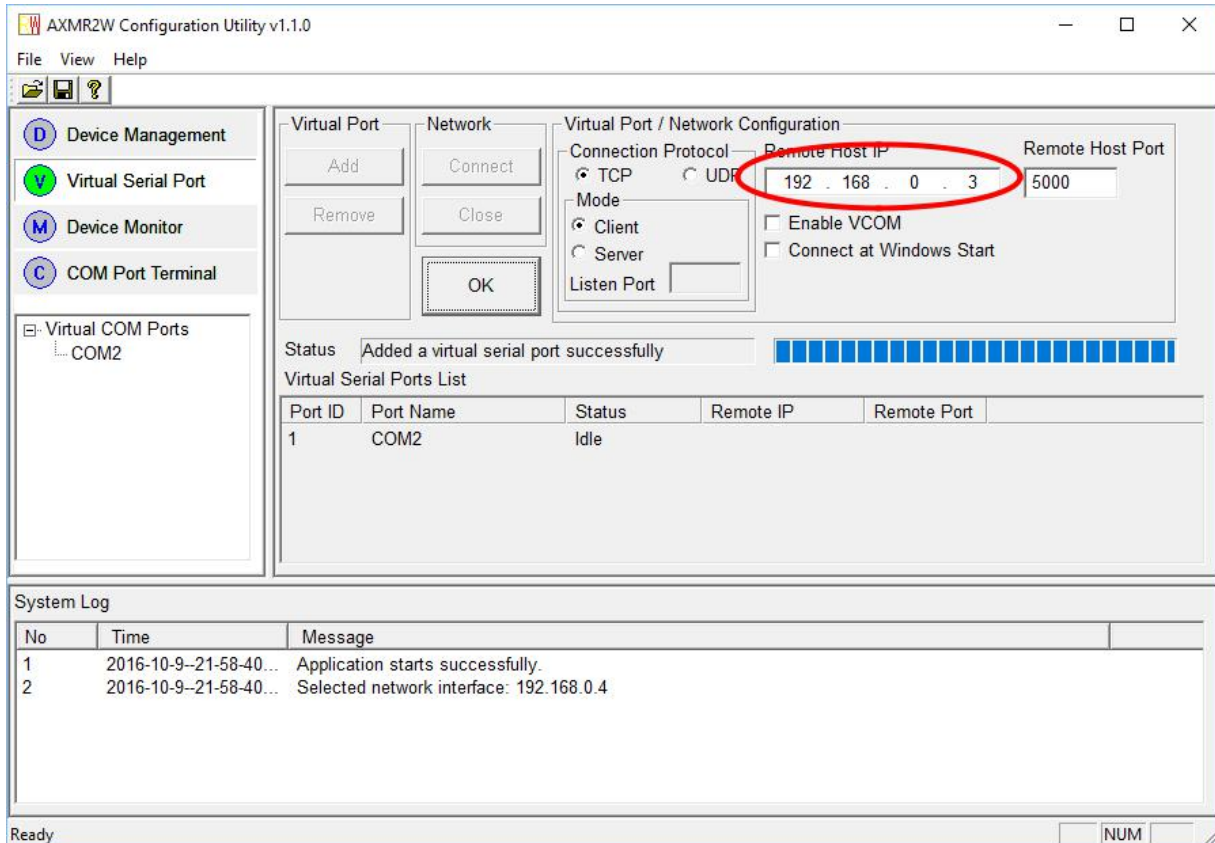


Check in Windows Device Manager to see if the COM port has been successfully created:



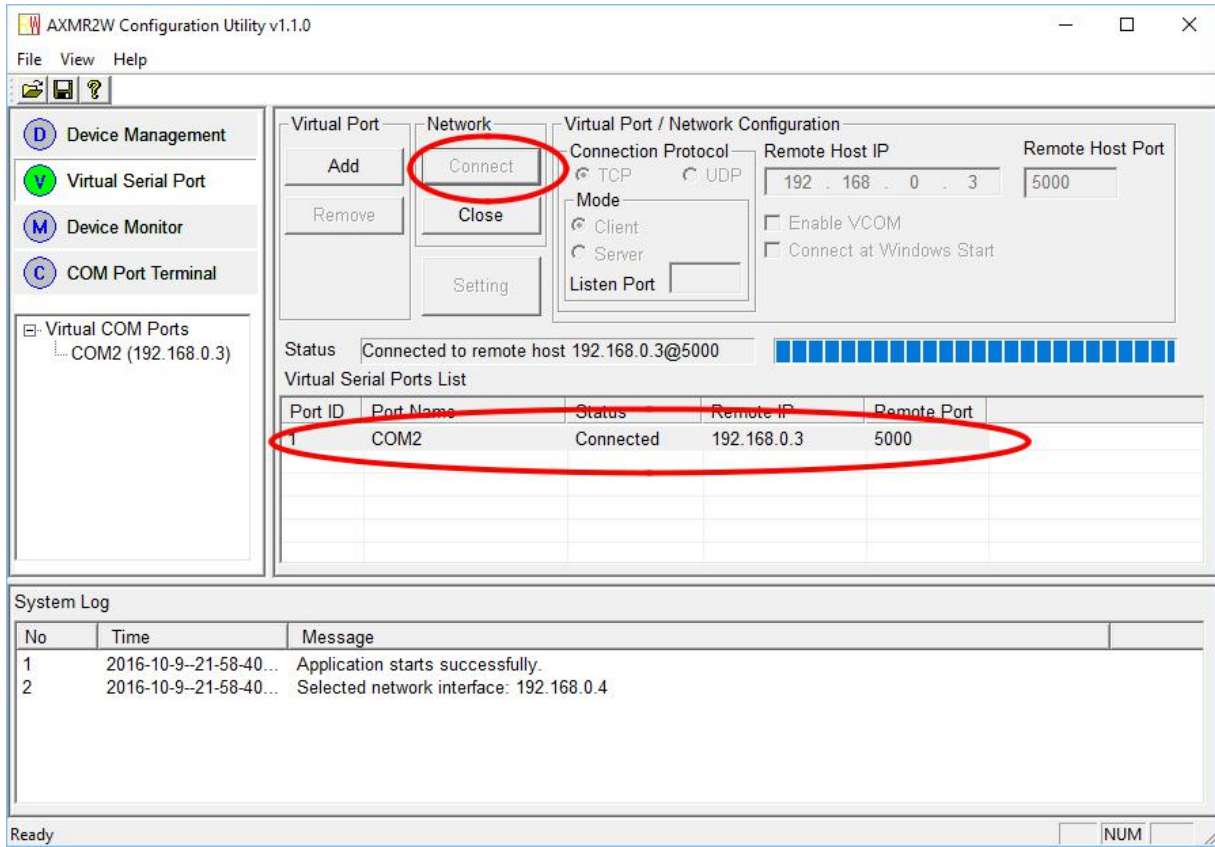


Click the “Setting” button and make sure the adapter’s IP address is entered in the “Remote Host IP” field, and click OK.





Click the “Connect” button and the software will open the COM port, ready to send and receive data.





Verifying communication with a loop-back test

To check if the WA232E can send and receive data successfully you can make a loop-back test using AccessPort (can be downloaded from www.usconverters.com).

First loop-back the TX pin (pin 2) to the RX pin (pin 3) in the WA232E's DB9 connector by placing a jumper (for example a paperclip) between the TX and RX pins:





Open AccessPort and set the parameters as shown below:

Options

General
Event Control
Flow Control
Timeout Control
Monitor Control

General

Custom Baud Rate
☐ Enable 115200

Serial Port Settings
Port: COM2
Baud Rate: 9600
Parity Bit: NONE
Data Bit: 8
Stop Bit: 1
Buffer Size: 8192

Send display
☒ Char Format
☐ Hex Format

Receive display
☒ Char Format
☐ Hex Format

AutoSend
☒ Enable auto send Cycle 200 ms

Advanced
☐ Auto open port when application start
☐ Prompt for saving when application exit
☒ Remind me when update is available

