



Instruction Manual

xIPMIT204

2.4GHz 48V 300Mbps IP Bridge

Table of Contents

Part 1 Introduction	1
Part 2 User Information	1
Part 3 Powering & Controls	2
Part 4 Bridge Options	3
1 Standard WiFi Bridge Setup	3
2 "One to Many" WiFi Link	4
3 Multiple Pairs	5
Part 5 Pairing	6
1 Example - Standard WiFi Bridge	7
2 ERR Code or P-95	7
3 Example - One to Many	8
4 Example - Multiple Pairs	9
Part 6 Default Settings	10
Part 7 Browser Interface	11
1 Login	11
2 Home	12
3 Wizard	14
Repeater Mode	15
AP Mode (Access Point)	19
4 CPE	22
5 WiFi	23
2G WiFi	23
Repeater Settings	24
MAC ACL	24
WiFi Timer Off	25
Advanced	25
6 Network	26
LAN Settings	26
VLAN Settings	27
Cloud Server Settings	27
7 Manage	28
Configure	28
Reboot	29
Modify Password	30
Upgrade	31
Time	32
Log	33
Part 8 Troubleshooting	34

1 Pairing Issues	34
2 Signal strength of P-095	34
3 IP camera not working through IPmitter	34
4 Not powering up	35
5 Poor image quality or streaming speed	35
6 Issues with Internet data pass through	35
7 Signal low - different sites with affect the range	36
8 Cannot login to the IPmitter browser interface	37
Part 9 Extra Resources	42
1 Tech Tips	43
Part 10 Specifications	44
Part 11 Conditions	45
Index	0

Introduction

The budget IPmitters have a data transfer rate of 300Mbps, using the 2.4Ghz band, this is aimed at cost conscious installations.

The IPmitter works in 2 modes with LED pairing, Repeater mode and AP mode, the Host acts as the Access point (AP) and the client sets up as the repeater to provide a WiFi Bridge between the two.

IPMIT204 Can be powered using 48 PoE (Not supplied) or can be powered using 12V DC (Not supplied).

User Information

- The connections to the must be clean and dry, and not exposed to moisture or excessive dust.
- Do not touch the any of its connections with wet hands.
- Ensure the power is switched off to the IPmitter if not in use for a long period of time.
- There are no user serviceable parts in the IPmitter and opening or attempting to repair the product will void the warranty.
- Only use a 12V DC Regulated PSU (at least 500mA) or a 48V PoE Supply (also known as 802.3af).
- Do not install or use the device if the power cable or network connection is damaged.

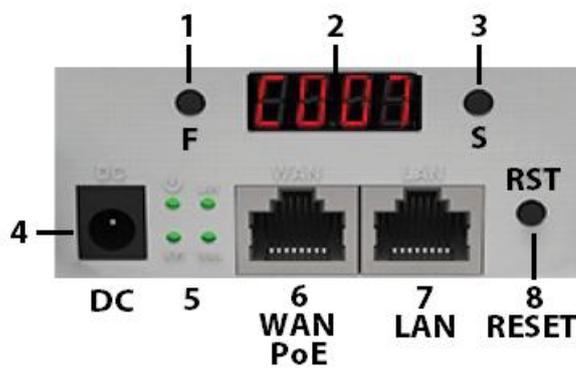
Powering & Controls

Powering

Option 1 - Power from 12V DC (via the 2.1mm DC Socket), the current consumption is 300mA. The IPMIT204 is polarity sensitive so connections must be made correctly.

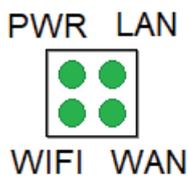
Option 2 - Power the camera using 48V PoE, in the RJ45 **WAN/POE** Socket

Note: The IPMIT204 will take approximately 3 minutes to boot up.



1 = Function Button
2 = LED Display
3 = Setting Button
4 = 12V DC. 2.1mm DC Socket ⊖ ⊕
5 = Status LEDs
6 = WAN - 10Mbps / 100Mbps 48 PoE network socket
7 = LAN - 10Mbps / 100Mbps network socket
8 = Reset/Pair Button

Status LEDs



PWR = Indicates on when power is connected to the IPmitter
WIFI = Indicates when there is WiFi connection
LAN / WAN = LAN and WAN light show network connection and flicker to indicate activity

