

# Enhanced Hybrid 4G LTE Gateway

NL1901ACV - QUICK START GUIDE

# WELCOME

Thank you for choosing a NetComm **NL1901ACV Enhanced Hybrid 4G LTE Gateway**. This guide will help you set up, connect and configure your device quickly and easily.

# TABLE OF CONTENTS

<b>PACKAGE CONTENTS</b>	<b>2</b>
<b>PRE-REQUISITES</b>	<b>4</b>
<b>SETTING UP YOUR GATEWAY</b>	
ADSL CONNECTIONS	4
VDSL CONNECTIONS	6
ETHERNET CONNECTIONS	8
<b>LOGGING INTO THE WEB INTERFACE</b>	<b>10</b>
<b>CONFIGURING THE GATEWAY FOR USE WITH AN INTERNET SERVICE</b>	<b>11</b>
ADSL	12
VDSL	14
ETHERNET WAN	16
MOBILE NETWORK	20
<b>CONNECTING WIRELESS DEVICES</b>	<b>21</b>
<b>CHANGING THE WIRELESS PASSWORD</b>	<b>22</b>
<b>CHANGING THE ADMINISTRATOR PASSWORD</b>	<b>24</b>

# PACKAGE CONTENTS

1. 1 x NetComm NL1901ACV  
Enhanced Hybrid 4G LTE Gateway
2. 2 x 4G/LTE antennas
3. 1 x RJ45 Ethernet cable
4. 1 x RJ11 Telephone cable
5. 1 x Power supply (12V/2A)
6. 1 x WiFi Security card
7. 1 x Warranty card
8. Quick Start Guide