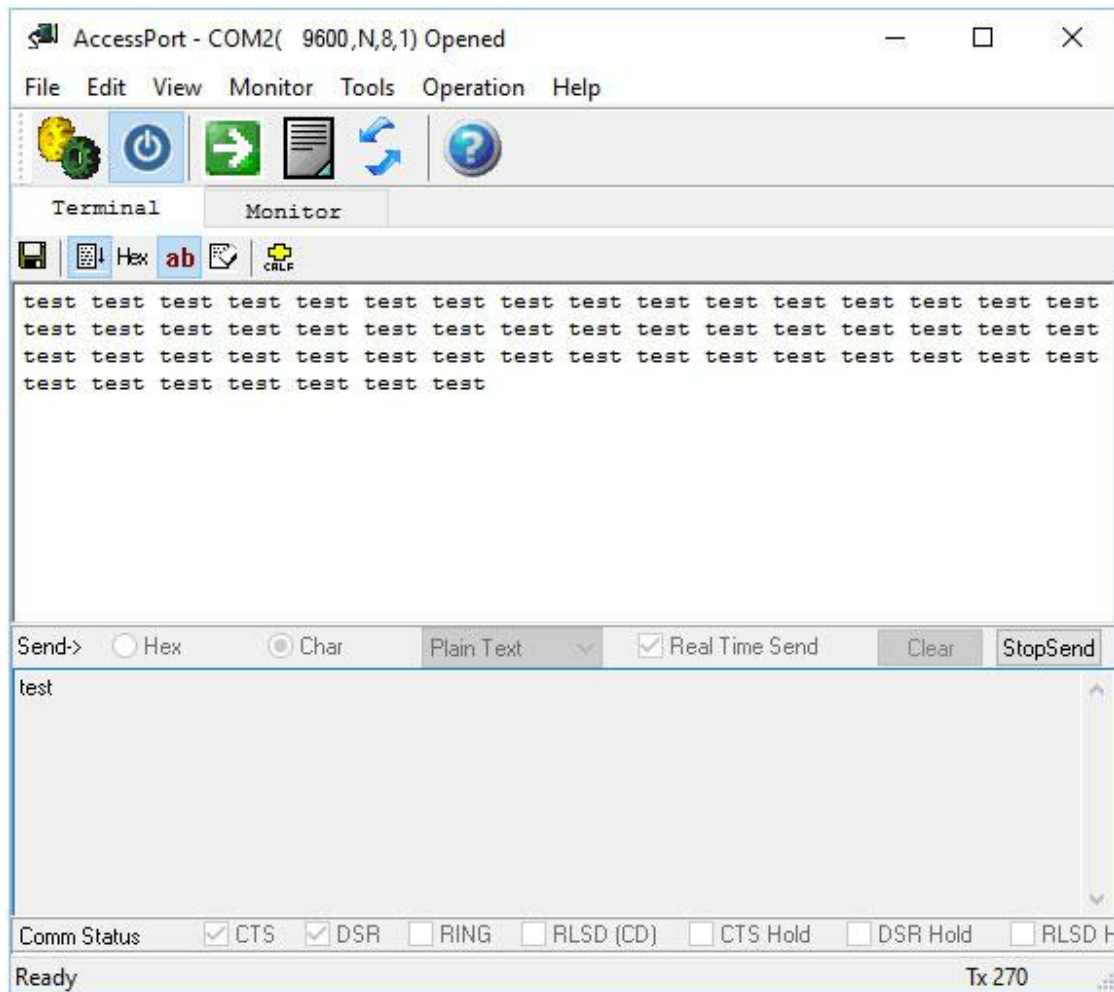
OK
Cancel



Enter a text string in the lower (send) window.

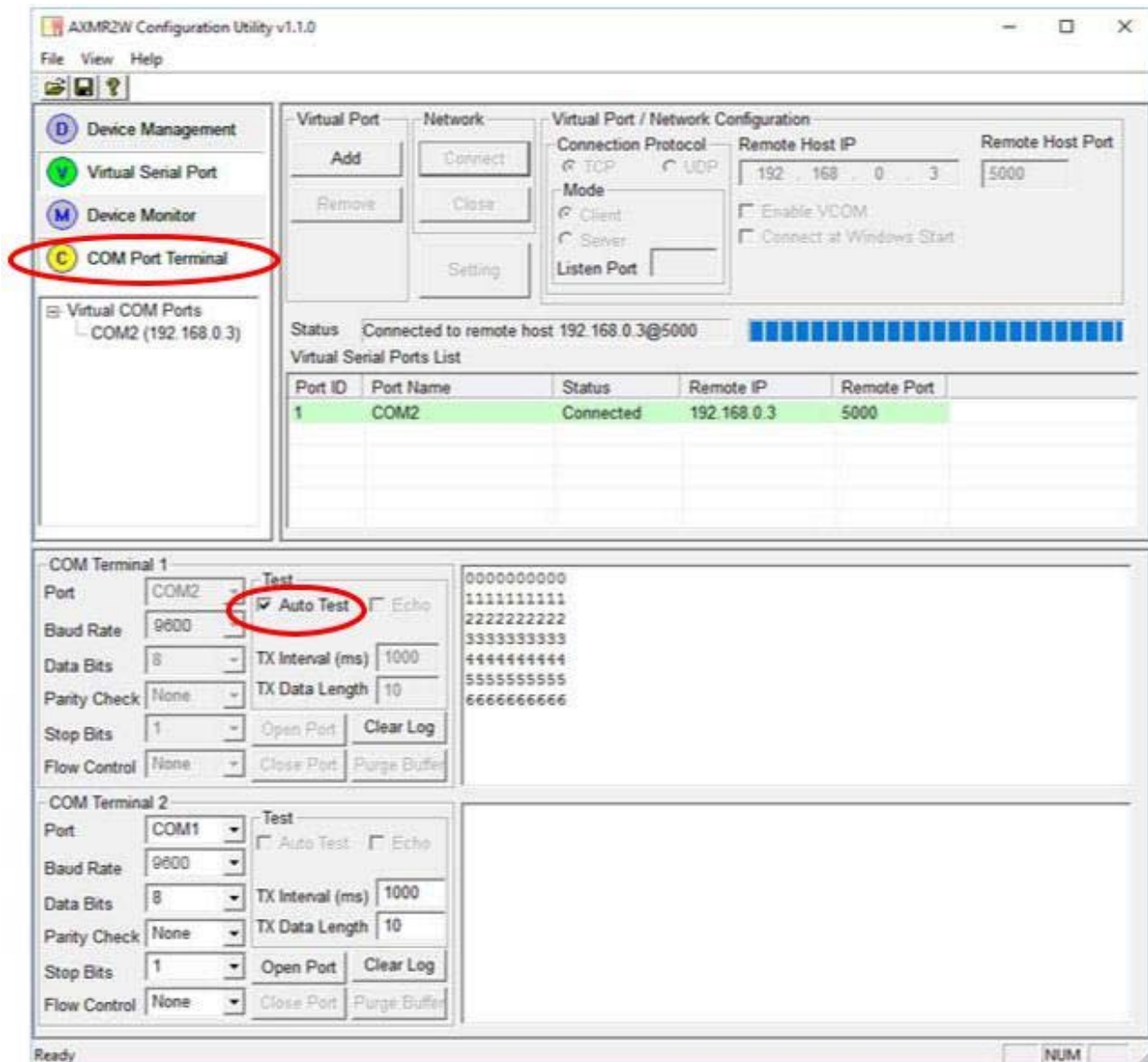
Click the “ON” button to open the COM port.

Click “AutoSend”. The text string should now be sent to the WA232E, out on the TX pin and back through the jumper on the RX pin and appear in the upper (receive) window:





Alternatively a similar test can be made with the built-in COM terminal. Enable “Auto Test” and the software will send out test strings on the TX line:





Creating a virtual COM/TCP port - example using PortShare

When creating a virtual COM port, an alternative to using the software utility for the WA232E is using a COM port redirector called PortShare. PortShare can be downloaded for free at www.usconverters.com.

First make sure that the WA232E has joined the network.

Start PortShare and enter the settings of the WA232E as shown below:

PortShare 1.2.4 - A...

Device Name: COM5

Server Description: Test

Server Address: 192.168.0.3

Server TCP Port: 5000

Connection Protocol:

- ☒ RFC-2217 (Default Base TCP Port 5000)
- ☐ Raw TCP (Default Base TCP Port 4000)