Bridge Options

4.1 Standard WiFi Bridge Setup

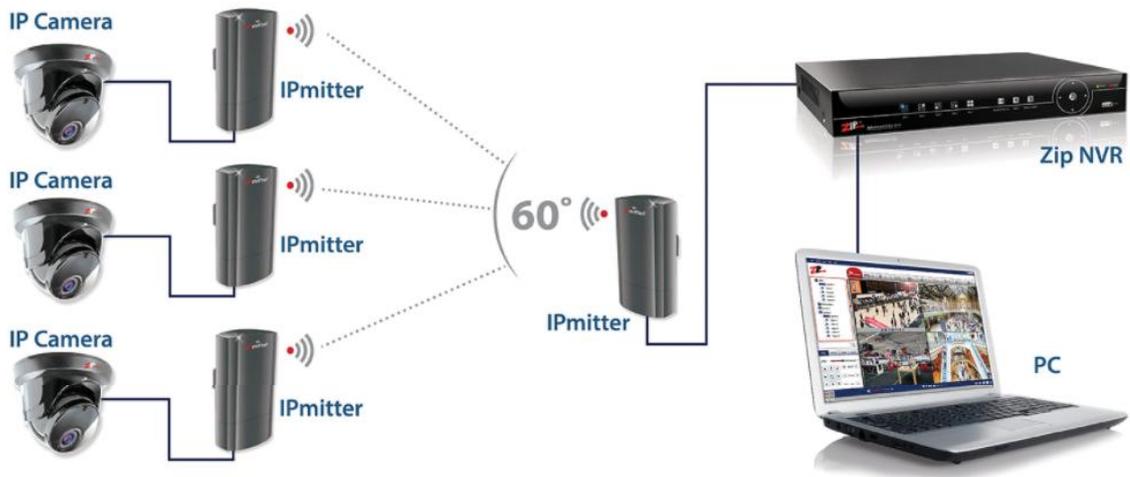


When pairing, one unit needs to be set to "Client" and the other unit needs to be set to "Host".

For example:



4.2 "One to Many" WiFi Link



When pairing, one unit needs to be set to "Host" and the many sender units need to be set to "Client".

Note:

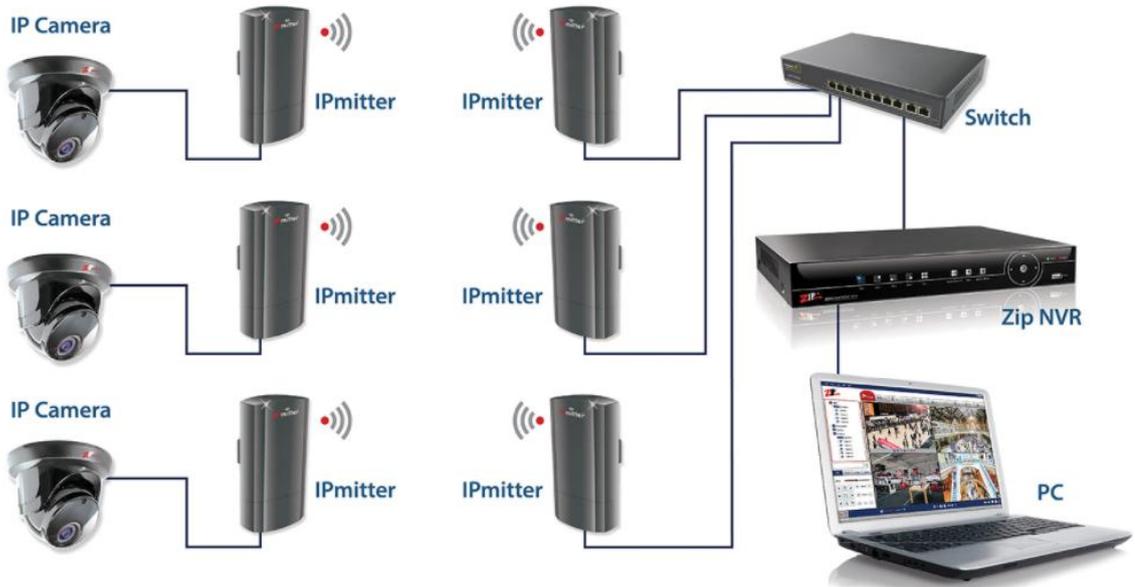
When pairing multiple clients with one host, configure the clients to "C" and the host to "H" and then pair the units. See [Pairing](#) for more information.

If a client has already been paired with the host and another client is to be added to the host, then down-power the existing client before attempting to pair the next client.

For example:



4.3 Multiple Pairs



When pairing, the units needs to be set to "Client" and "Host" but with different channel numbers.

Note:

When pairing multiple pairs each pair needs to be configured to a different WiFi channel.

When pairing the second pair onwards, down-power the existing pair/s. See [Pairing](#) for more information.

