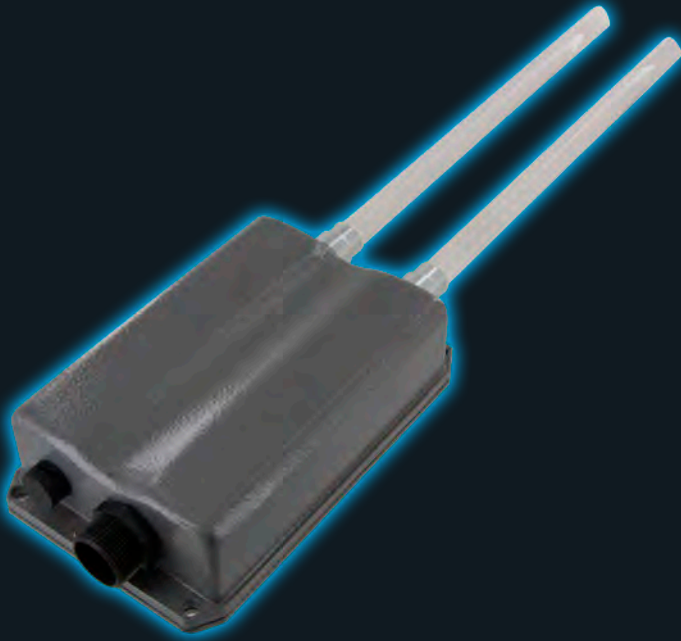




Outdoor Dual Band WiFi N Access Point



	www.esis.com.au
	Ph 02 9481 7420
	Fax 02 9481 7267
	esis.enq@esis.com.au
Industrial Electronics	

WELCOME

Thank you for choosing a NetComm Wireless NP731 Outdoor Dual Band WiFi N Access Point. This guide will help you set up, connect and configure your device quickly and easily.

PACKAGE CONTENTS

The NP731 package includes:



NP731 Outdoor Dual Band
WiFi N Access Point



Dual Band 5dBi Outdoor
Omni Antenna



PoE Injector



10m RJ-45 Outdoor-grade
Ethernet cable



Ground Wire
(green)



Detachment tool
(for RJ45 connector)



Mounting Kit



1 x Quick start guide

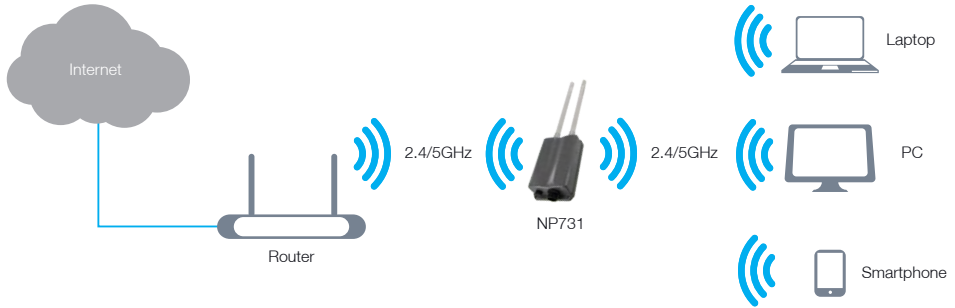


1 x Warranty card

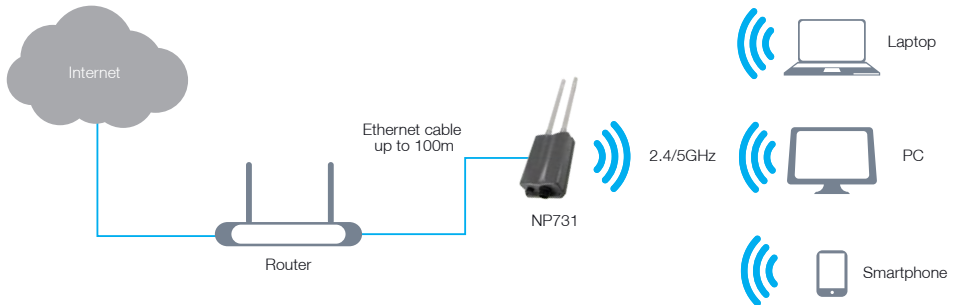
HOW IT WORKS

The NP731 has four modes of operation:

1. **Repeater mode (default)** – the NP731 repeats the wireless signal of your existing network to provide coverage to a greater area of your premises.