☐ Encrypt Traffic

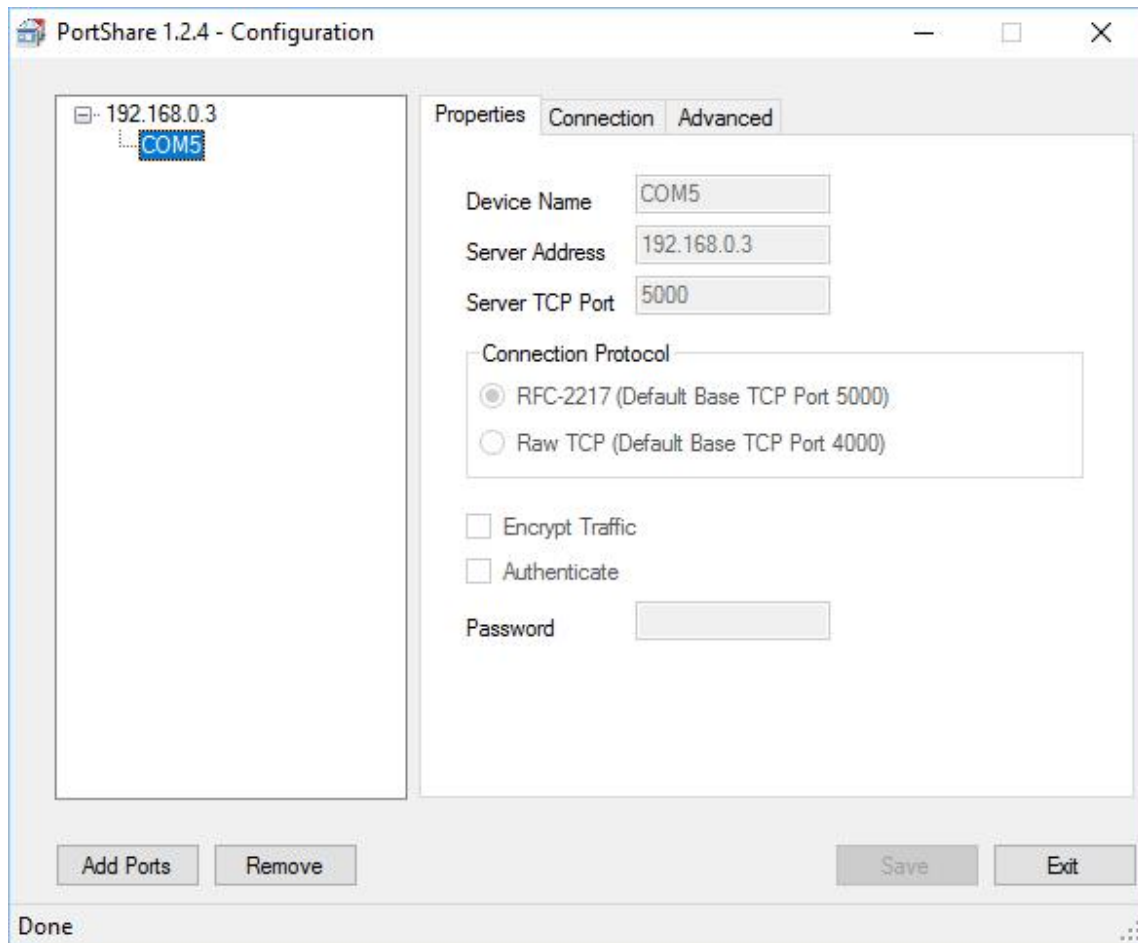
☐ Require Authentication

Password:

OK Cancel

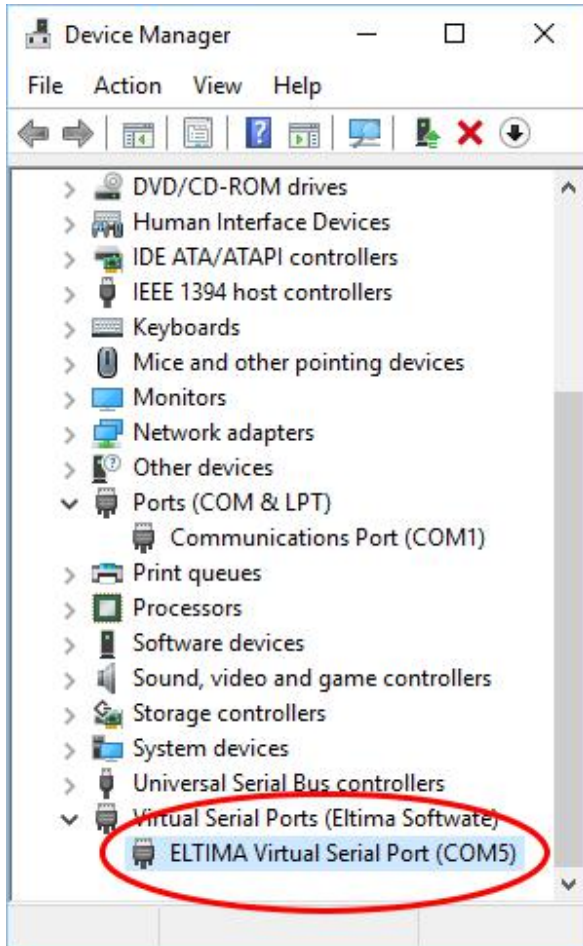


Default settings can usually be used without problems. PortShare will in this example create COM 5:





COM port 5 is now available in Device Manager, under “Virtual Serial Ports” in Windows 10. In older Windows versions the COM port may be listed under “Ports (COM & LPT)”:



To verify that the created virtual COM port can communicate properly with the WA232E you can make a loopback test as described earlier in this guide in the section called “Verifying communication with a loopback test”.

Alternative compatible Virtual COM/TCP software is:

Fabulatech Serial Port Redirector: <http://www.fabulatech.com/serial-port-redirector.html>

and

Eltima Serial over Ethernet: <http://www.eltima.com/products/serial-over-ethernet/>

These alternative solutions are good products and offers a 30 day trial period.



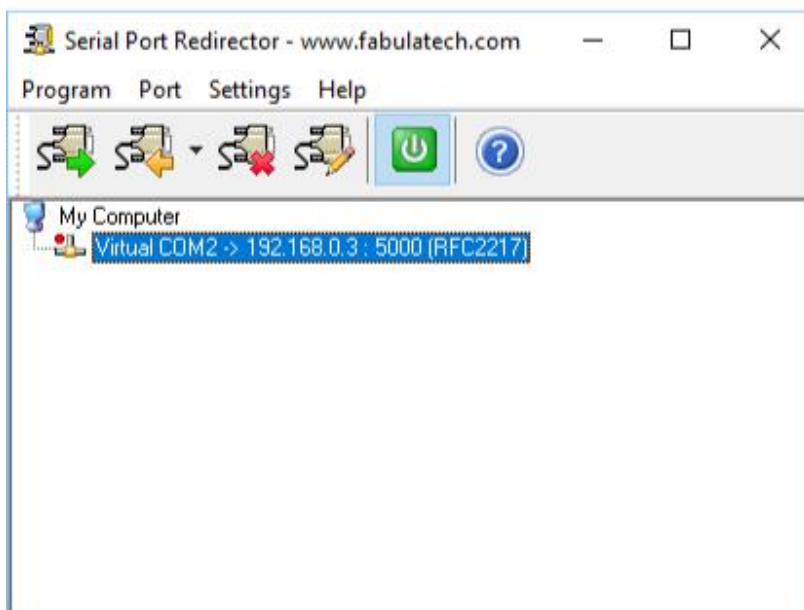
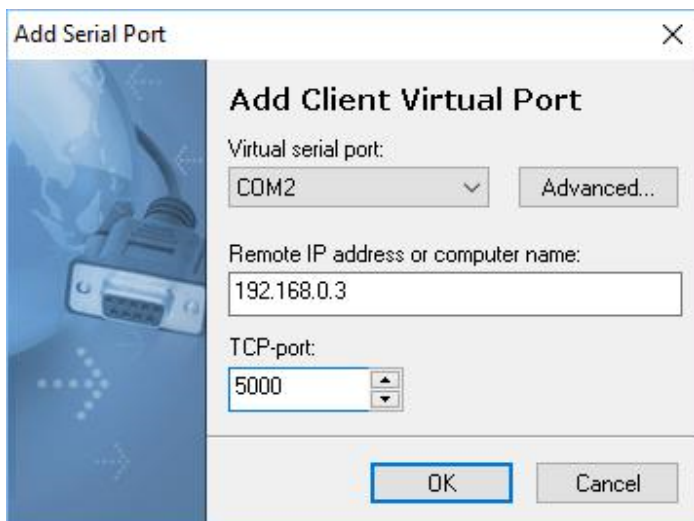
Creating a virtual COM/TCP port - example using Fabulatech

Fabulatech's "Serial Port Redirector" is compatible with the WA232E and an excellent alternative to creating a virtual COM port.

A 15-day trial software can be downloaded from www.fabulatech.com.

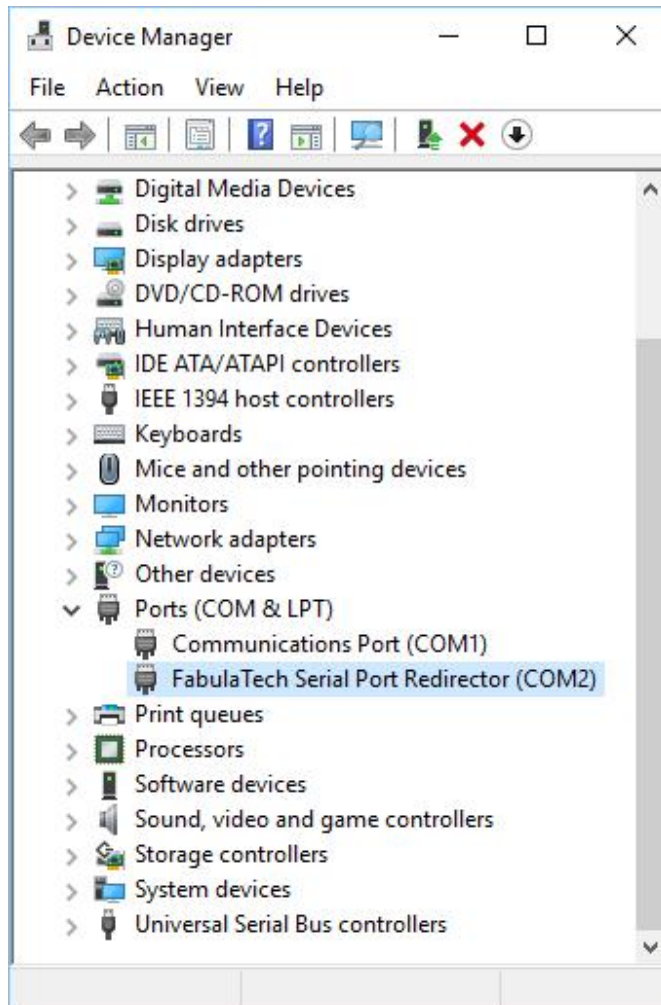
Here is a quick overview of what the Fabulatech COM port redirector software looks like:

