



## How to setup the USCEW10 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 USCEW10. This product has many more 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 USCEW10's parameters can be configured several ways:

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

We will here describe how to configure it using a web-browser as this is the easiest and most common way to do it.

The default network settings are:

Adhoc mode (Simple AP), DHCP enabled  
TCP mode: Server  
SSID: EW10  
No Security  
IP: 10.10.100.254  
Socket port: 8899  
Log in ID: admin  
Log in password: admin  
Telnet port: 23

The default COM port settings are:

Baud rate: 115200 bps  
Data bit: 8  
Parity: none  
Stop bit: 1  
Flow control: none



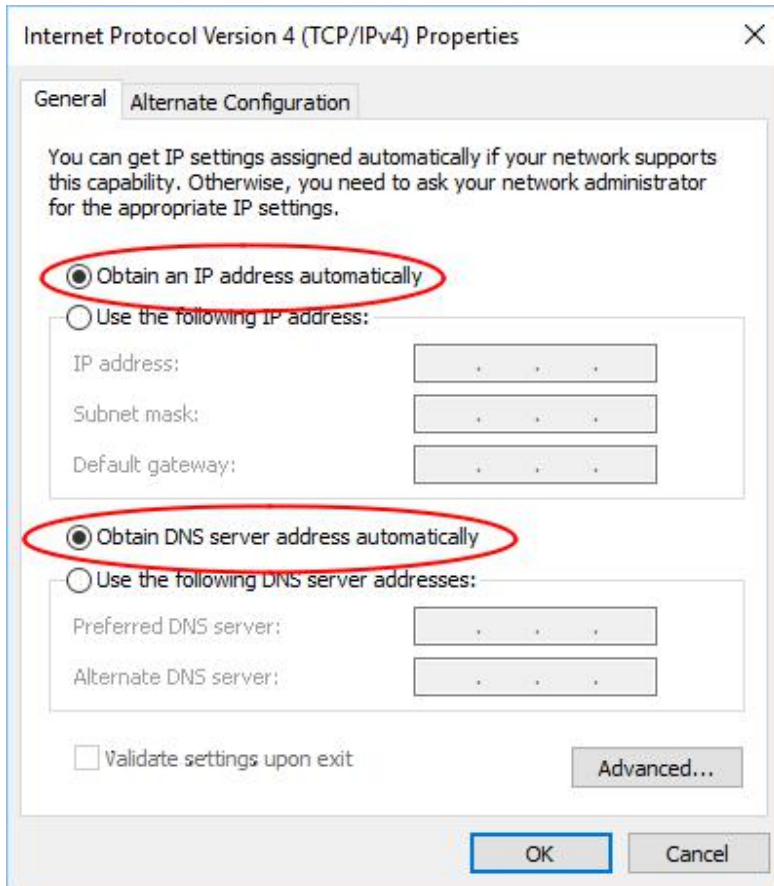
## Configuring the parameters using a Web browser

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 USCEW10 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”.

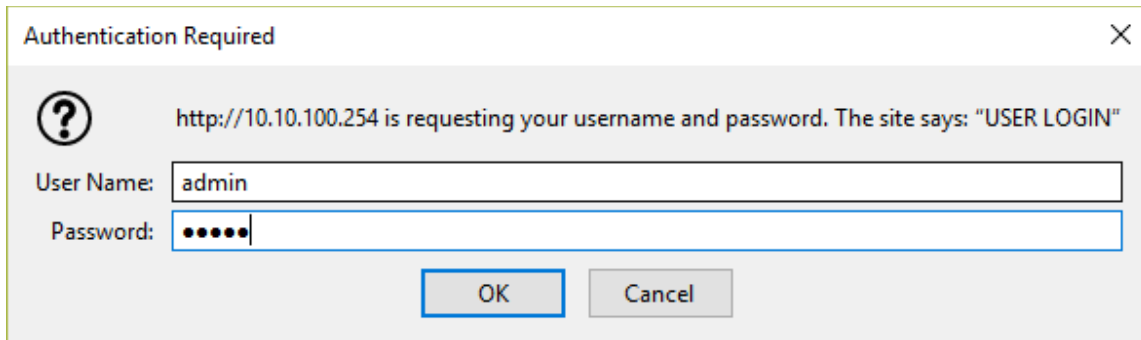




Open a web browser (we strongly recommend using Firefox) and enter the IP address <http://192.168.0.3>. You should now see the login screen.

The default username is: admin

The default password is: admin



You can now enter and change the administration panel's parameters.