2. **Access Point mode** – the NP731 connects to an existing router via Ethernet and provides a wireless signal for wireless devices. This is useful in situations where there is no existing wireless access point or where you wish to provide a wireless signal to a remote area (up to 100 metres) from where the router is located.

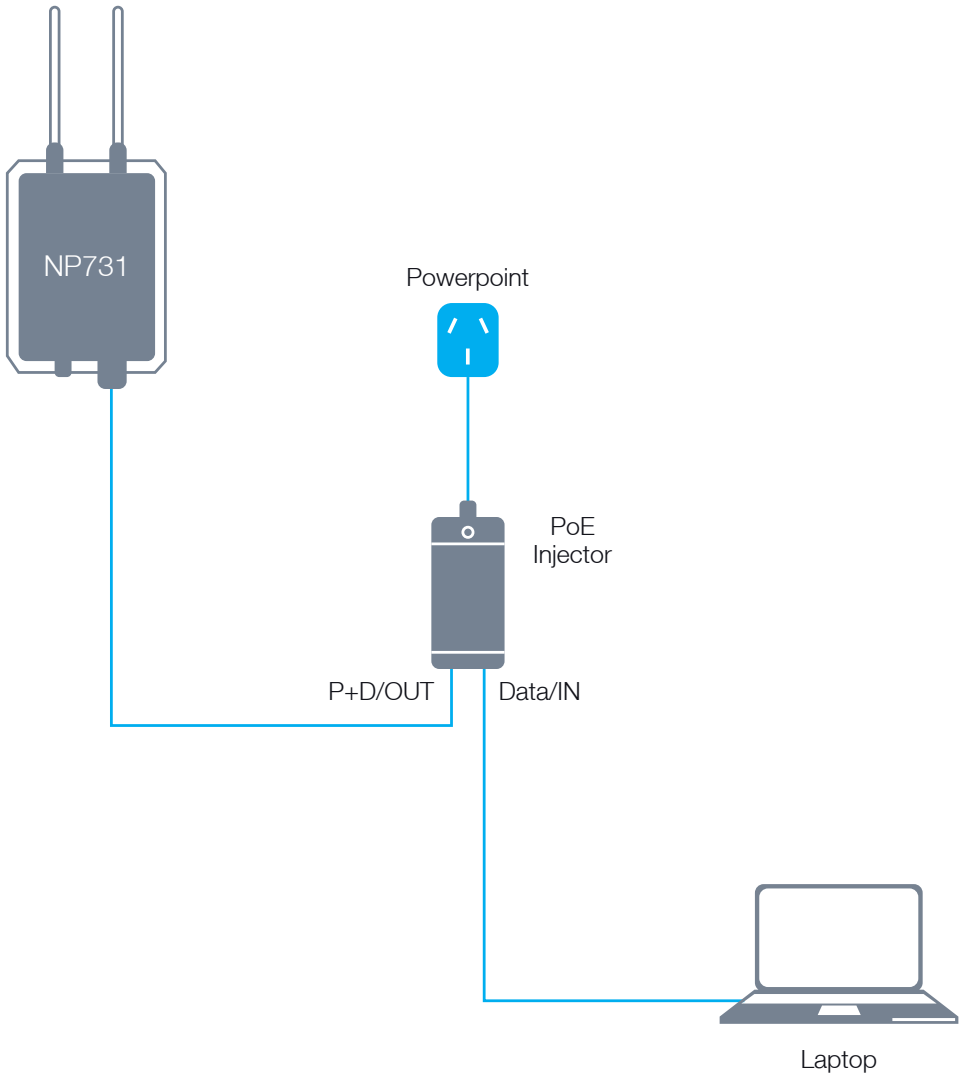


3. **CPE mode** – the NP731 connects wirelessly to a remote network and provides access to that network to clients connected via Ethernet. Use of a switch is required for multiple clients. (Further details on this mode are available in the User Guide).
4. **WDS mode** – the NP731 connects to up to 16 other NP731 units to create a wireless mesh network. This is similar to repeater mode but in WDS mode, the NP731 uses a single MAC address to provide seamless roaming. (Further details on this mode are available in the User Guide).