Enter the COM port number and the IP address of the WA232E





The COM port is now available in Windows Device Manager:





Check the COM port with AccessPort:

Options

General
Event Control
Flow Control
Timeout Control
Monitor Control

General

Custom Baud Rate
☐ Enable 115200

Serial Port Settings
Port: COM2
Baud Rate: 9600
Parity Bit: NONE
Data Bit: 8
Stop Bit: 1
Buffer Size: 8192

Send display
☒ Char Format
☐ Hex Format

Receive display
☒ Char Format
☐ Hex Format

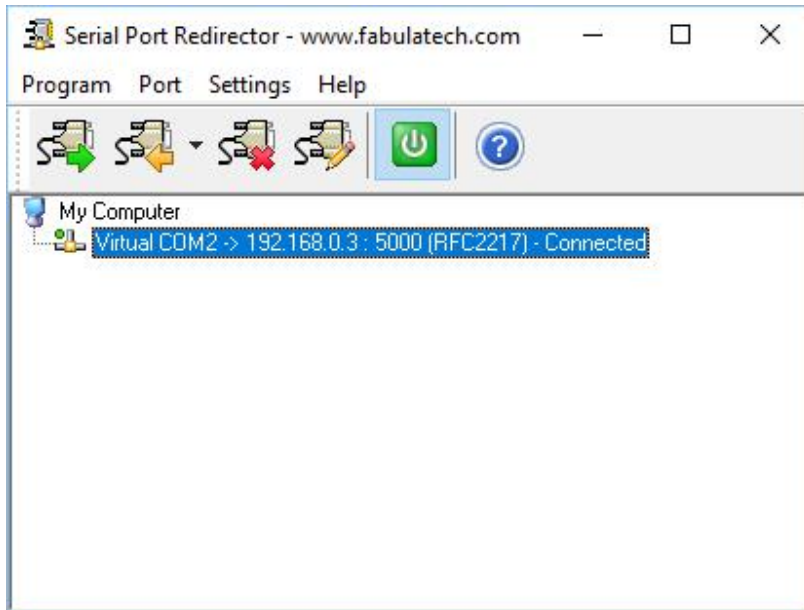
AutoSend
☒ Enable auto send Cycle 200 ms

Advanced
☐ Auto open port when application start
☐ Prompt for saving when application exit
☒ Remind me when update is available

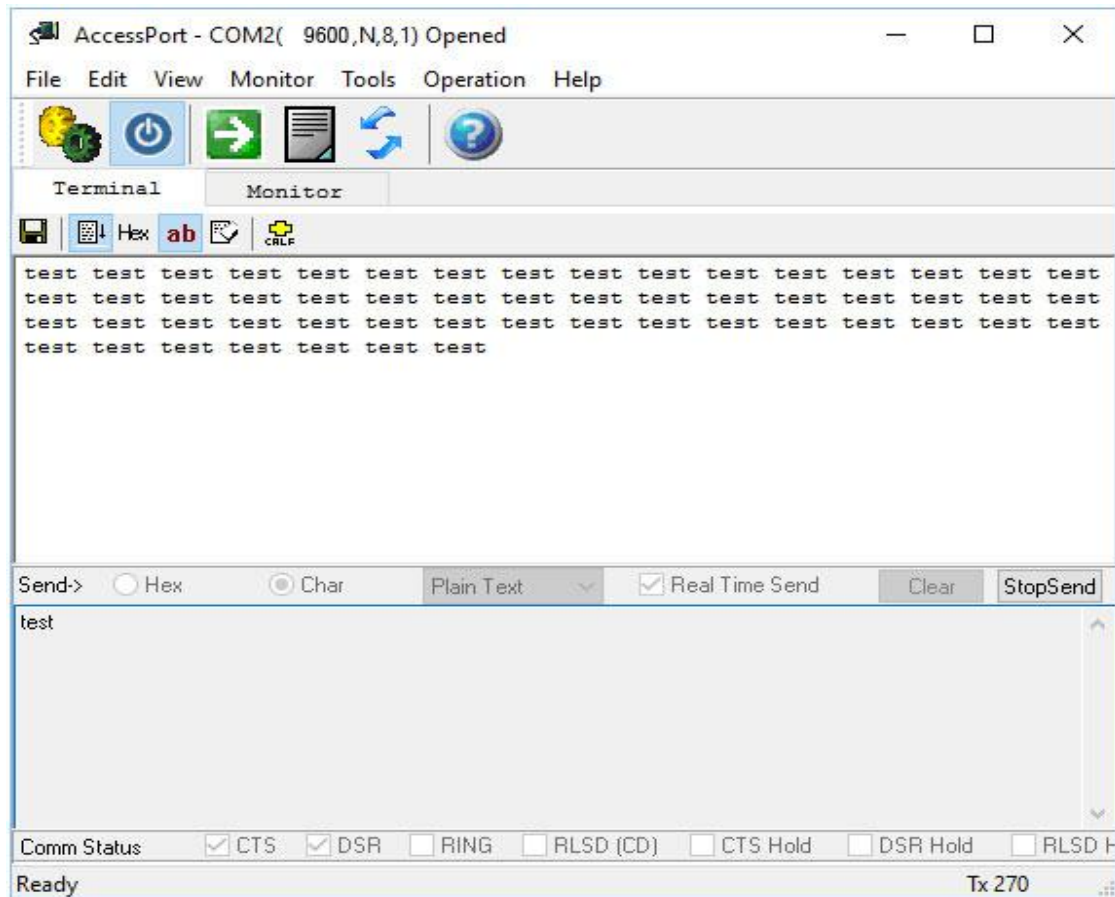
OK
Cancel



The small green dot next to the COM port indicates that the port is open:

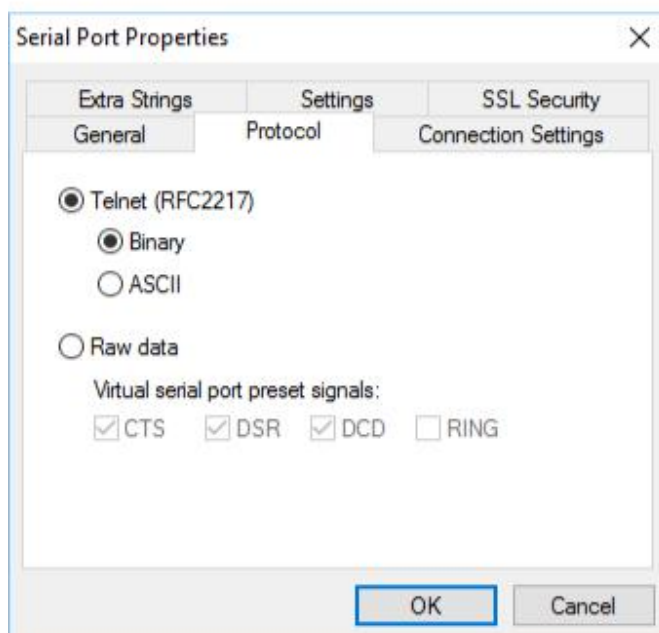
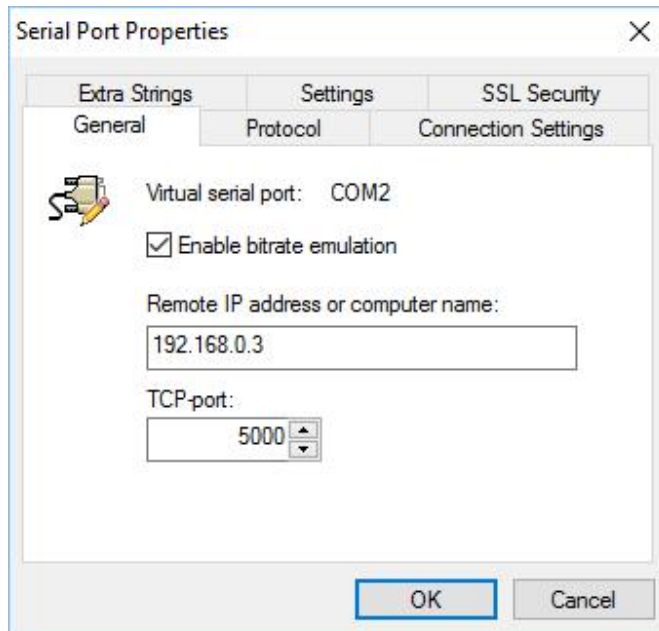