EW10 10.10.100.254/index.html

**U.S. CONVERTERS LLC**  
SERIAL WIFI CONVERTER  
MODEL: USCEW10

English v

- STATUS
- SYSTEM SETTINGS
- SERIAL PORT SETTINGS
- COMMUNICATION SETTINGS
- ADVANCED SETTINGS
- OTHERS

### Status

System running status overview

#### System State

Product Name EW10	MAC 98D8630D5018
DHCP Enable	IP 0.0.0.0
Subnet Mask 0.0.0.0	Gateway 0.0.0.0
DNS 223.5.5.5	Firmware Version 1.41.0
System Time NTP Disabled	Total Running Time 0-Day 0:6:49
Remaining RAM 46368	Max Block Size 46368
Configuration Protected Disable	WiFi State Disconnected
WiFi Rssi -1	

#### Serial Port State

Received Bytes 0	Received Frames 0
Sent Bytes 0	Sent Frames 0

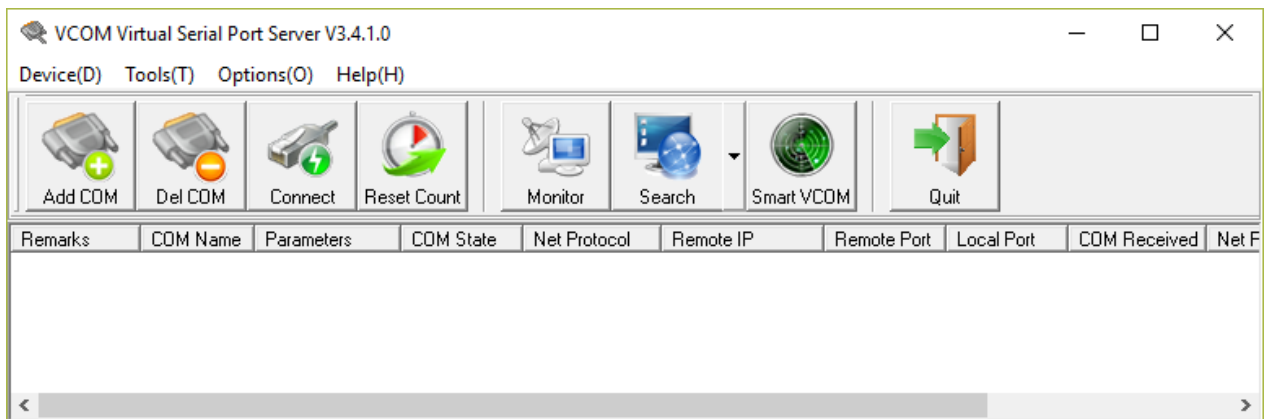


## Creating a virtual COM port using USC-VCOM

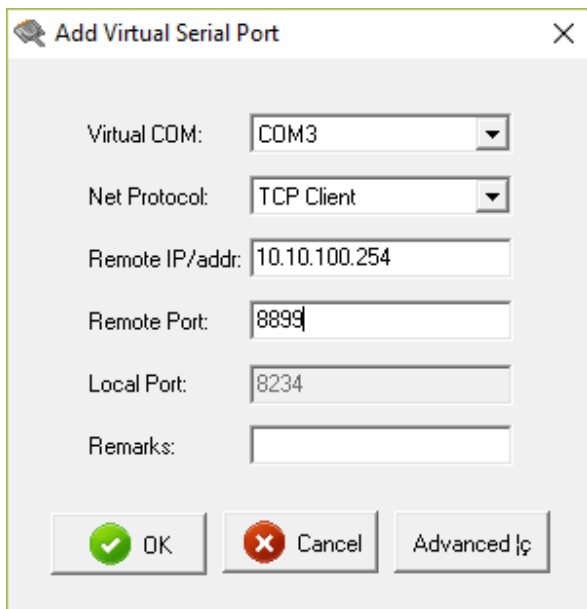
A virtual COM port can be created by using the USC-VCOM virtual COM port software or it can be created by using alternative VCOM software such as PortShare, Fabulatech.

First we show how to create a virtual COM port with the USC-VCOM software.