1



2



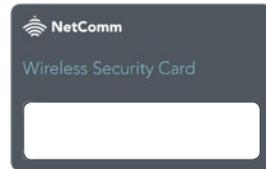
3



4



5



6



7



8

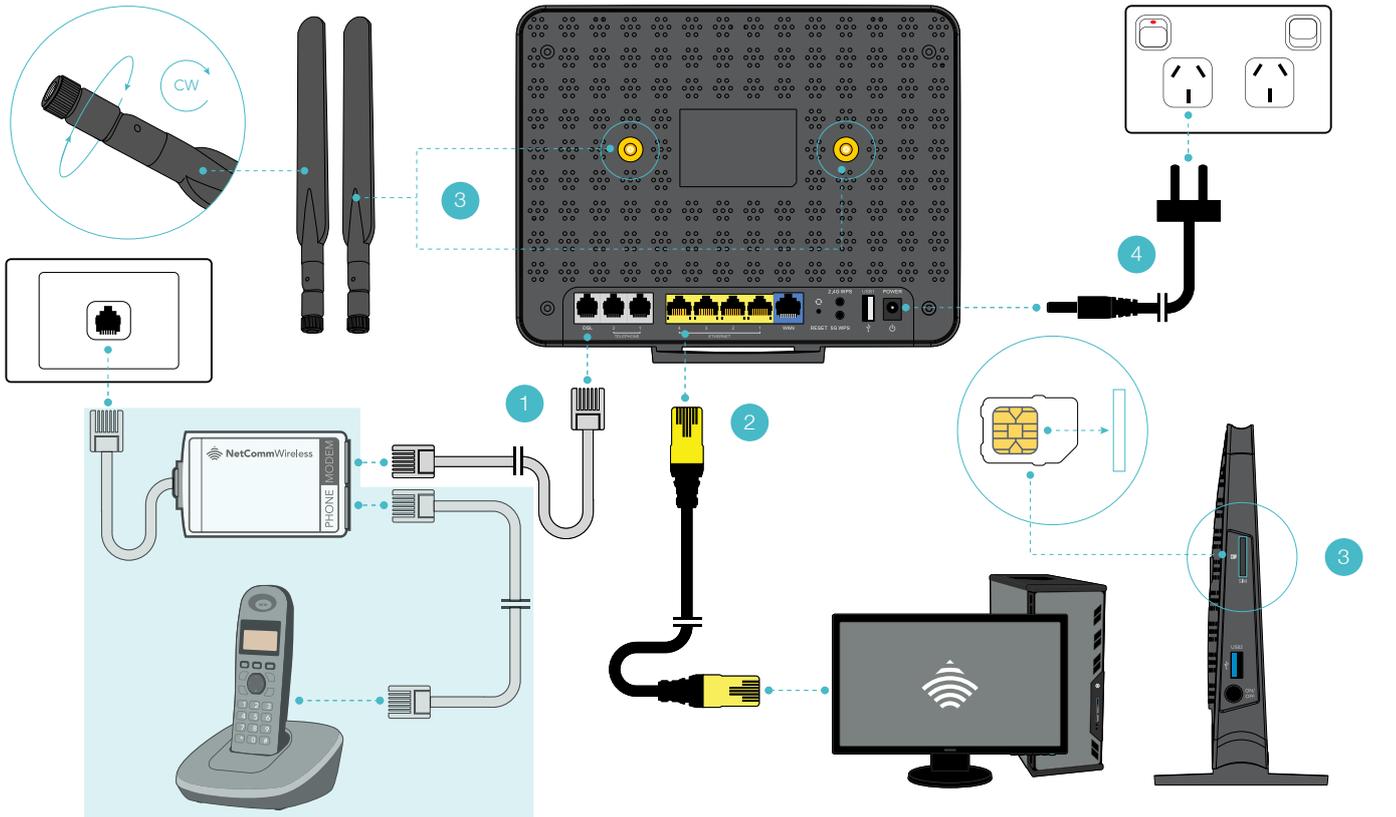
# SETTING UP YOUR GATEWAY

## ADSL Connections

### PRE-REQUISITES

If you are using a voice service on the same line as the DSL service, you will need a DSL line filter for each handset or back-to-base home alarm system on the line. If you have a Naked DSL service, line filters are not required. To use the 4G backup feature, you will need an active SIM card in 2FF format.

1. Connect the supplied RJ11 cable to the “modem” port of your DSL line filter and then connect the other end to the **DSL** port on the back of the **NL1901ACV**. Connect the DSL line filter (not included) to the wall socket and then connect your handset to the “phone” port of the filter.
2. Connect the supplied RJ45 Ethernet cable from one of the yellow **Ethernet** ports (1-4) on the back of the **NL1901ACV** to your computer.
3. If you intend to use a cellular connection as a backup, insert a **SIM** card (in 2FF format) in the direction shown in the diagram on the next page, then attach the **4G/LTE antennas** by turning them in a clockwise direction on the antenna sockets, as shown in the diagram on the next page.
4. Connect the included power adapter to the **Power** jack of the **NL1901ACV** and then plug it into an available wall socket. Press the **ON/OFF** button to power the router on. The Power light illuminates in red. When the **NL1901ACV** has finished booting up, the Power light turns green.

