

# Support Note - 245/945U-E Back to Back Configuration

## PURPOSE

The purpose of this document is to show the configuration steps for setting up a back to back 245U-E or 945U-E Ethernet modems pair.

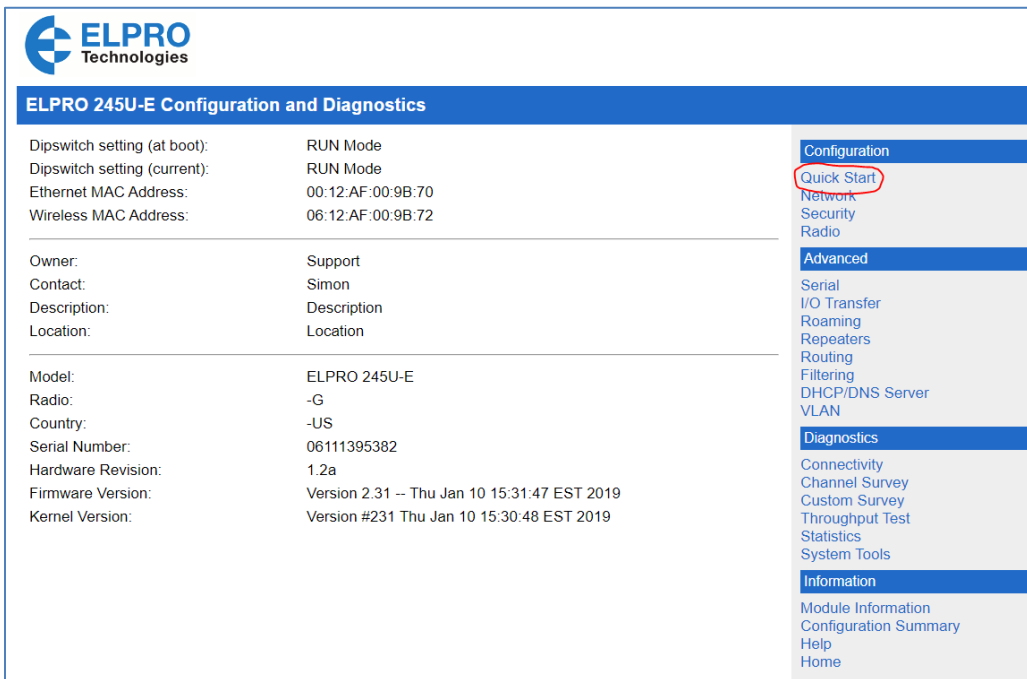
## MATERIALS USED

2 x 245U-E/945U-E Ethernet modems.  
Laptop or PC to configure

## APPLICATION

Set modems to the Default IP address by switching the Run/Setup switch on the end of the module to Setup and then re-powering the modem. (See Label on the back of the module for the default IP Address) and connect to the IP address using Internet Explorer. (Computer network settings may need to be changed so as to be able to connect to the Default IP address of the modem). Please see User Manual for more information on this

From the main home page, select "Quick Start" from the main menu.



The screenshot shows the ELPRO 245U-E Configuration and Diagnostics web interface. The main menu on the right includes Configuration, Network, Security, Radio, Advanced, Diagnostics, and Information. The 'Quick Start' option under the Configuration menu is circled in red. The main content area displays various system parameters:

Dipswitch setting (at boot):	RUN Mode
Dipswitch setting (current):	RUN Mode
Ethernet MAC Address:	00:12:AF:00:9B:70
Wireless MAC Address:	06:12:AF:00:9B:72
Owner:	Support
Contact:	Simon
Description:	Description
Location:	Location
Model:	ELPRO 245U-E
Radio:	-G
Country:	-US
Serial Number:	06111395382
Hardware Revision:	1.2a
Firmware Version:	Version 2.31 -- Thu Jan 10 15:31:47 EST 2019
Kernel Version:	Version #231 Thu Jan 10 15:30:48 EST 2019

The Quick Start configuration is the simplest way to get two modems configured in a back to back pair.

In the screenshot below you will see that it only displays the important parameters that are needed to get a connection, i.e. Operating Mode, IP addresses, ESSID and an Encryption Password.