Check that you can send and receive data with a loop-back test:





The following shows Fabulatech's COM port redirector's available settings:





Serial Port Properties

Extra Strings Settings SSL Security

General Protocol Connection Settings

☐ Auto-reconnect when connection is broken

Reconnect interval (1-99999): sec

☐ Cache data when connection is broken

☐ Use keep alive interval settings

Keep alive interval (1-99999): sec

OK Cancel

Serial Port Properties

General Protocol Connection Settings

Extra Strings Settings SSL Security

☐ Send string on port opening

☐ Send string on port closing

OK Cancel



Serial Port Properties

General Protocol Connection Settings
Extra Strings Settings SSL Security

☐ Use fixed baud rate
Bits per second: 9600

☐ Use fixed line control
Data bits: 8 bits
Parity: No parity
Stop bits: 1 bit

☐ Use fixed flow control
Flow control: Hardware

OK Cancel

Serial Port Properties

General Protocol Connection Settings
Extra Strings Settings SSL Security

☐ Use SSL for connection to remote side

OK Cancel



Point-to-point setup

The WA232E can be configured to communicate in pairs between two serial ports, also called point-to-point communication.



Simple AP (TCP Server)



Infrastructure/station mode (TCP Client)

The Server adapter (configured as an Access Point by default) is using **all default settings** as shown below:

The screenshot shows a web browser window with the URL <http://192.168.0.3/basic.htm>. The page is titled "Basic" and contains the following settings:

- Serial Settings**
 - Device Name: DSM1 (Note: Device name can be up to 16 characters.)
 - Data Baud Rate: 9600
 - Data Bits: 8
 - Data Parity: None
 - Stop Bits: 1
 - Flow Control: None
 - RS485: Disable
- Serial to Network Settings**
 - Operation Mode: Socket
 - Connection Type: TCP
 - Transmit Timer (ms): 100 (Note: Please enter an integer between 10-65535.)
 - Server/Client Mode: Server
 - Server Listening Port: 5000 (Note: Please enter an integer between 1024-65535.)
 - TCP Server Connections: 1 (Note: This is effective only for TCP server under Socket or VCOM mode.)
 - Client Destination Host Name/IP: 192.168.0.2 (Note: Please enter host name or IP address(e.g. google.com or 10.4.1.100).)
 - Client Destination Port: 5000 (Note: Please enter an integer between 1024-65535.)
- Static IP Settings**
 - Static IP Address: 192.168.0.3
 - Static Default Gateway: 192.168.0.1
 - Static Subnet Mask: 255.255.255.0
 - Static DNS Server: 168.95.1.1
- DHCP Settings**
 - DHCP Client: Disable
 - DHCP Server: Enable



The other adapter must be configured as a Client in STA (Station) mode, with its host IP address set as the same as the Server's IP address, which is 192.168.0.3 and port 5000:

Serial Settings

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

Data Baud Rate:

Data Bits:

Data Parity:

Stop Bits:

Flow Control:

RS485:

Serial to Network Settings

Operation Mode:

Connection Type:

Transmit Timer (ms):
Please enter an integer between 10~65535.

Server/Client Mode:

Server Listening Port:
Please enter an integer between 1024~65535.

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

Static IP Settings

Static IP Address:

Static Default Gateway:

Static Subnet Mask:

Static DNS Server:

DHCP Settings

DHCP Client:

DHCP Server:



Serial WiFi Converter

Basic Advanced Security **WiFi** WiFi Wizard RTC Status

System Settings

Network Mode: **Station** ▼

AP Channel: 11 ▼

Service Area Name/SSID: Serial2WiFi_03_fe

Security Mode: Open ▼

WEP Encryption Key Settings

Key Length: 64 bits ▼

Key Index Select: Key Index 0 ▼

Key Index 0: 12345

Key Index 1: 67890

Key Index 2: 54321

Key Index 3: 09876

Please enter 5 ASCII codes or 10-digit hex for 64-bit key length.

AES/TKIP Encryption Key Settings

AES/TKIP Passphrase: 12345678

Please enter a string between 8~63 digits in length.

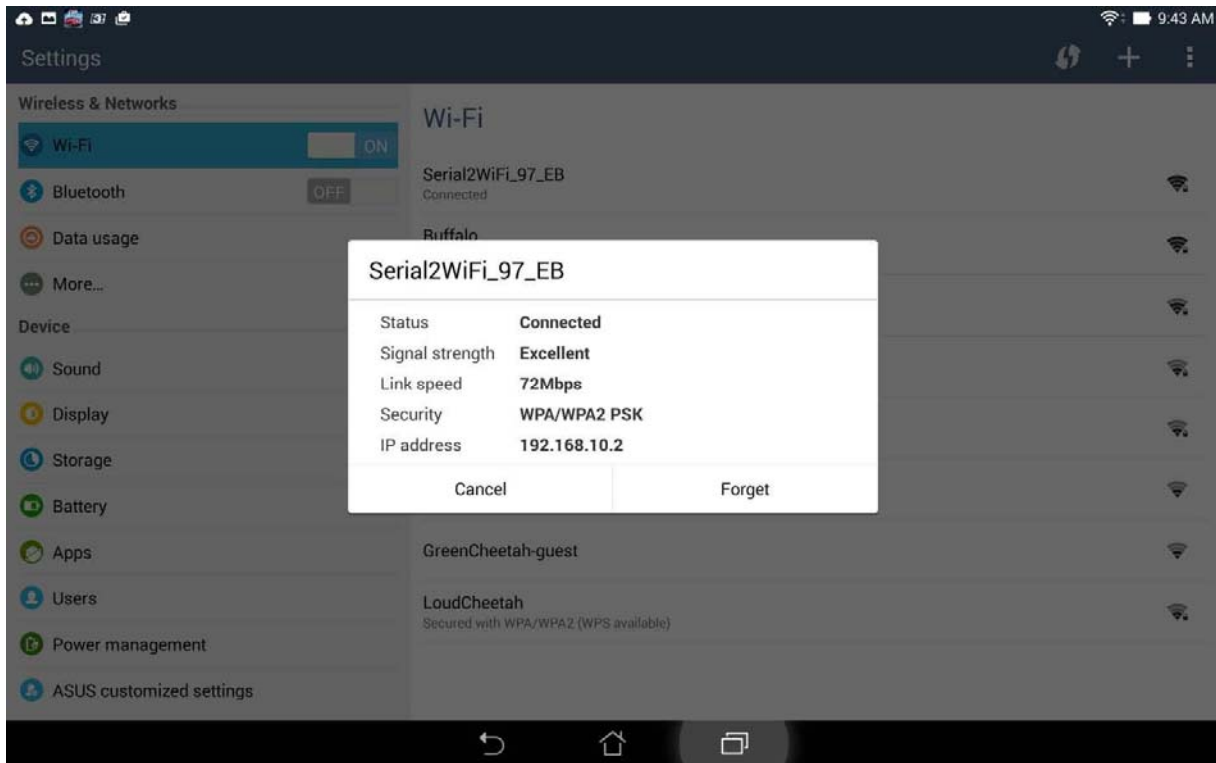
Apply Cancel

Now save the settings and restart the adapter. The Client adapter should now connect with the Server adapter automatically.



Connecting with Android

Connecting and communicating with the WA232E using an Android tablet is easy. Simply search for the WA232E using the tablet's built-in WiFi manager and connect to the WA232E:



You can now login to the adapter's admin page using any web-browser.