Make sure the USCEW10 is connected to the WiFi network. Start USC-VCOM and click the 'Add COM' button:



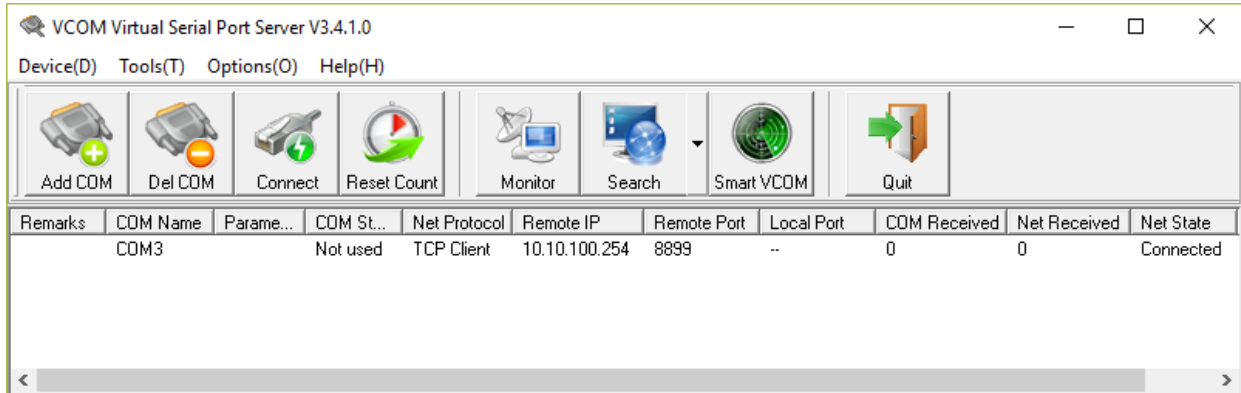
Enter the IP address and port number and click OK:



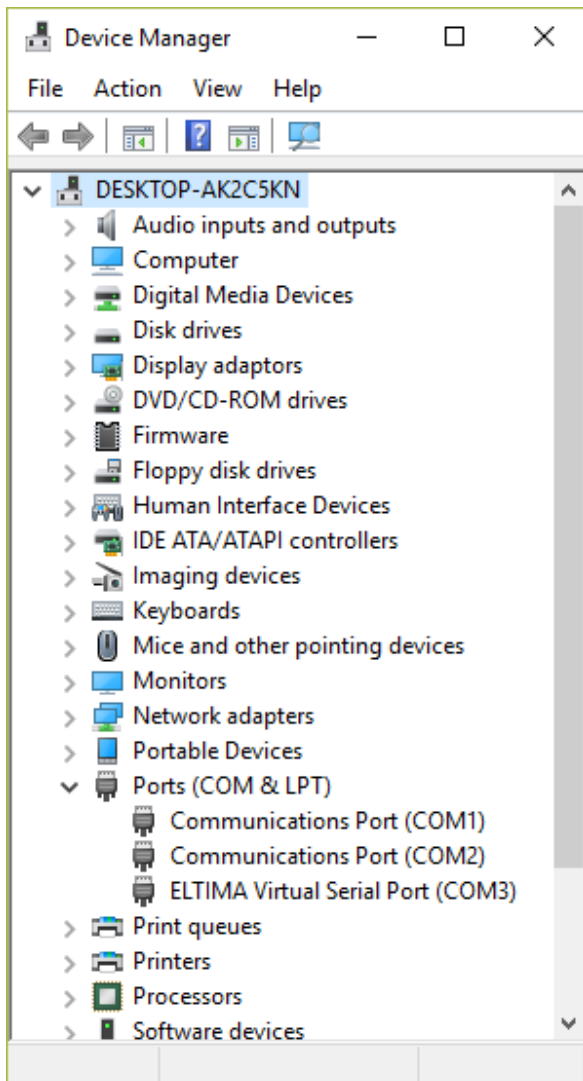




The virtual COM port is now created:



Check in Windows Device Manager that the virtual COM port indeed has been created successfully:





## Verifying communication with a loop-back test

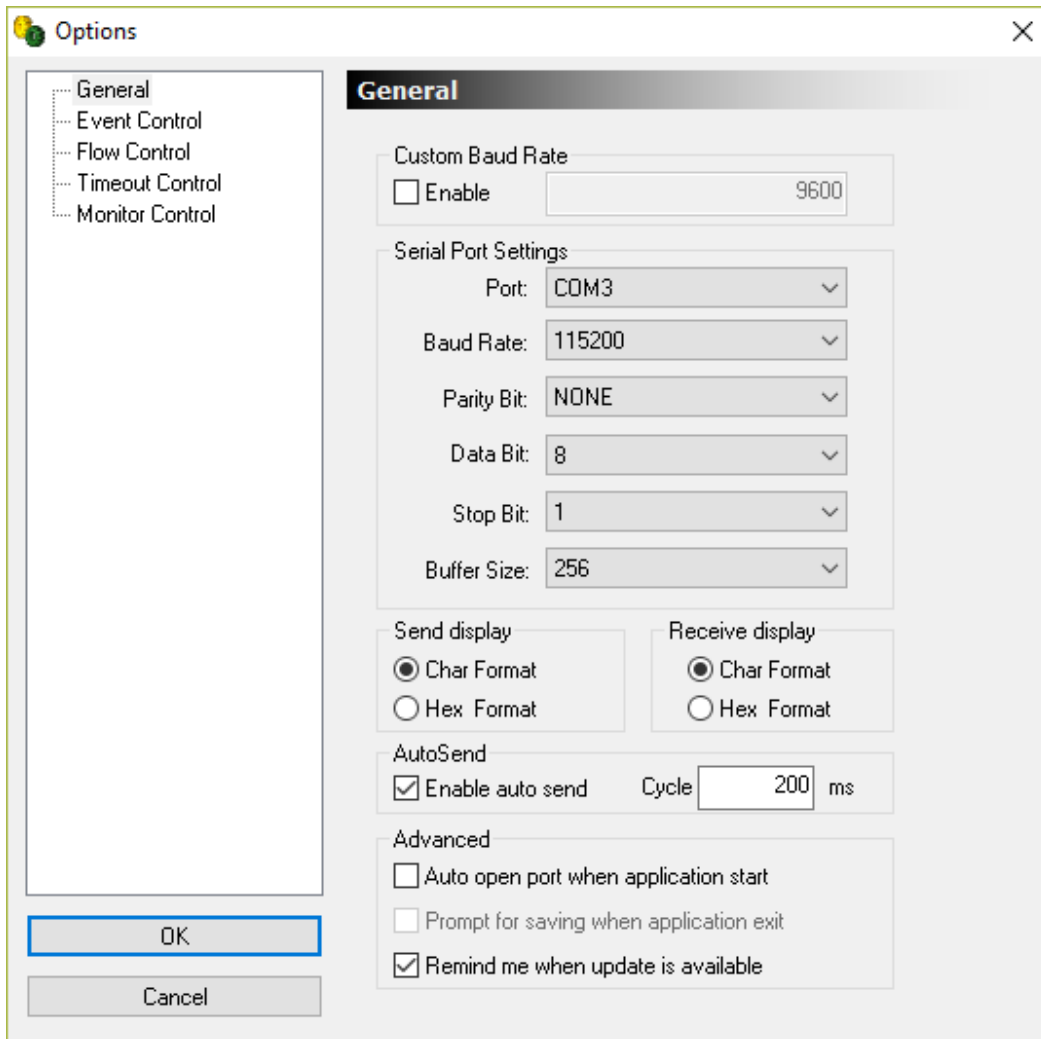
To check if the USCEW10 can send and receive data successfully you can make a loop-back test using AccessPort (can be downloaded from [www.usconverters.com](http://www.usconverters.com)).

First loop-back the TX pin (pin 2) to the RX pin (pin 3) in the USCEW10'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 (make sure to select the COM port number you have created, in this example COM 3):

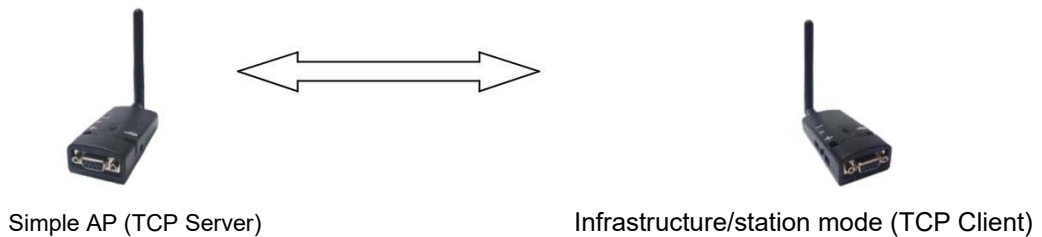






## Point-to-point setup

The USCEW10 can be configured to communicate in pairs between two serial ports, also called point-to-point communication.



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

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, (Client Destination Host Name/IP) which is 10.10.100.254 and port 8899 (Server Listening Port).

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



## How to connect the USCEW10 using a wireless router

The setup looks like this:



First login to the USCEW10 using an access point (not the wireless router) as described earlier in this guide. Go to the "System Settings" screen and select STA mode under the 'WiFi Settings' menu. Select an AP key and security if required and click the 'Submit button'.