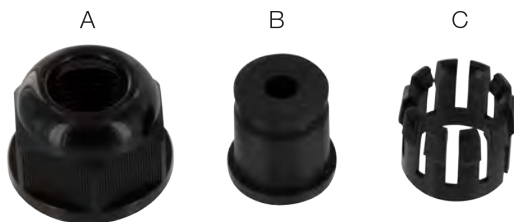
HARDWARE INSTALLATION

The following diagram illustrates the basic network topology that should be used for testing and configuration:

1. Connect the two Dual band antennas to the primary and secondary N-type antenna connectors on the NP731



2. Unscrew the weather seal from the PoE port and disassemble it so that it is in three parts.



3. Place the Ethernet cable through the bottom piece (A) first, as shown below.



4. Open the middle piece (B) and slide the Ethernet cable into it. Take care to orient the middle piece as shown below.



5. Place the third piece (C) over the top with the same orientation as shown below.



6. Connect the weather sealed end of the Ethernet cable to the Ethernet port of the NP731. Screw part A onto the Ethernet port of the NP731. Connect the other end of the Ethernet cable to the P+D/OUT port of the PoE injector.
7. Connect one end of another Ethernet cable to the DATA/IN port of the PoE injector and the other end of the cable to a computer.
8. Connect the power cord to the PoE injector and power it on.

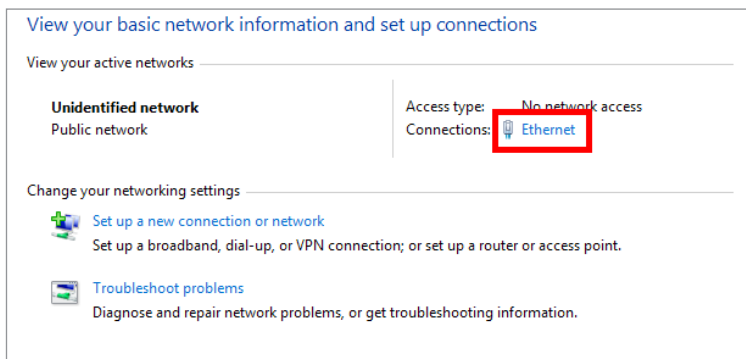
ACCESSING THE NP731'S USER INTERFACE

The NP731 has a static IP address of 192.168.1.254. To access the web management interface, you must set the IP address of your computer to be within the range of 192.168.1.2 to 192.168.1.253.

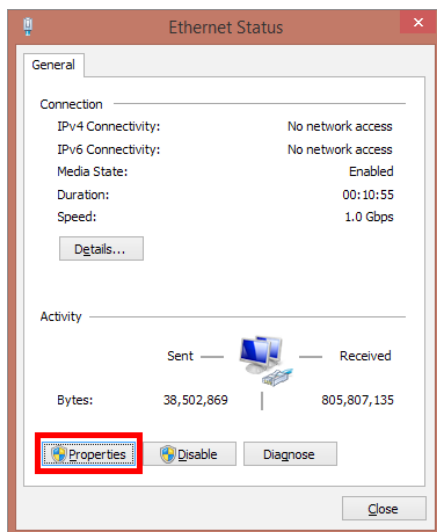
Setting the IP address of your computer

To set the IP address of your computer:

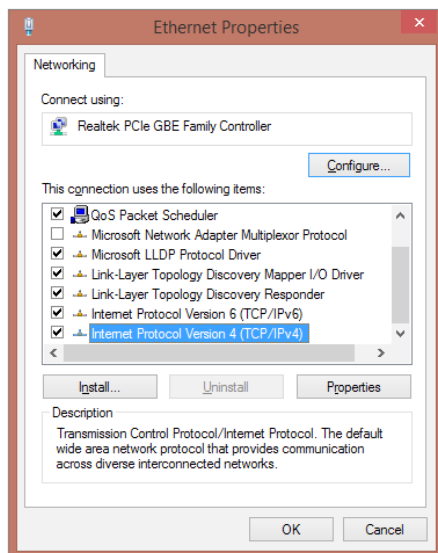
1. Open the **Control Panel** then select **Network and Sharing Center**.
2. Select the **Ethernet** connection for the Unidentified network.