A free terminal emulator APP for Android is offered from the Google Play store:

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

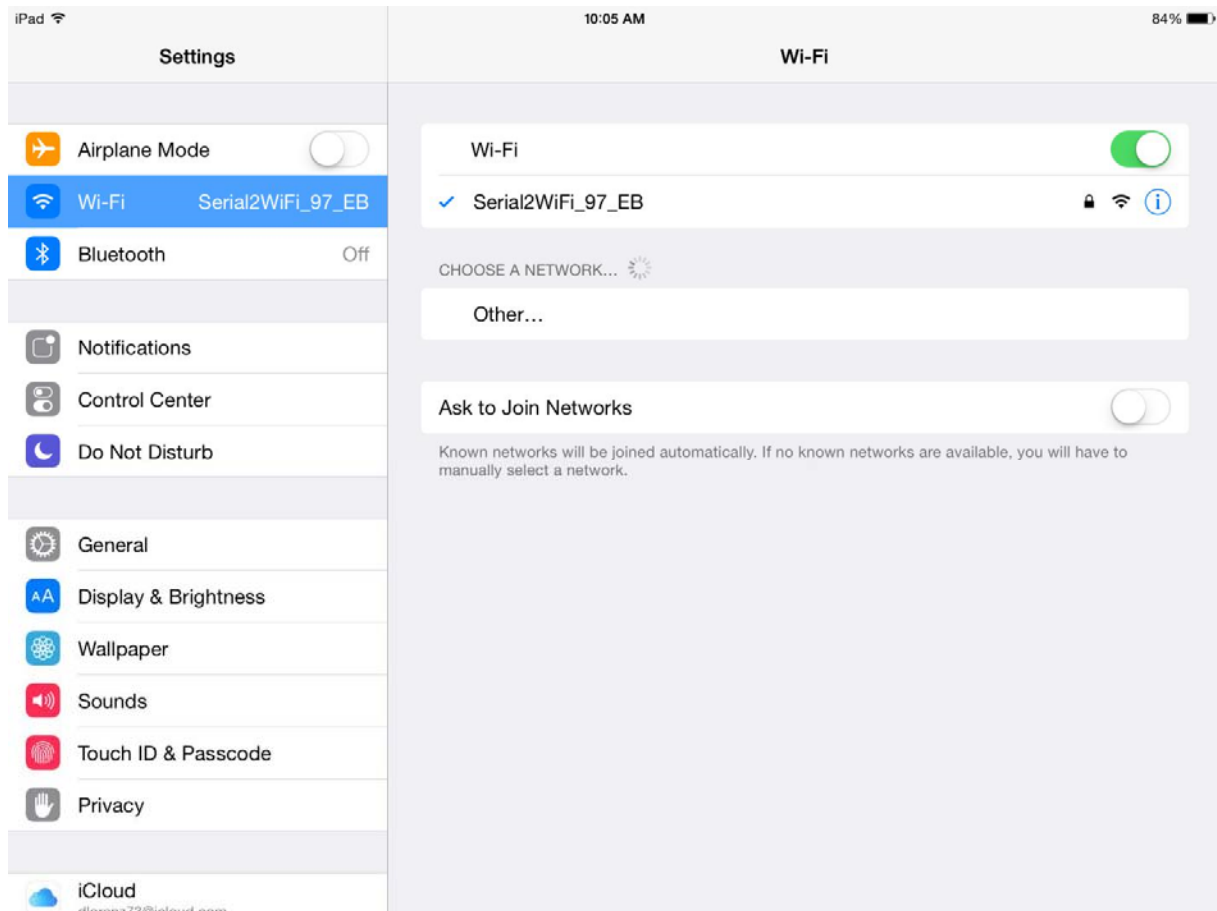
Most of the free serial terminals are compatible with the WA232E, simply search the Google Play Store for "Serial Terminal", see what is available and experiment with the various terminals until you find one you like.





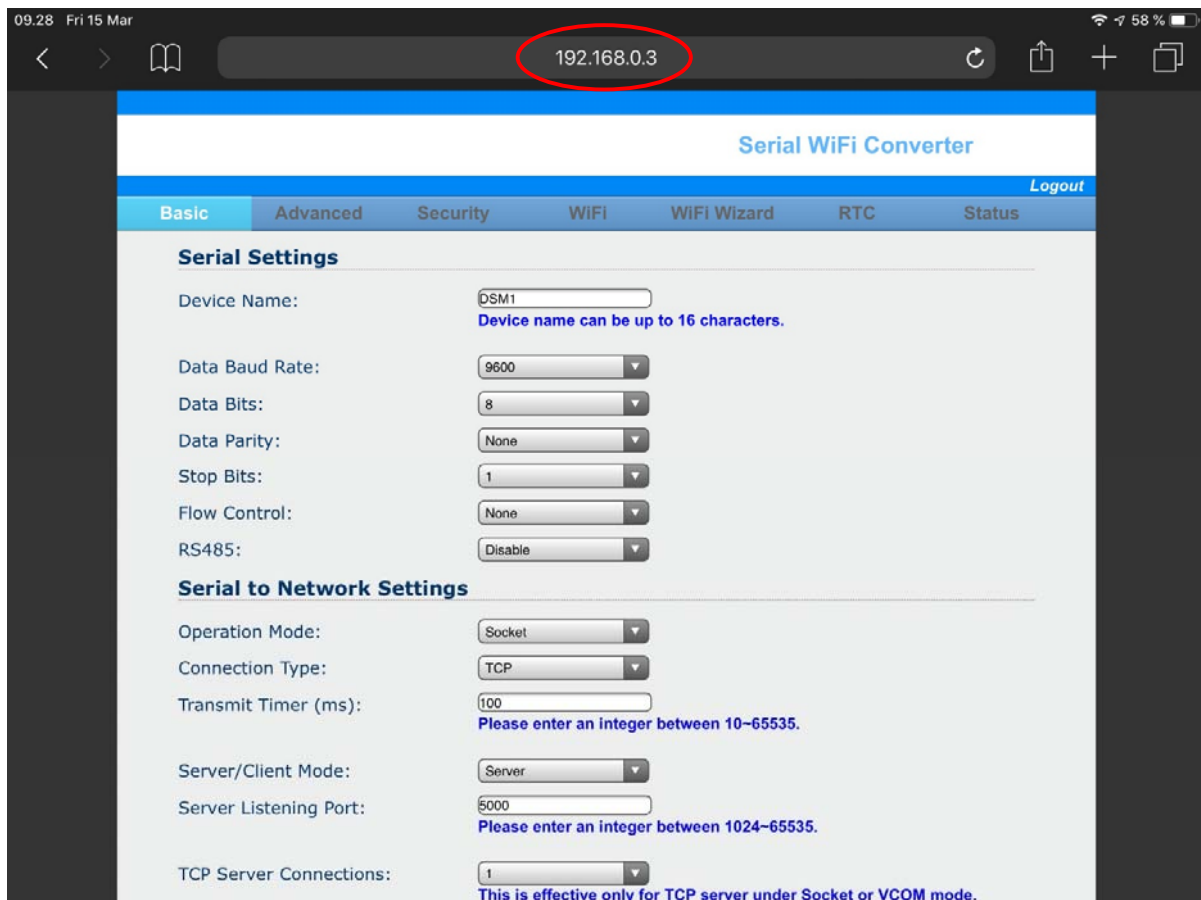
Connecting with iOS

Connecting and communicating with the WA232E using an iPad table is easy. Simply search for the WA232E using the tablet's built-in WiFi manager and connect to the WA232E:





You can now connect to the WA232E's admin page by using a web-browser:



A free terminal emulator APP for iOS is offered from the iTunes store:

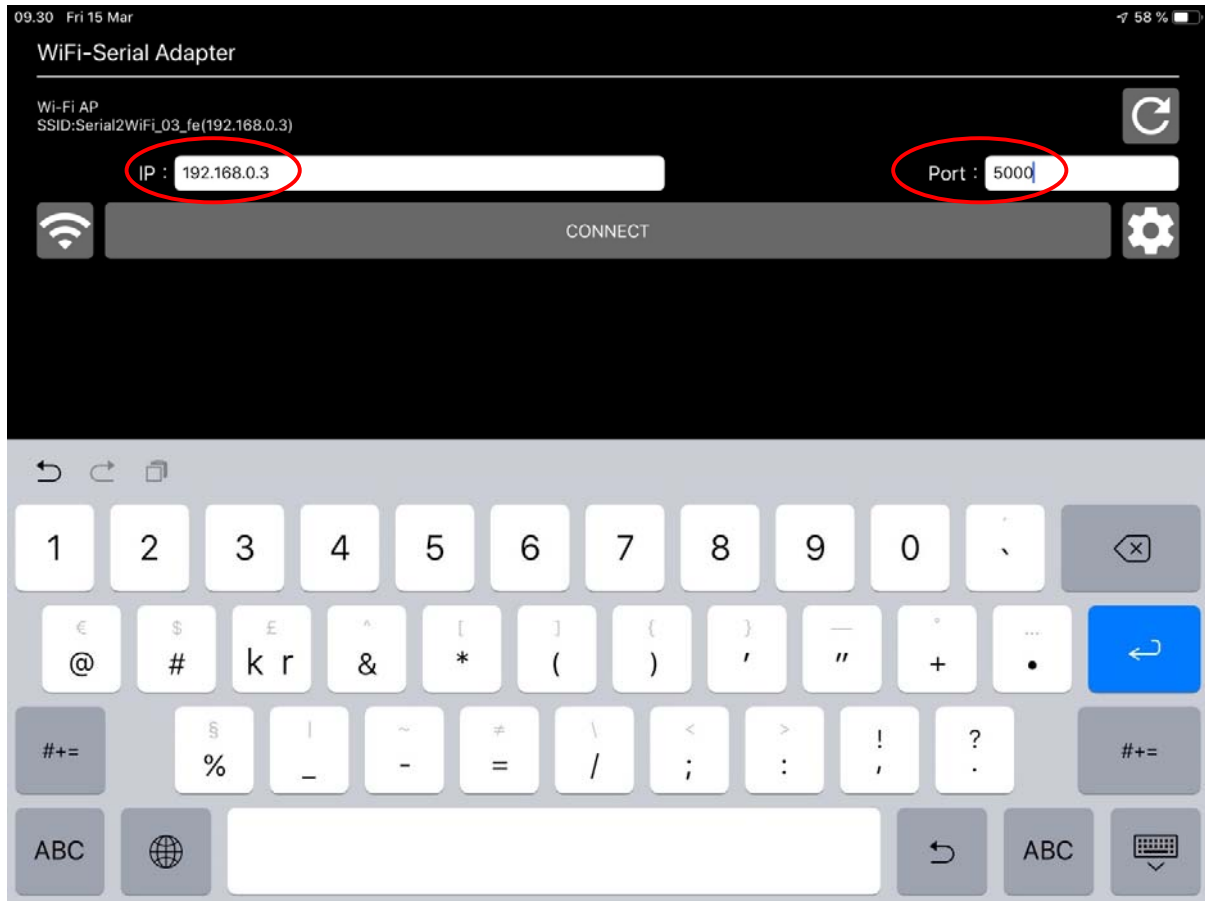
<https://itunes.apple.com/us/app/tcp-ip-to-serial-terminal/id1238054234?l=zh&ls=1&mt=8>