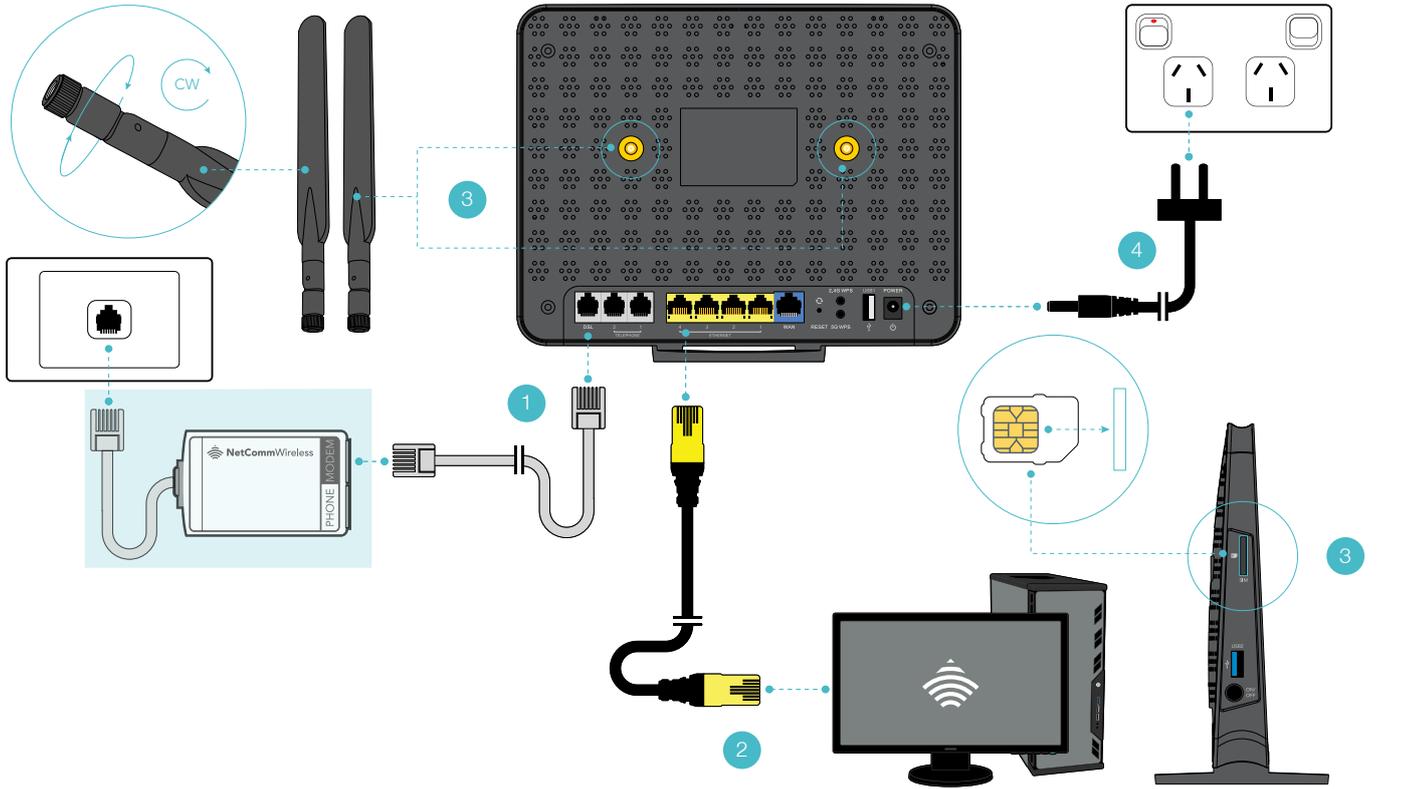


◆ = Optional Elements

# SETTING UP YOUR GATEWAY

## VDSL Connections

1. Connect the supplied RJ11 cable to the “modem” port of your DSL line filter and then connect the other end to the **DSL** port on the back of the **NL1901ACV**. Connect the DSL line filter (not included) to the wall socket.
2. Connect the supplied RJ45 Ethernet cable from one of the yellow **Ethernet** ports (1-4) on the back of the **NL1901ACV** to your computer.
3. If you intend to use a cellular connection as a backup, insert a **SIM** card (in 2FF format) in the direction shown in the diagram on the next page, then attach the **4G/LTE antennas** by turning them in a clockwise direction on the antenna sockets, as shown in the diagram on the next page.
4. Connect the included power adapter to the **Power** jack of the **NL1901ACV** and then plug it into an available wall socket. Press the **ON/OFF** button to power the router on. The Power light illuminates in red. When the **NL1901ACV** has finished booting up, the Power light turns green.