For example:



Pairing

Available Channels – Available channels 1-13

The IPmitters are sent out as default on H (Host).

One IPmitter needs to be set to H (Host) and the other to C (Client).

Ensure the IPmitters are paired up before installing in position.

The units can be down-powered and then installed in position once paired.

IMPORTANT :

Keep both IPmitters at least 2m apart during pairing, if they are too close they will "de-sense" and not pair.

If they are very close then point them away from each other during pairing to ensure they do not "de-sense".

Do not attempt to pair both IPmitters connected to the same PoE switch, they will detect a network loop and not pair.

If pairing is attempted with both IPmitters connected to the same PoE switch then default both units (press and hold rst button for at least 10 seconds).

Note:

Super WDS mode is not used in the IPMIT204 models, as they now use repeater and access point modes.

The Client is set to repeater mode and the Host is set to access point mode.

When pairing an older model IPMIT200 with a new model IPMIT204, then the IPMIT200 is required to be set manually in the web interface to either access point mode or repeater mode (depending on if being used as a client or a host).

5.1 Example - Standard WiFi Bridge

Pairing on channel 007

1. Power both IPmitters, and leave to boot up for at least 3 mins. During boot up they will display a rotating segment [_!]
2. On one IPmitter (client), press the **F** (function) button and "H" will flash [H007]. Press the **S** (setting) button to change to [C007].
3. The whole display will flash to indicate the settings have been saved, it will reboot (can take up to 3 mins) then the display will show [C007].
4. Now press the **RST** (reset) button for 1 second on both IPmitters [H007] [C007].

The display will change to a P with a rotating segment whilst pairing [P __]. Pairing can take up to 5 minutes.

The display will show P and a value once paired [P0 10] [P0 12].

5.2 ERR Code or P-95

Note: The strength will range P-01 (Good) to P-75 (Poor).

If **ERR** shows then the IPmitters have not paired

Reset both IPmitters, holding the R (reset) button down on both IPmitters for 10 seconds. Once both units have booted back up, then try the pairing process again.

Note: Ensure the units are not plugged into the same switch / network during pairing.

If **P-95** shows the the IPmitters have either not paired or they have lost signal.

1. Check the pairing > Reset both IPmitters, holding the R (reset) button down on both IPmitters for 10 seconds. Once both units have booted back up, then try the pairing process again.
2. Between P-070 and P-095 is too low for transmission > Try the pairing process with the devices closer together.

5.3 Example - One to Many

Pairing on channel 007

1. Power on all the IPmitters, and leave to boot up for at least 3 mins. During boot up they will display a rotating segment [_]
2. On client IPmitters, press the **F** (function) button and "H" will flash [H007]. Press the **S** (setting) button to change to [C007].
3. The whole display will flash to indicate the settings have been saved, it will reboot (can take up to 3 mins) then the display will show [C007].
4. Now press the **RST** (reset) button for 1 second on the IPmitters [H007] [C007] [C007].

The display will change to a P with a rotating segment whilst pairing [P _]. Pairing can take up to 5 minutes.

The display will show P and a value once paired [P0 10] [P0 12] [P0 11].

Note: If a client has already been paired with the host and another client is to be added to the host, then down-power the existing client before attempting to pair the next client.

5.4 Example - Multiple Pairs

Pairing on channel 007 and 010

1. Power one pair of IPmitters, and leave to boot up for at least 3 mins. During boot up they will display a rotating segment [_!]

2. On one IPmitter (client), press the **F** (function) button and "H" will flash [H007]. Press the **S** (setting) button to change to [C 007].

3. The whole display will flash to indicate the settings have been saved, it will reboot (can take up to 3 mins) then the display will show [C007].

4. Now press the **RST** (reset) button for 1 second on both IPmitters [H007] [C007].

The display will change to a P with a rotating segment whilst pairing [P _]. Pairing can take up to 5 minutes.

The display will show P and a value once paired [P0 10] [P0 12].

5. Down-power the paired units and then boot up the next pair.

6. On one IPmitter (client), press the **F** (function) button and "H" will flash [H007]. Press the **S** (setting) button to change to [C007].

7. The whole display will flash to indicate the settings have been saved, it will reboot (can take up to 3 mins) then the display will show [C007].

8. On the Host, press the **F** (function) button two times. Press the **S** (setting) button until the display shows [H0 10].

9. Now press the **RST** (reset) button for 1 second on both IPmitters [H0 10] [C007].

The display will change to a P with a rotating segment whilst pairing [P _]. Pairing can take up to 5 minutes.