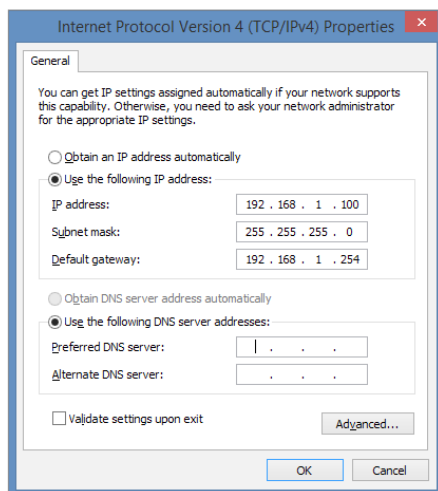
3. Click on the **Properties** button.



4. Select **Internet Protocol Version 4 (TCP/IPv4)** and then click on the **Properties** button.



5. Select the **Use the following IP address** option, then enter an IP address between the range of 192.168.1.2 and 192.168.1.253. In the **Subnet mask** field, enter 255.255.255.0. Click the **OK** button.

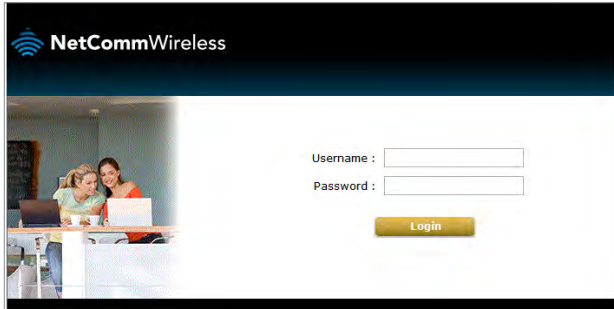


6. Close the **Ethernet Properties** and **Ethernet Status** windows.

Logging in to the NP731

To access the NP731's user interface:

1. Open a web browser and enter **http://192.168.1.254** into the address bar. Press **Enter**.
2. The login page of the NP731 is displayed.

The screenshot shows the login page of the NetCommWireless NP731. At the top, there is a dark blue header with the NetCommWireless logo and name. Below the header, on the left, is a small image of two people working at a desk. On the right, there are two input fields labeled 'Username :' and 'Password :'. Below these fields is a yellow 'Login' button.

3. Enter **admin** into both the Username and Password fields, then click the **Login** button.

CONNECTING THE NP731 TO YOUR ROUTER

Repeater Mode

Upon logging in to the NP731 web interface, you are presented with the System Overview screen.



To configure the NP731 for use in repeater mode:

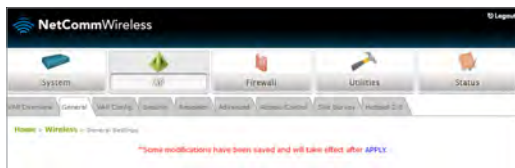
1. Click on the **AP** button at the top of the screen, then click on the **General** tab.



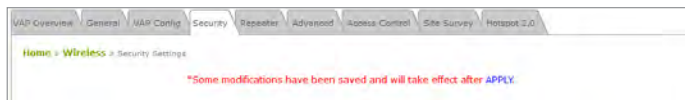
2. Use the **Band** drop down list to select the same network band that your router broadcasts on (2.4GHz / 5GHz). Use the **Protocol** drop down list to select the protocol that your router uses. Click the **Save** button.



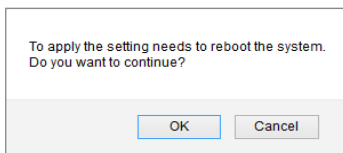
Depending on your chosen band, the NP731 may require a reboot. If it is required, the NP731 displays the message in the screenshot below. If it is not required, skip to step 5:



3. Click the **APPLY** link to apply the configuration.



4. Click the **OK** button on the confirmation window.



The NP731 reboots to apply the settings. When the NP731 has finished rebooting, continue to the next step.

5. Click on the **AP** menu item then the **Site Survey** tab. Click the **Scan** button.

Scan Result

[Scan Again](#)

SSID	MAC Address	Protocol	Channel	Rate	Signal	Security	Setup / Connect
NetComm 6005	00:60:64:F5:8A:F8	802.11ng	12	54	0	WPA2-Personal	Setup
NetComm 0758	00:60:64:DC:A3:48	802.11ng	11	54	0	WPA2-Personal	Setup

6. Enter the authentication credentials for the chosen network.

Pre-shared Key Type : ☐ PSK(Hex) **(64 chars)*
☒ Passphrase **(8 - 63 chars)*

Pre-shared Key :

[Connect](#)

7. Click on the **VAP Config** tab. For the **VAP** option, select **Enable**. In the **ESSID** field, enter the name you would like to use for the Virtual Access Point wireless network (i.e. the name of the repeated wireless network). Click the **Save** button when you have finished.