Most of the free serial terminals are compatible with the WA232E, simply search the Apple App Store for “Serial Terminal”, check what is available and experiment with the various terminals until you find one you like. Here is the QR code for the free APP:



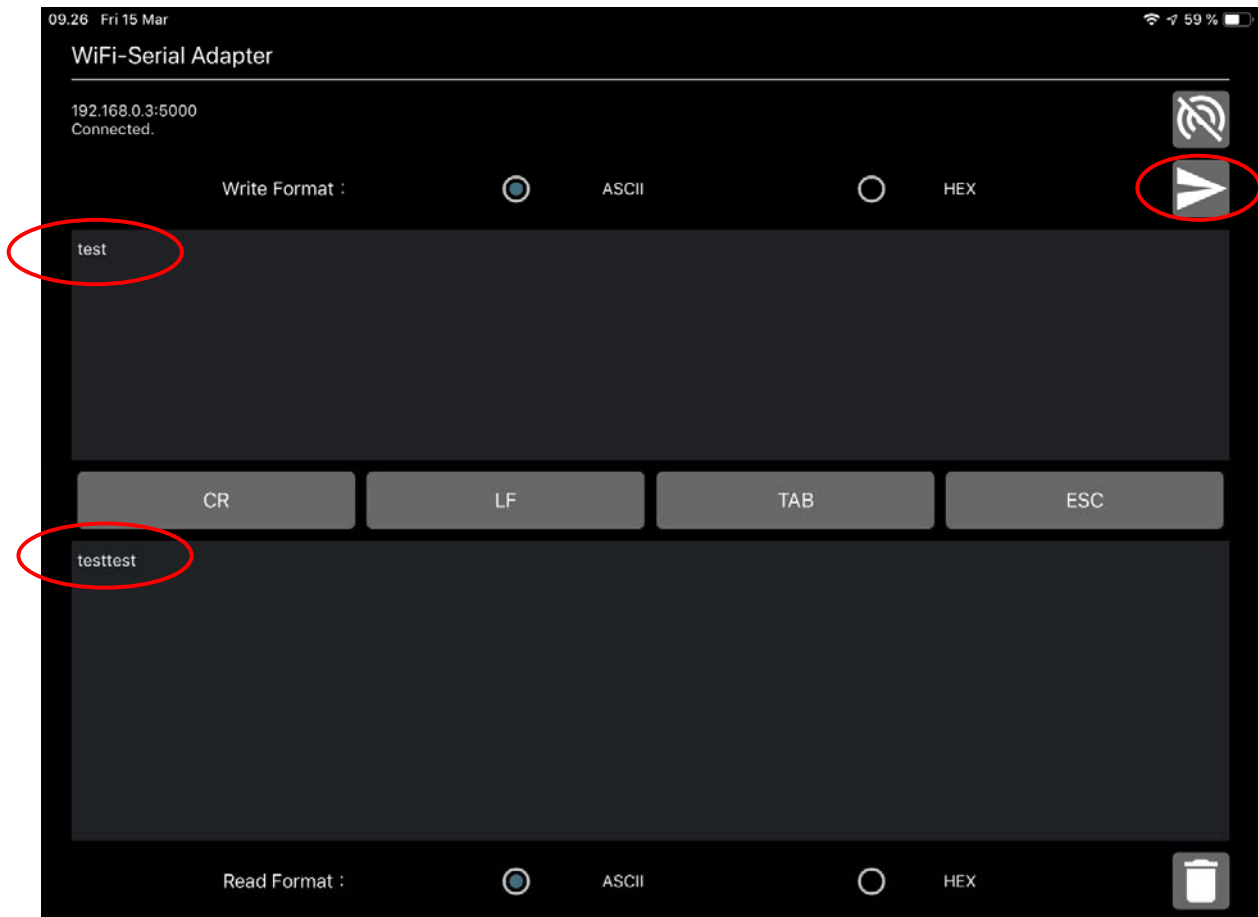


Enter the WA232E's IP address and port number, 192.168.0.3 port 5000, and press the CONNECT button:





Now put a jumper wire between the TX and RX pins (pins 2 and 3) in the WA232E's DB9 connector.
Enter a text string in the upper 'send' window and press the send button:



If the connection is set up correctly, you have the jumper wire in place and the adapter is working properly then the text from the upper window will be received in the lower 'receive' window.

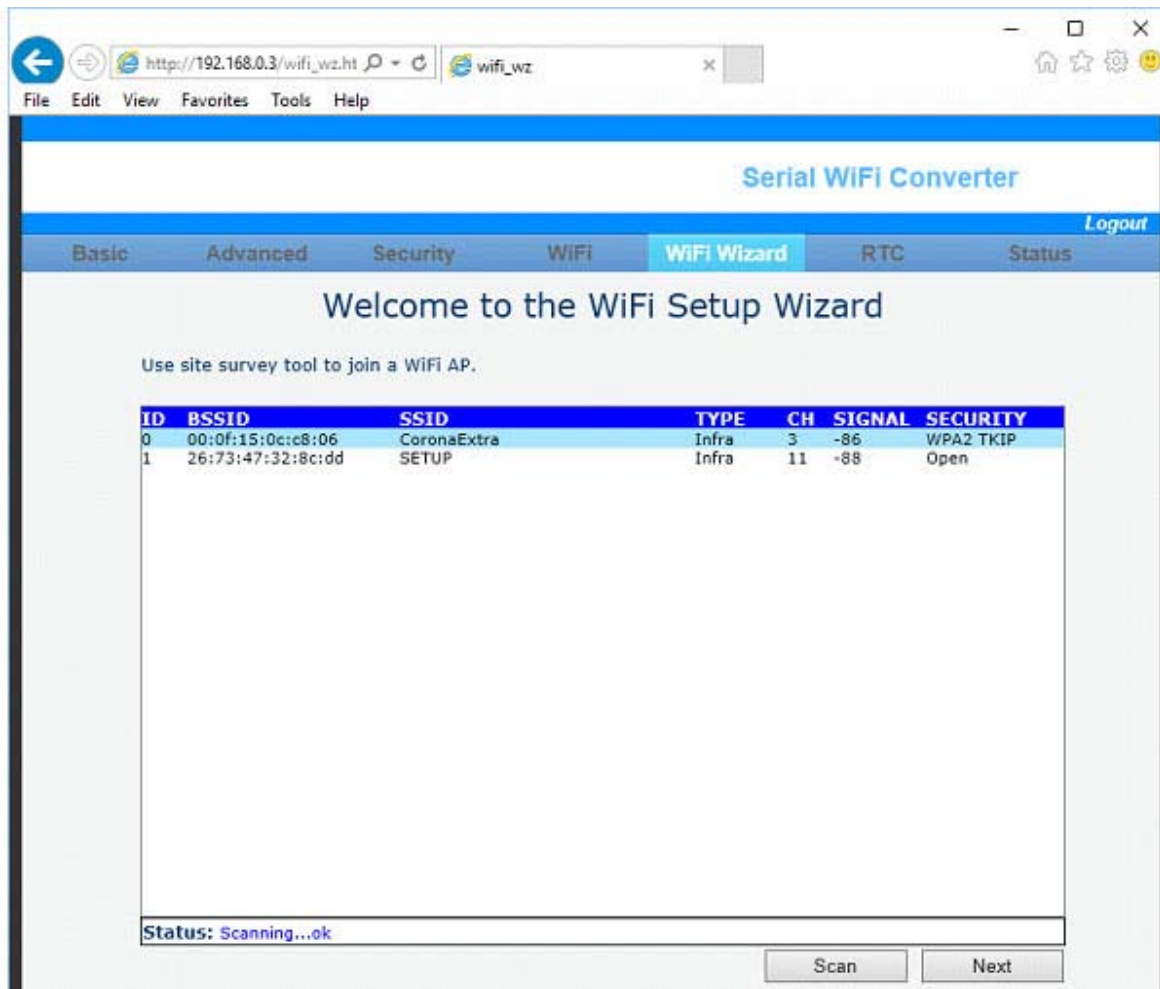


How to connect the WA232E using a wireless router

The setup looks like this:



First login to the WA232E using an access point (not the wireless router) as described earlier in this guide. Go to the “WiFi Wizard” screen, select the SSID you want to connect to and click the “Next” button:





Enter your security key:

The screenshot shows a web browser window with the address bar displaying `http://192.168.0.3/wifi_wz.ht` and a tab labeled `wifi_wz`. The browser's menu bar includes `File`, `Edit`, `View`, `Favorites`, `Tools`, and `Help`. The web application, titled **Serial WiFi Converter**, features a navigation bar with tabs: **Basic**, **Advanced**, **Security**, **WiFi**, **WiFi Wizard** (which is highlighted), **RTC**, and **Status**. A **Logout** link is located in the top right corner of the application area. The main content area is titled **Enter WiFi Security Key** and contains the instruction: "Please enter a pre-share key between 8~63 digits in length." Below this instruction, there is a label **Pre-Share Key:** followed by a text input field containing the value `123456789`. To the right of the input field are two buttons: **Next** and **Cancel**.