The display will show P and a value once paired [P0 10] [P0 12].

10. Power the first pair of IPmitters back up and check to ensure the two pairs work correctly.

Default Settings

The default settings for the IPmitter:

IP Address = 192.168.1.123
Web Interface Password = ipmitter (lower case)

(These are shown on the label on the back of the unit)

Default WiFi key = 66666666

When the IPmitters are paired one IP address will always be on the default and the others will be automatically assigned (via GHCP).

The IP address of the unit can be found by pressing the F button until the display changes to Axxx the 3 characters after the A indicate the last segment of the IP address.

Unless you have changed the IP address the first 3 segments will still be on 192.168.1.

Defaulting the IPmitter to factory settings - Press and hold the RST (Reset) button on the IPmitter for 10 seconds.

Browser Interface

The following section describes the browser interface used for advanced setup and configuration.

Maintenance tasks such as setting the IPmitter to automatically reboot, and setting changes like setting the IP address and WiFi password.

Note: The browser interface is for advanced users only, incorrect use / setting could result in an inoperable unit. Please proceed at your own risk.

7.1 Login

This is the main login screen which is displayed as when logged into the IPmitter on a browser.

Enter the **Web Interface Password** = ipmitter (lower case).



7.2 Home

This screen displays the status information of the IPmitter.

Operation Mode - Which mode the IPmitter is set to currently (AP Mode for host, Repeater Mode for the client).

Flow - Shows the data flow to and from the unit.

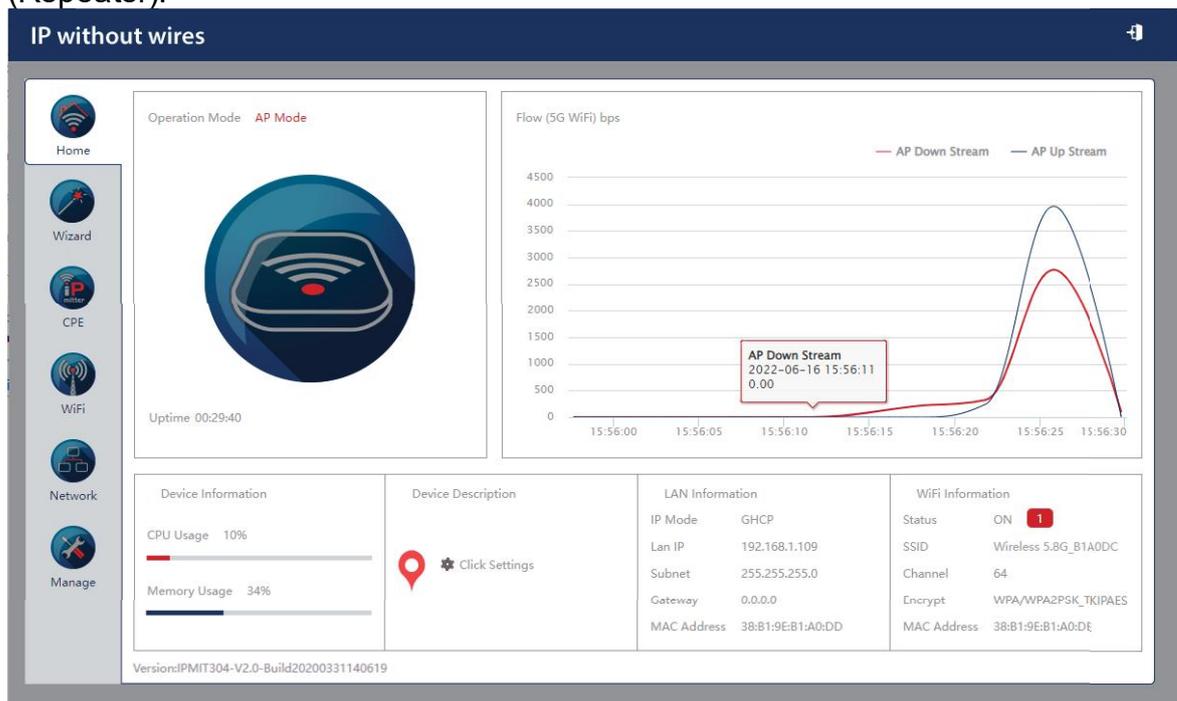
Device Information - Shows the current resource usage.

Device Description - Allows for a custom set name for this IPmitter.

LAN Information - The current IP address and basic network information.

WiFi Information - The current Wireless information on the IPmitter, for the Host (AP) if it is paired to a Client (Repeater) the status will show a red 1, to indicate the number of connected devices.