NetCommWireless

System | **AP** | Firewall | Settings | Status

Home > Wireless > VAP Configuration

VAP Configuration

Profile Name: VAP-1

VAP: ☐ Disable ☒ Enable

Profile Name: VAP-1

ESSID: NetCommAP-A1

VLAN ID: ☐ Disable ☒ Enable

VLAN ID: 1

Channel: 11

[Save](#) [Cancel](#)



Note: If the ESSID is set to be the same as the existing wireless network's SSID then client devices can automatically roam between the networks based on wireless signal strength.

8. Click on the **Security** tab. Select the desired security settings of the repeated network then click the **Save** button.



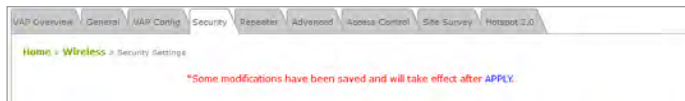
The screenshot shows the 'Security Settings' window for a VAP profile named 'VAP-1'. The 'Security Type' is set to 'WPA-Personal'. The 'Cipher Suite' is 'WPA2'. The 'Pre-shared Key Type' is set to 'PSK(Hex)*(64 chars)' with a radio button selected. The 'Pre-shared Key' field is empty. The 'Group Key Update Period' is set to '86400' seconds. There is a checkbox for '802.11r roaming' which is unchecked.

9. Before completing the configuration, we need to set the IP address of the NP731 to an IP address within the DHCP range of your router. Many routers use different DHCP ranges so you must refer to the documentation of your router to find out what its DHCP range is. Common DHCP address ranges are **192.168.1.xxx**, **192.168.0.xxx**, and **10.1.1.xxx**. You can configure the last octet of the IP address to be anything between 1 and 254 so long as it does not conflict with an existing device on the network. For example, to set the NP731's IP address to work with a router with a 192.168.0.x range, click on the **System** menu, then **Network Interface** and enter the details as per the following screenshot:



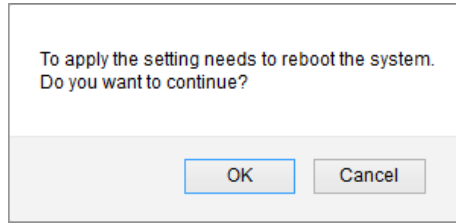
The screenshot shows the 'Network Settings' window for a 'Static' IP configuration. The 'IP Address' is set to '192.168.0.254'. The 'Subnetmask' is '255.255.255.0'. The 'Default Gateway' is '192.168.0.1'. The 'Primary DNS Server' is '192.168.0.1'. The 'Alternate DNS Server' is empty. The 'Internet DHCP Monitoring' is set to 'Disable'. The 'Exported DHCP' is set to 'Disable'. There are 'Apply' and 'Cancel' buttons at the bottom.

10. Click the **APPLY** link to apply the configuration.



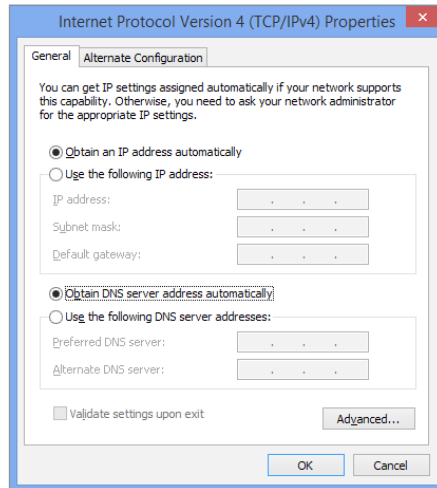
The screenshot shows a confirmation message in a web browser window. The message states: '*Some modifications have been saved and will take effect after APPLY.' The browser window shows the 'Security' tab selected in the navigation menu.

11. Click the **OK** button on the confirmation window.



The NP731 reboots to apply the settings. Wait approximately 4 minutes before attempting to connect a wireless client to the NP731. Now that the NP731 is configured for use, you can connect it to a PoE switch with Ethernet cable up to 100m to power it, or continue using it with the PoE injector.