To check and verify if the USCEW10 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 USCEW10:

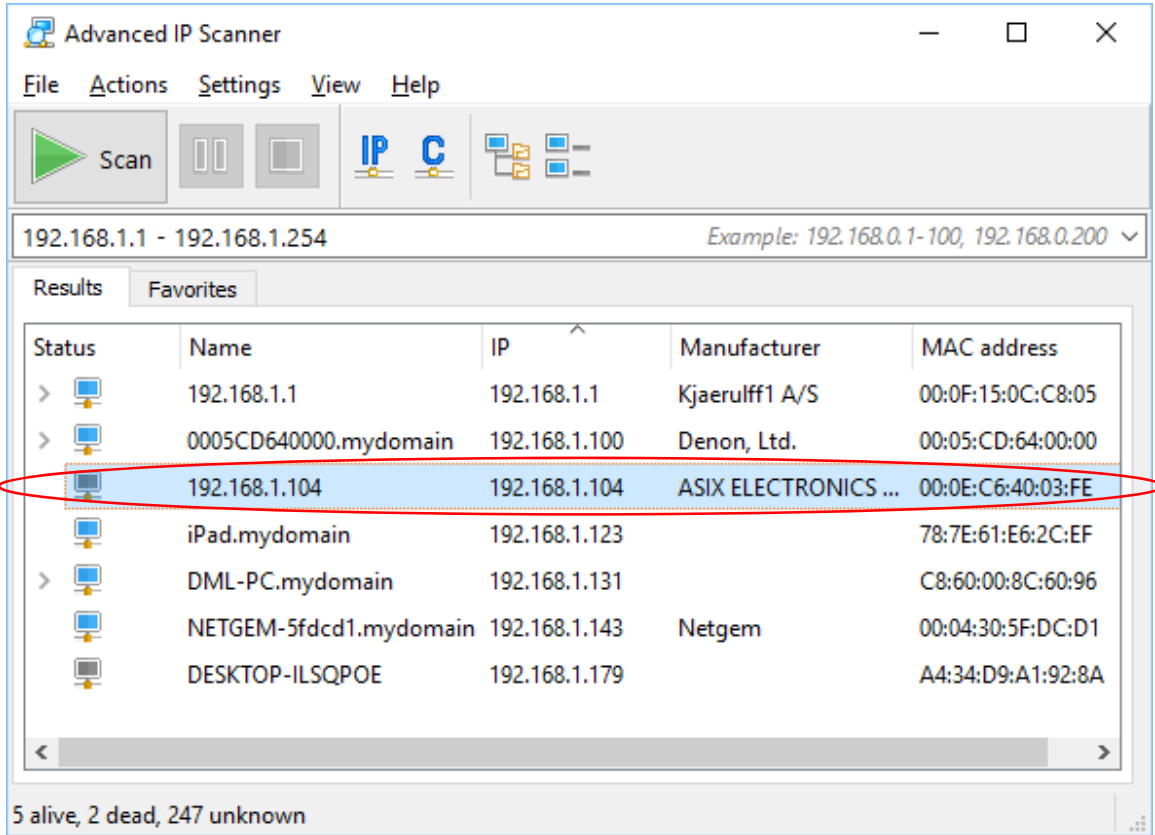
The screenshot shows the administrative interface of an Icotera IGW3000 Residential Gateway. The browser address bar shows `http://192.168.1.1/index.cgi`. The interface includes a navigation menu with options like Wi-Fi, Network, System, Status, and Log out. The 'Network' section is active, and the 'IP' tab is selected, showing DHCP configuration settings. Below the configuration, the 'DHCP' section displays a table of 'Dynamic Leases'.

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

A red circle highlights the first row of the table, which corresponds to the IP address 192.168.1.104 and MAC address 00:0E:C6:40:03:FE.



If logging into your wireless router is not an option then you can find the USCEW10's IP address with an IP Scanner such as "Advanced IP Scanner", <http://www.advanced-ip-scanner.com/>



You can now login to the USCEW10 using the new IP address.





## 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 USCEW10 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-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 USCEW10 's then they will disconnect randomly.
2. Make sure the USCEW10'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.



**Question:**

Can I be connected to the Internet while also being connected to the USCEW10? (when using a Windows laptop with a built-in WiFi card).

**Answer:**

Windows does not have a feature to have two wireless networks connected at the same time using only one network card. So you would need to connect another WiFi card (for example a USB WiFi dongle) to your PC to be able to have two network connections at the same time.

This works in most cases however Windows does have bugs in this regard, in some cases Windows will crash when connecting two wireless cards to the same PC.

Linux does not have this 'limitation'.

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  
OPERATION.

Tested to comply with FCC standards for home or office use