◆ = Optional Elements

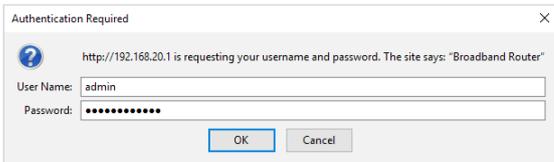
# SETTING UP YOUR GATEWAY

## Ethernet Connections

1. Connect a straight-through Ethernet cable to the blue **WAN** port on the back of the **NL1901ACV** and then connect the other end to your upstream gateway device, e.g. an FTTP gateway or HFC cable modem.
2. Connect the supplied RJ45 Ethernet cable from one of the yellow **Ethernet** ports (1-4) on the back of the **NL1901ACV** to your computer.
3. If you intend to use a cellular connection as a backup, insert a **SIM** card (in 2FF format) in the direction shown in the diagram on the next page, then attach the **4G/LTE antennas** by turning them in a clockwise direction on the antenna sockets, as shown in the diagram on the next page.
4. Connect the included power adapter to the **Power** jack of the **NL1901ACV** and then plug it into an available wall socket. Press the **ON/OFF** button to power the router on. The Power light illuminates in red. When the **NL1901ACV** has finished booting up, the Power light turns green.



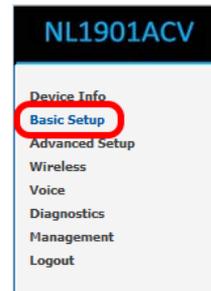
# LOGGING INTO THE WEB INTERFACE



1. Open a web browser (such as **Mozilla Firefox®** or **Google Chrome™**), type **http://192.168.20.1** into the address bar and press **Enter**.
2. When prompted for authentication, type **admin** into the Username field. In the Password field, enter the **full serial number of your device**. The serial number is **12 digits in length** and can be found on the label affixed to the rear of the device and on the box label. When you have entered the login details, click the **OK** button.

# CONFIGURING THE GATEWAY FOR USE WITH AN INTERNET SERVICE

1. Click on the **Basic Setup** menu item on the left side of the screen.
2. Follow the instructions for your connection type.



# ADSL

1. Select **ADSL** and click the **Next** button.
2. Select either the PPPoE, PPPoA or Bridging for your internet connection as specified by your Internet Service Provider (ISP). Click the **Next** button.

Basic > Quick Setup > Internet Setup

This Wizard is designed to walk you through the basic information needed to set up your device  
To continue, please select your WAN connection type.

ADSL  
 VDSL  
 Ethernet WAN  
 Mobile Network

Next

Basic > Quick Setup > Wan Setup (Select one WAN mode)

Select the WAN mode for your internet connection as specified by your Internet Service Provider(ISP).

PPP Over Ethernet (PPPoE)  
 PPP Over ATM (PPPoA)  
 Bridging

Back Next

- In the **User ID** and **Password** fields, enter the username and password assigned to you by your Internet Service Provider (ISP). If you want to use the cellular backup feature, select **Enable Mobile Broadband Backup**, then enter the required details. Contact your mobile carrier if you are unsure of the details. Click the **Finish** button.
- The account settings are saved and the **NL1901ACV** connects to the internet.

Basic > Quick Setup > ADSL only > PPPoE Information

Enter the User ID and Password assigned to you by your Internet Service Provider (ISP).

Protocol: PPPoE

User ID:

Password:

VPI:

VCI:

Enable Mobile Broadband Backup

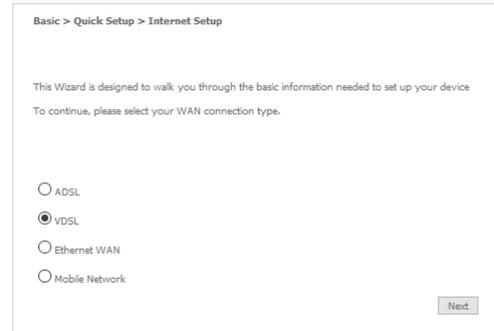
Network Name(APN):

Username(optional):

Password(optional):

# VDSL

1. Select **VDSL** and click the **Next** button.



Basic > Quick Setup > Internet Setup

This Wizard is designed to walk you through the basic information needed to set up your device. To continue, please select your WAN connection type.