12. While the NP731 is rebooting, you may like to set your computer's network card back to its previous setting so that you can continue to use it with your router. Follow the steps 1-4 of the "Setting the IP address of your computer" section. Instead of following step 5, select the "Obtain an IP address automatically" and "Obtain DNS server address automatically" options. Click the **OK** button then close the **Ethernet Properties** and **Ethernet Status** windows.



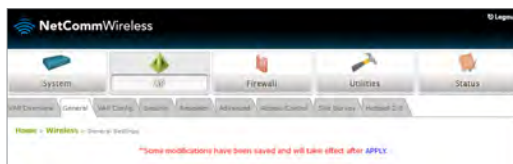
Access Point Mode

To use the NP731 in Access Point mode:

1. Click on the **AP** button at the top of the screen, then click on the **General** tab.
2. Use the **Band** drop down list to select the same network band that your router broadcasts on. Click the **Save** button.



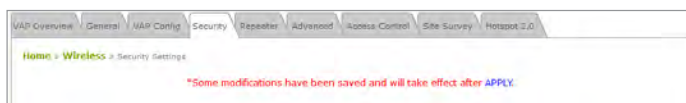
Depending on your chosen band, the NP731 may require a reboot. If it is required, the NP731 displays the message in the screenshot below. If it is not required, skip to step 5:



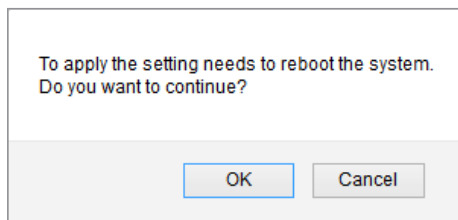
3. Before completing the configuration, we need to set the IP address of the NP731 to an IP address within the DHCP range of your router. Many routers use different DHCP ranges so you must refer to the documentation of your router to find out what its DHCP range is. Common DHCP address ranges are **192.168.1.xxx**, **192.168.0.xxx**, and **10.1.1.xxx**. You can configure the last octet of the IP address to be anything between 1 and 254 so long as it does not conflict with an existing device on the network. For example, to set the NP731's IP address to work with a router with a 192.168.0.x range, click on the **System** menu, then **Network Interface** and enter the details as per the following screenshot:



4. Click the **APPLY** link to apply the configuration.



5. Click the **OK** button on the confirmation window.



The NP731 reboots to apply the settings. When the NP731 has finished rebooting, continue to the next step.

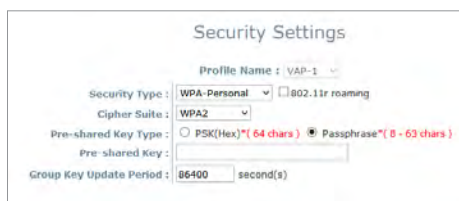
6. Click on the **Repeater** tab. Set **Repeater Type** to **None**. Click the **Save** button.



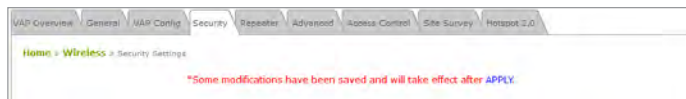
7. Click on the **VAP Config** tab. For the **VAP** option, select **Enable**. In the **ESSID** field, enter the name you would like to use for the Virtual Access Point wireless network (i.e. the name of the wireless network). Click the **Save** button when you have finished.



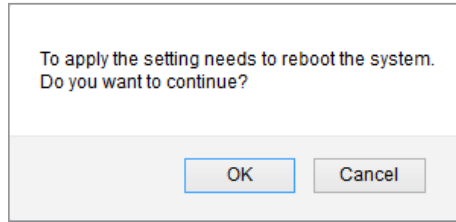
8. Click on the **Security** tab. Select the desired security settings of the AP network then click the **Save** button.



9. Click the **APPLY** link to apply the configuration.

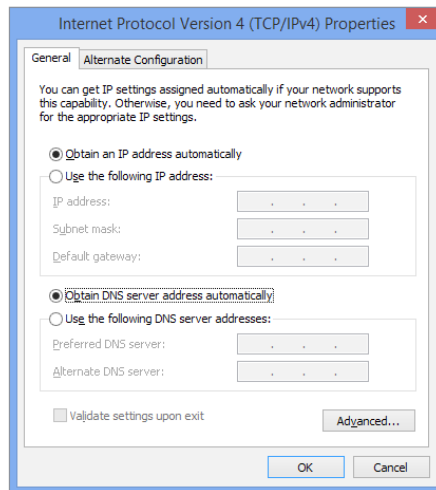


10. Click the **OK** button on the confirmation window.



The NP731 reboots to apply the settings. Wait approximately 4 minutes before attempting to connect a wireless client to the NP731. Now that the NP731 is configured for use, you can connect it to a PoE switch with Ethernet cable up to 100m, to power it or continue using it with the PoE injector.