As standard this page will display for the Host (AP Mode) when paired with a Client (Repeater).



As standard this page will display for the Client (Repeater Mode).

-f
IP without wires

- Home
- Wizard
- CPE
- WiFi
- Network
- Manage

Operation Mode **Repeater Mode**

Device Description

Uptime 00:27:56

Device Information		LAN Information		Repeater Information		WiFi Information	
CPU Usage	11%	Lan IP	192.168.1.123	Repeater SSID	Wireless 5.8G_B1A0DC	Status	OFF 0
Memory Usage	34%	Subnet	255.255.255.0	BSSID	38:B1:9E:B1:A0:DE	SSID	Wireless 5.8G_B1A23C
		MAC Address	38:B1:9E:B1:A2:3D	Encrypt	WPA2PSK_TKIPAES	Channel	64
		Gateway	0.0.0.0	Signal	<div style="width: 100%; height: 10px; background: linear-gradient(to right, red, orange, yellow, green);"></div> [-17dBm]	Encrypt	WPA/WPA2PSK_TKIPAES
		DHCP Server	OFF	Link quality	<div style="width: 100%; height: 10px; background: linear-gradient(to right, red, orange, yellow, green);"></div> [100%]	MAC Address	38:B1:9E:B1:A2:3E

Flow(bps)

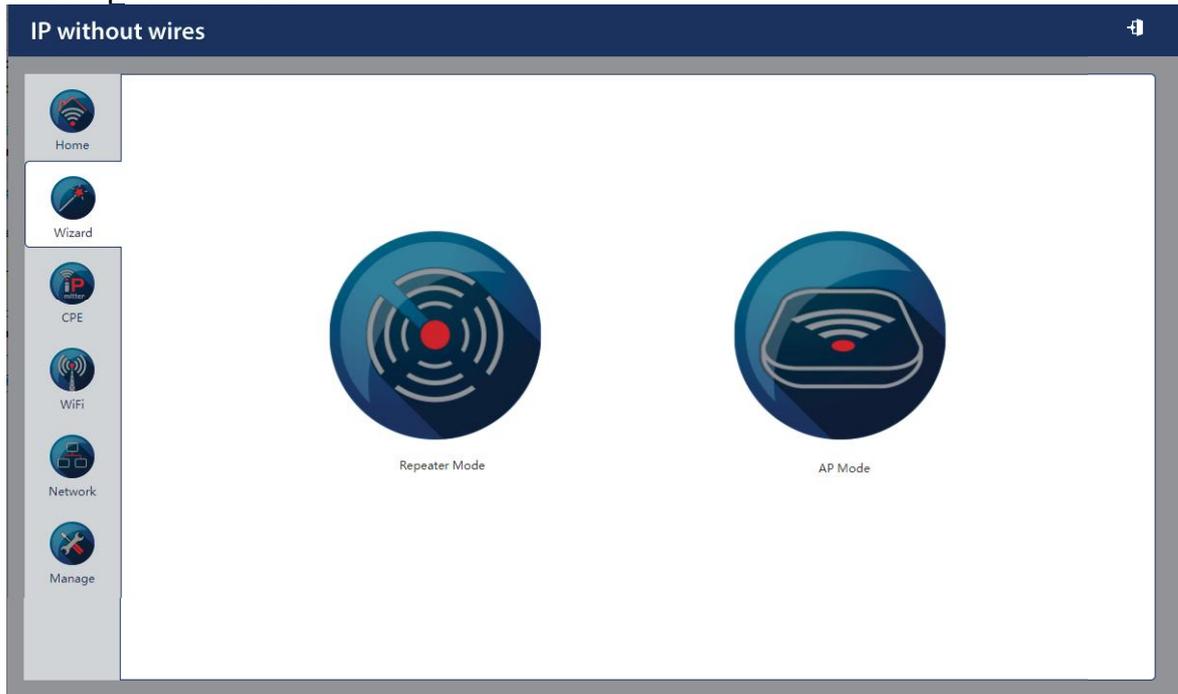
Version:IPMIT304-V2.0-Build20200331140619

7.3 Wizard

Pairing can be done using the buttons on each IPmitter (see [Pairing](#)⁶ for more information) or it can be done via the Wizard.

For a "Standard WiFi Bridge Setup" one IPmitter needs to be set as AP Mode (Access Point Mode) and another as Repeater Mode.

See [Bridge Options](#)³ for information on which IPmitter needs to be set to AP Mode and Repeater Mode.



7.3.1 Repeater Mode

Repeater mode requires an existing WiFi connection from a router, access point or other IPmitter.