ADSL

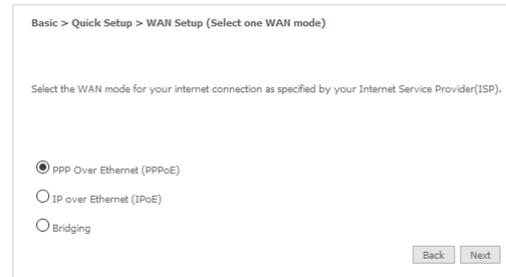
VDSL

Ethernet WAN

Mobile Network

Next

2. Select the WAN mode for your internet connection as specified by your Internet Service Provider (ISP). Click the **Next** button.



Basic > Quick Setup > WAN Setup (Select one WAN mode)

Select the WAN mode for your internet connection as specified by your Internet Service Provider(ISP).

PPP Over Ethernet (PPPoE)

IP over Ethernet (IPoE)

Bridging

Back Next

3. Select the correct VLAN option for your connection.  
For **New Zealand** customers, the requirement for VDSL is **VLAN tag 10**. If you are not sure of the tagging requirement for your connection, please contact your ISP. Click the **Next** button.

Basic > Quick Setup > VLAN Setup

Please select the correct VLAN option for your connection:  
If you are unsure, please contact your ISP

No VLAN Tag

VLAN Tag 10(For most New Zealand Customers)

Custom VLAN Tag

Back Next

4. In the **User ID** and **Password** fields, enter the username and password assigned to you by your Internet Service Provider (ISP). If you want to use the cellular backup feature, select **Enable Mobile Broadband Backup**, then enter the required details. Contact your mobile carrier if you are unsure of the details.
5. Click the Finish button when you have entered the required details. The account settings are saved and the **NL1901ACV** connects to the internet.

Basic > Quick Setup > VDSL only > PPPoE Information

Enter the User ID and Password assigned to you by your Internet Service Provider (ISP).

User ID:

Password:

Enable Mobile Broadband Backup

Network Name(APN):

Username(optional):

Password(optional):

Back Finish

## Ethernet WAN

1. Connect an RJ45 Ethernet cable to the **WAN** port on the **NL1901ACV**. Connect the other end of the cable to your WAN service. Select **Ethernet WAN** then click the **Next** button.

Basic > Quick Setup > Internet Setup

This Wizard is designed to walk you through the basic information needed to set up your device  
To continue, please select your WAN connection type.

ADSL

VDSL

Ethernet WAN

Mobile Network

Next

## PPP over Ethernet (PPPoE)

1. Select the WAN mode for your internet connection as specified by your Internet Service Provider (ISP). Click the **Next** button.

Basic > Quick Setup > WAN Setup (Select one WAN mode)

Select the WAN mode for your internet connection as specified by your Internet Service Provider(ISP).

PPP Over Ethernet (PPPoE)

IP over Ethernet (IPoE)

Back Next

2. Select the correct VLAN option for your connection.  
For **New Zealand** customers, the requirement for VDSL is **VLAN tag 10**. If you are not sure of the tagging requirement for your connection, please contact your ISP. Click the **Next** button.

Basic > Quick Setup > VLAN Setup

Please select the correct VLAN option for your connection:  
If you are unsure, please contact your ISP

No VLAN Tag

VLAN Tag 10 (For most New Zealand Customers)

Custom VLAN Tag

Back Next

3. Select the WAN mode for your internet connection as specified by your Internet Service Provider (ISP).  
If you want to use the cellular backup feature, select **Enable Mobile Broadband Backup**, then enter the required details. Contact your mobile carrier if you are unsure of the details.  
Click the **Finish** button.

Basic > Quick Setup > Ethernet WAN only > PPPoE Information

Enter the User ID and Password assigned to you by your Internet Service Provider (ISP).