## ELPRO 245U-E Quick Start Configuration

Reset is required to activate settings.

### Device Mode:

Operating Mode	<input type="text" value="Access Point"/>
Default Gateway	<input type="text" value="192.168.17.1"/>
IP Address	<input type="text" value="192.168.17.10"/>
Subnet Mask	<input type="text" value="255.255.255.0"/>
System Address (ESSID)	<input type="text" value="Supportnet"/>
Radio Encryption	<input type="text" value="WPA2-PSK(AES)"/>
WPA Passphrase	<input type="text" value="support1234"/>

### Notes:

- Radio Data Rate and Channel will be set to Auto.
- Radio Transmit Power will be set to maximum.
- Any previous configuration of unrelated parameters will not be modified, and will still apply.

On the first modem configure the Operating mode as an “Access Point” (one of the modules needs to be an Access Point and the other a “Client” (Station))

Then select an IP address that is compatible with your application or network.

Select a “System Address (ESSID). This can be a string or word/number combination, etc, it is case sensitive and will need to be the same on the other Ethernet modems that you wish to communicate with.

By default the Radio Encryption will be WPA2-PSK but you can change this by selecting another encryption method from the drop down list. Next configure an Encryption key (passphrase) and again this is case sensitive and will need to be exactly the same on all modems that are communicating.

If you are having connection problems try disabling encryption to eliminate any encryption key problems.

When completed press the “Save Changes and Reset” button and wait until the module had reset and then reconnect to the configured IP address.

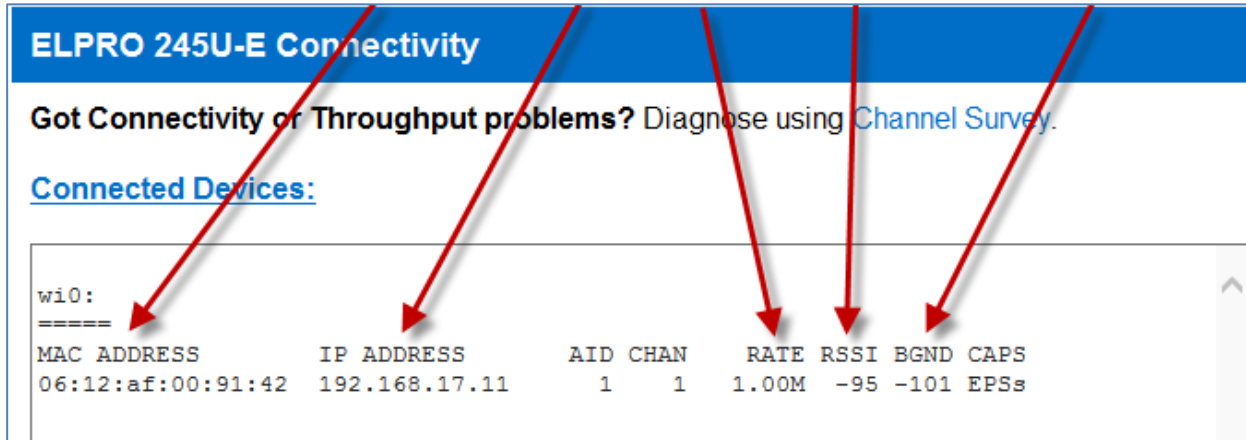
Do the same with the other modem however configure the Operating Mode as a Client and make sure the ESSID, Radio Encryption and WPA Passphrase are the same as what was configured on the Access Point.

You will also need to configure an IP address and because the modems are configured as bridges they will need to be in the same IP Subnet range i.e. 192.168.0.XXX.

There are other settings in the modems that can be changed however the configuration above should be all that is required to get the two modems connected via the Wireless Ethernet connection.

To test the connection you can go to the Connectivity page on the Access Point which will show any connections (Associations) with any Clients.

The display shows the MAC Address, IP Address, Data rate, RSSI level and Background noise levels



You should now be able to type in the IP Address of the Client in your browser to bring up its main connection page, from there you can again check the connectivity which will show the association back to the Access Point.

***Amendment Register:***

Issue No.	Date	Details of Amendment
1.0	30/10/15	Draft Issue
1.1	12/02/19	Elpro Branding