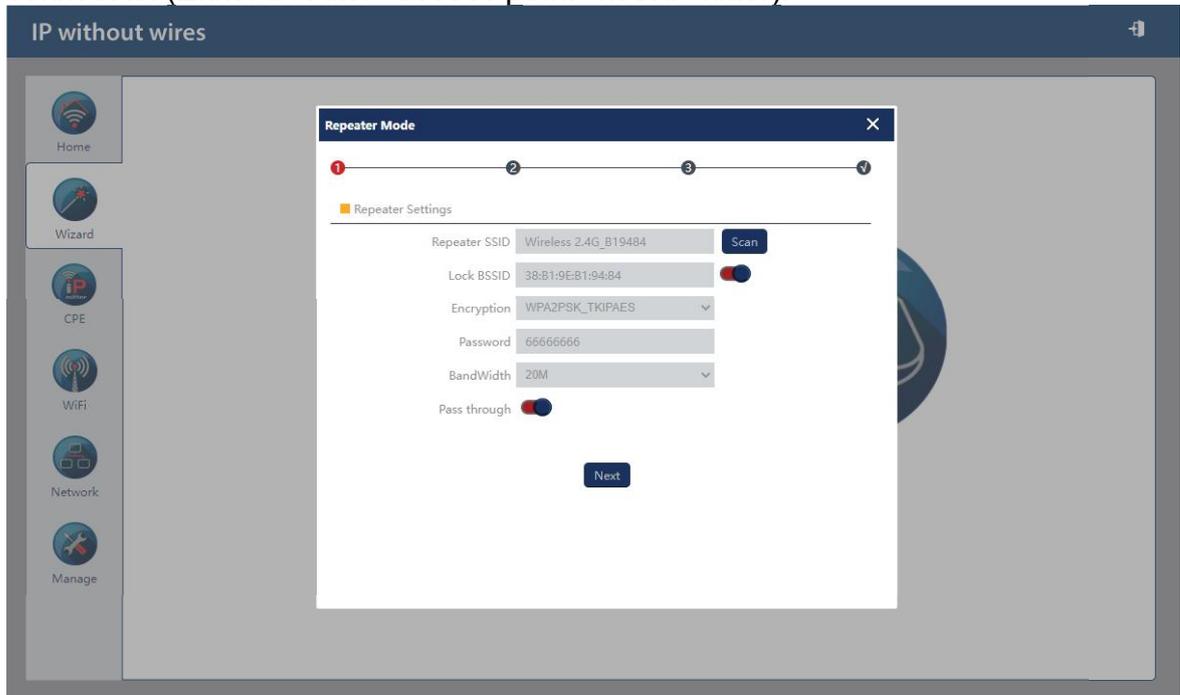
The IPmitter then connects to the existing WiFi connection and then extends that network via the LAN/ WAN RJ45 ports or via WiFi on the repeating IPmitter.

Select Repeater Mode.



 Repeater Mode

1. Enter settings for existing WiFi, these are the details of which this IPmitter will connect to. (Either a router / access point / host IPmitter).



Repeater SSID is the WiFi network SSID this IPmitter is to connect to. To find the network you want to connect to press Scan and then select the WiFi network name.

Lock BSSID is the Mac Address of the device being connected to, this field is completed automatically.

Encryption is the type of Wireless Encryption used to access the WiFi network.