User ID:

Password:

Enable Mobile Broadband Backup

Network Name (APN):

Username (optional):

Password (optional):

Back Finish

## IP over Ethernet (IPoE)

1. Select the WAN mode for your internet connection as specified by your Internet Service Provider (ISP). Click the **Next** button.
  
2. Select the appropriate VLAN option for your connection. For **New Zealand** customers, the requirement for VDSL is **VLAN tag 10**. If you are not sure of the tagging requirement for your connection, please contact your ISP.

Basic > Quick Setup > WAN Setup (Select one WAN mode)

Select the WAN mode for your internet connection as specified by your Internet Service Provider(ISP).

PPP Over Ethernet (PPPoE)

IP over Ethernet (IPoE)

Back Next

Basic > Quick Setup > VLAN Setup

Please select the correct VLAN option for your connection:  
If you are unsure, please contact your ISP

No VLAN Tag

VLAN Tag 10(For most New Zealand Customers)

Custom VLAN Tag

Back Next

3. If your ISP has supplied a static IP address, select **Use the following Static IP address** and enter the details, otherwise select **Obtain an IP address automatically**. If you want to use the cellular backup feature, select **Enable Mobile Broadband Backup**, then enter the required details. Contact your mobile carrier if you are unsure of the details. Click the **Next** button.

Basic > Quick Setup > Ethernet WAN only > IPoE Information

You can configure your IP over Ethernet(IPoE) settings as supplied by your Internet Service Provider(ISP). If your ISP supplied a static IP address, you can enter the details here. Otherwise,select"Obtain an IP address automatically".

Obtain an IP address automatically  
 Use the following Static IP address

Enable Mobile Broadband Backup

Network Name(APN):

Username(optional):

Password(optional):

Back Next

4. The settings are displayed in a summary. Click **Apply/Save** to save them.

WAN Basic Setup - Summary

Make sure that the settings below match the settings provided by your ISP.

Connection Type:	IPoE
NAT:	Enabled
Full Cone NAT:	Disabled
Firewall:	Enabled
IGMP Multicast:	Disabled
Quality Of Service:	Disabled

Click "Apply/Save" to have this interface to be effective. Click "Back" to make any modifications.

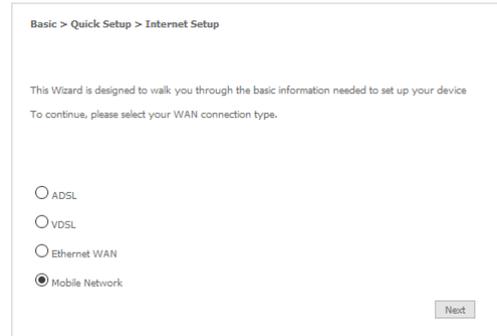
Back Apply/Save

5. The account settings are saved and the **NL1901ACV** connects to the internet.

# Mobile Network

To use the mobile network as the primary WAN connection, ensure that you have an active SIM card inserted into the gateway. If you do not have a SIM card inserted, power off the gateway, insert the SIM card, then power it on again.

1. Click on **Basic Setup**, then select **Mobile Network**. Click the **Next** button.
2. Enter the APN assigned by your carrier and if required, enter a **username** and **password**.
3. Click the **Apply/Save** button.

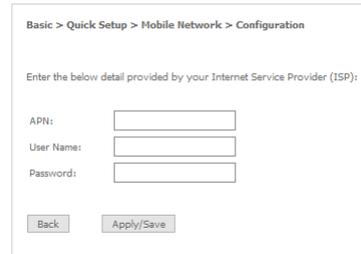


Basic > Quick Setup > Internet Setup

This Wizard is designed to walk you through the basic information needed to set up your device  
To continue, please select your WAN connection type.