Enable DHCP or give the WA232E a static IP address and click the "Accept" button:

The screenshot shows a web browser window displaying the 'Serial WiFi Converter' interface. The 'WiFi Wizard' tab is selected, showing the following settings:

Setting	Value
Service Area Name/SSID:	CoronaExtra
AP Channel:	3
Security Mode:	WPA/WPA2 AES
DHCP Client:	Enable
Static IP Address:	192.168.0.3
Static Default Gateway:	192.168.0.1
Static Subnet Mask:	255.255.255.0
Static DNS Server:	168.95.1.1

Buttons: Accept, Cancel



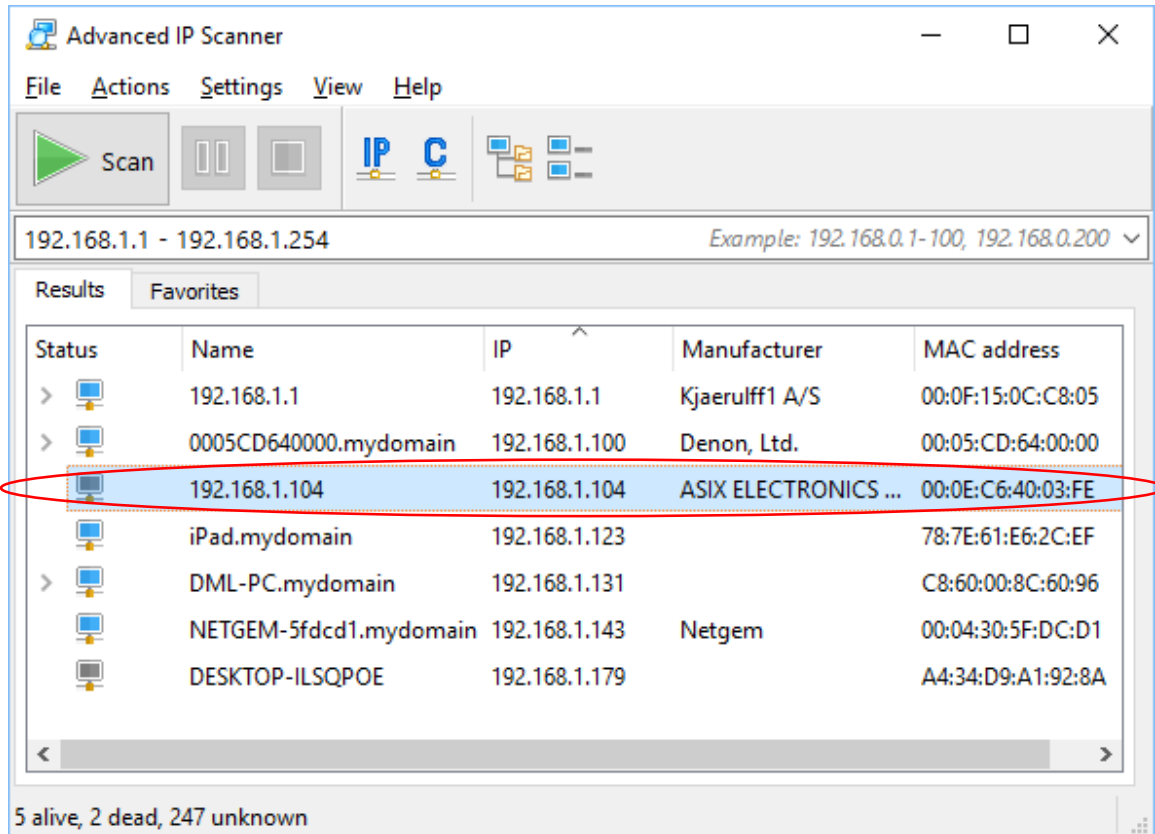
To check and verify if the WA232E has joined the network successfully you may be able to login to your wireless routers admin status page and see what IP address has been assigned to the WA232E:

The screenshot shows the Icotera IGW3000 Residential Gateway administrative interface. The 'Network' tab is selected, and the 'Configuration' section is visible. The 'DHCP' section shows a table of 'Dynamic Leases'. The first row of the table, with IP 192.168.1.104 and MAC 00:0E:C6:40:03:FE, is circled in red.

IP Address	MAC Address	Hostname	Expires	
192.168.1.104	00:0E:C6:40:03:FE	*	2017/02/11 07:12	Make Static
192.168.1.131	C8:60:00:8C:60:96	DML-PC	2017/02/11 04:09	Make Static
192.168.1.179	A4:34:D9:A1:92:8A	DESKTOP-ILSQPOE	2017/02/11 06:59	Make Static
192.168.1.123	78:7E:61:E6:2C:EF	iPad	2017/02/11 06:53	Make Static
192.168.1.143	00:04:30:5F:DC:D1	NETGEM-5fdcd1	2017/02/11 06:48	Make Static
192.168.1.100	00:05:CD:64:00:00	0005CD640000	2017/02/11 04:04	Make Static



If logging into your wireless router is not an option then you can find the WA232E's IP address with an IP Scanner such as "Advanced IP Scanner", <http://www.advanced-ip-scanner.com/>





You can now login to the WA232E using the new IP address:

Serial WiFi Converter

Login

Username:

Password:



←

→

http://192.168.1.104/wifi.htm

Wireless - Administrative Co...

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FileEditViewFavoritesToolsHelp

Serial WiFi Converter

Logout

BasicAdvancedSecurityWiFiWiFi WizardRTCTestStatus

System Settings

Network Mode:Station

AP Channel:11

Service Area Name/SSID:CoronaExtra

Security Mode:WPA/WPA2 Auto

WEP Encryption Key Settings

Key Length:64 bits

Key Index Select:Key Index 0

Key Index 0:12345

Key Index 1:67890

Key Index 2:54321

Key Index 3:09876

Please enter 5 ASCII codes or 10-digit hex for 64-bit key length.

AES/TKIP Encryption Key Settings

AES/TKIP Passphrase:123456789

Please enter a string between 8~63 digits in length.

ApplyCancel



Troubleshooting / Known issues

Dropped connections or connection problems.

Using a serial WiFi adapter on a high traffic network with many WiFi and/or Bluetooth connections may sometimes be a challenge since all WiFi and Bluetooth devices share the same 2.4Ghz frequency. Sometimes this “noisy / busy” environment can cause problems connecting to the WA232E or it can cause dropped connections, so here are a few things you can try to improve the situation:

1. Try changing the wireless channel.
2. Try changing the wireless data rate. Lowering the data rate may help improve time-out issues.
3. If possible try and scan the 2.4Ghz spectrum. This can for example be done by using a 3rd party software such as:

inSSID:

<http://www.metageek.net/products/inssider/>

WiFi Stumbler:

[http://meraki.cisco.com/products/wireless/wifi-](http://meraki.cisco.com/products/wireless/wifi-stumbler)

stumbler For Android: WiFi Analyzer APP

Analyze the network and use the channel with the least number of other wireless devices.

1. Check the number of DHCP clients of your router if you use a wireless router. If the number of available IP addresses is less than the number of WA232E 's then they will disconnect randomly.
2. Make sure the WA232E's power supply is sufficient. We recommend 5VDC 1000mA USB power adapter, powered from a 120VAC-5VDC wall adapter.
3. Bandwidth of AP: If you connect using an external Access Point, please set 20 MHz bandwidth. 40 MHz may not work.



Federal Communications Commission (FCC) Statement

RADIO FREQUENCY INTERFERENCE STATEMENT

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS.

(1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE AND

(2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED , INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE
D OPERATION.

Tested to comply with FCC standards for home or office use