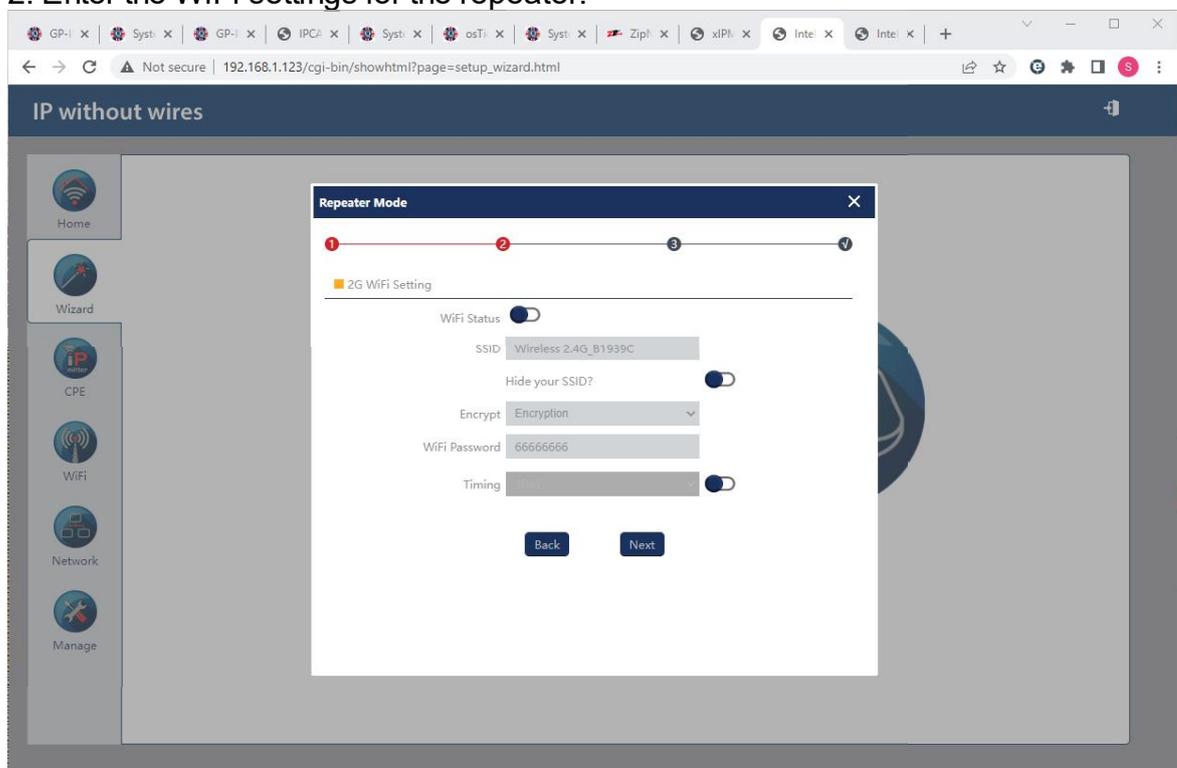
Password is the password used to access the WiFi network.

Bandwidth is the broadcasting bandwidth which this wireless network uses. This needs to set to match your router/ WiFi Bandwidth.

Pass through is set to off as default, may need to be enabled for network data (Internet traffic) at the repeater end.

Select **Next** to confirm settings.

2. Enter the WiFi settings for the repeater.



WiFi Status controls the WiFi on the repeater. When used purely as an IP camera bridge then it is recommended to leave this option off. When enabled the repeater will broadcast its own WiFi network as well as the existing WiFi network.

SSID sets the name of the WiFi network you will see broadcast at the repeater. This can be the same as the existing WiFi network or unique to the repeater.

Hide your WiFi name? Enable so that when a wireless device searches the area for the networks it will not be able detect the WiFi name.

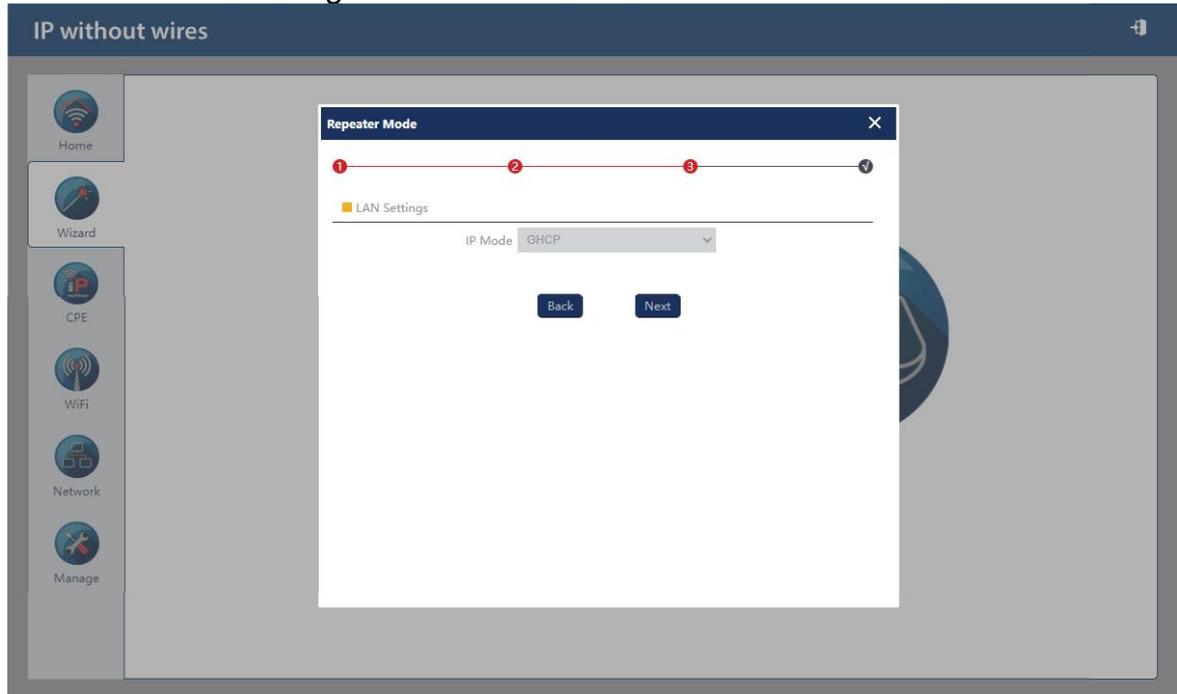
WiFi Password is the password used to access the Repeater WiFi network.