ADSL  
 VDSL  
 Ethernet WAN  
 Mobile Network

Next



Basic > Quick Setup > Mobile Network > Configuration

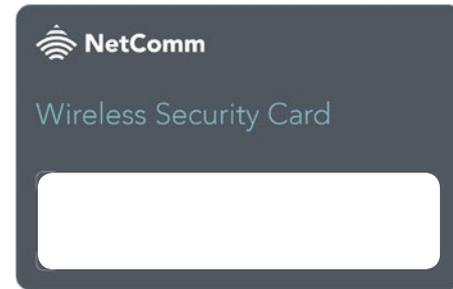
Enter the below detail provided by your Internet Service Provider (ISP):

APN:   
User Name:   
Password:

Back Apply/Save

# CONNECTING WIRELESS DEVICES

The default settings of the router have the wireless function enabled so there is no configuration necessary to use the wireless function, simply connect to the SSID (network name) listed on the WiFi security card or on the label located on the back of your gateway. When prompted, enter the password that is also printed on the card or gateway label.



<b>Enhanced Hybrid LTE Gateway</b>	<b>Admin IP Address:</b> 192.168.20.1
<b>Model No:</b> NL1901ACV	<b>Default username/password:</b> admin/944525YYWWNNNNN
<b>Part Code:</b> NL1901ACV-01-01	<b>WiFi Network Name:</b> XXXXXXXX XXXX
<b>IMEI:</b> XXXXXXXXXXXXXXXX	<b>WiFi Password:</b> XXXXXXXXXX
<b>MAC:</b> XXXXXXXXXXXXXXXX	
<b>Serial No:</b> 944525YYWWNNNNN	
<b>Power:</b> 12V=== 2A	
R-NZ	
Made in China.  <b>NetComm</b>	

# CHANGING THE WIRELESS PASSWORD

The security settings of the 2.4GHz and 5GHz bands are configured separately. If you would like to change the wireless password to something easier to remember, follow these steps for each band that you would like to change.

1. From the menu on the left side of the screen, select **Wireless-> {2.4GHz or 5GHz} -> Security**. The Wireless Security page for the chosen band is displayed.

2. In the **WPA/WAPI passphrase** field, enter the desired password to use for the wireless network. When choosing a password, try to ensure that it:

- is unique;
- is sufficiently long (at least 8 characters in length);
- uses a mix of letters, numbers and symbols;
- does not contain any personal information or common words.

3. Click the **Apply/Save** button.

### Manual Setup AP

You can set the network authentication method, selecting data encryption, specify whether a network key is required to authenticate to this wireless network and specify the encryption strength. Click 'Apply/Save' when done.

Select SSID:

Network Authentication:

Protected Management Frames:

WPA/WAPI passphrase:  [Click here to display](#)

WPA Group Rekey Interval:

WPA/WAPI Encryption:

WEP Encryption:

# CHANGING THE ADMINISTRATOR PASSWORD

We strongly recommend that you change the administrator password used to access the web interface to a more secure password. To change the administrator password:

1. From the menu on the left side of the screen, select **Management-> Access Control**.
2. In the **Old Password** field, enter the current administrator password. The unique 12-digit serial number of your device is the default password. The serial number can be found on the device label on the back of the gateway.

3. In the **Username** field, enter the current username.
4. In the **New Username** field, enter the desired username. It may be the default setting of 'admin', but the field must not be empty.
5. In the **New Password** and **Confirm Password** fields, enter a new password. When choosing a password, try to ensure that it:
  - is unique;
  - is sufficiently long (at least 8 characters in length);
  - uses a mix of letters, numbers and symbols;
  - does not contain any personal information or common words.
6. Click the **Apply/Save** button.

**Access Control – Passwords**

Access to your broadband router is controlled through your admin account.

The user name 'admin' has unrestricted access to change and view configuration of your Broadband Router.

Use the fields below to enter up to 16 characters and click 'Apply/Save' to change or create passwords. Note: Password cannot contain a space.

Username:

New Username:

Old Password:

New Password:

Confirm Password:



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