11. While the NP731 is rebooting, you may like to set your computer's network card back to its previous setting so that you can continue to use it with your router. Follow the steps 1-4 of the "Setting the IP address of your computer" section. Instead of following step 5, select the "Obtain an IP address automatically" and "Obtain DNS server address automatically" options. Click the **OK** button then close the **Ethernet Properties** and **Ethernet Status** windows.



CHOOSING A LOCATION FOR YOUR WIFE EXTENDER

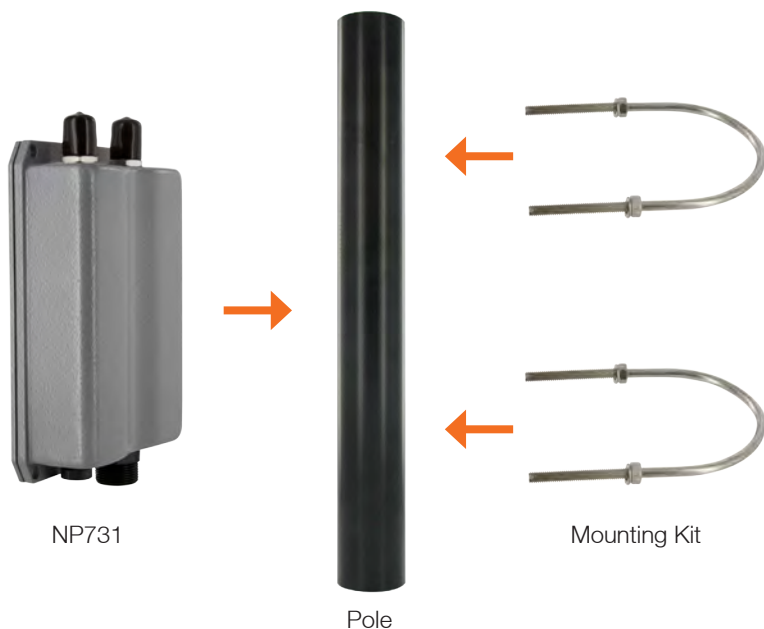
Now that your Access Point is connected to your router, you can move it to a different location to provide greater range for your network. Select a location to mount the NP731 that maximizes the range of your network in the direction where you wish to have wireless network coverage.

Remember that in repeater mode, if the NP731 is far from the router, you may increase your coverage but reduce the signal strength between your NP731 and the router. Conversely, if the NP731 is close to the router, the coverage area may be reduced but signal strength is increased.

In Access Point mode, you can place the NP731 in any area you wish to cover so long as the Ethernet cable between the NP731 and the router is 100m or shorter.

Mounting the NP731

1. Screw nuts onto the U-shaped bolts and then place a split washer on each end.
2. Align the front panel of the NP731 with the pole, then insert the U-shaped bolts through the holes provided on the corners of the NP731.
3. Secure the NP731 to the pole using the remaining nuts and washers as illustrated below.



CONNECTING YOUR WIRELESS CLIENT DEVICE TO THE NP731

1. On your wireless client device, scan for nearby wireless networks.
2. Select the wireless network that matches the ESSID that you previously configured.
3. Enter the authentication details that you previously configured.
4. Wait for the wireless client to connect. You have now completed the wireless client connection to the NP731.

Product Warranty

For warranty information please visit

<http://www.netcommwireless.com/product/wifi/np731>

Safety and product care

Please refer to the user guide for safety and product care information.



NetCommWireless

NETCOMM WIRELESS LIMITED ABN 85 002 490 486

Head Office, 18-20 Orion Road
Lane Cove, Sydney, NSW 2066, Australia

p: +61 2 9424 2000

f: +61 2 9424 2010



ESIS

Industrial Electronics

www.esis.com.au

Ph 02 9481 7420

Fax 02 9481 7267

esis.enq@esis.com.au