A strong password consists of at least six characters (and the more characters, the stronger the password) that are a combination of letters, numbers and symbols. This can be the same as the existing WiFi network or unique to the repeater.

Timing allows for a timed reboot or interval for the IPmitter.

Select **Next** to confirm settings.

3. Enter the LAN Settings for the IPmitter.



IP Mode can be set to either GHCP, static or DHCP. GHCP is set as standard, and will receive an address (similar to DHCP, but will also assign another IPmitter connected to an available address), static IP address is a unique fixed address which you can assign to the IPmitter. DHCP will obtain the address from the DHCP server or the router and assign IPmitter with an address from the network.

LAN IP is a unique local IP address of the IPmitter that identifies the device on the local area network.

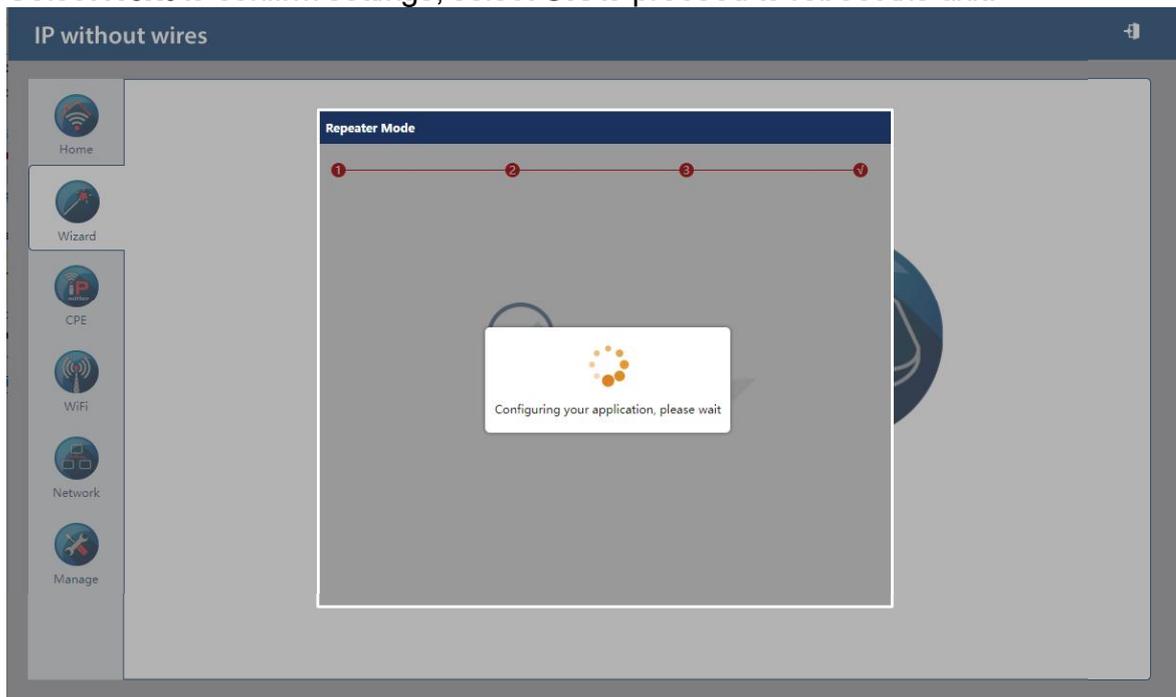
Subnet is the number that defines a range of IP address that can be used on the network. This should match other devices on the network. The most common subnet mask is 255.255.255.0

Gateway (or default gateway) is a router address connected to the local network that sends packets out of the local network. This is normally the local IP address of the router.

Primary DNS is usually the Gateway (router's) local IP address.

Secondary DNS another DNS server address

Select **Next** to confirm settings, select **OK** to proceed to reboot the unit.



7.3.2 AP Mode (Access Point)

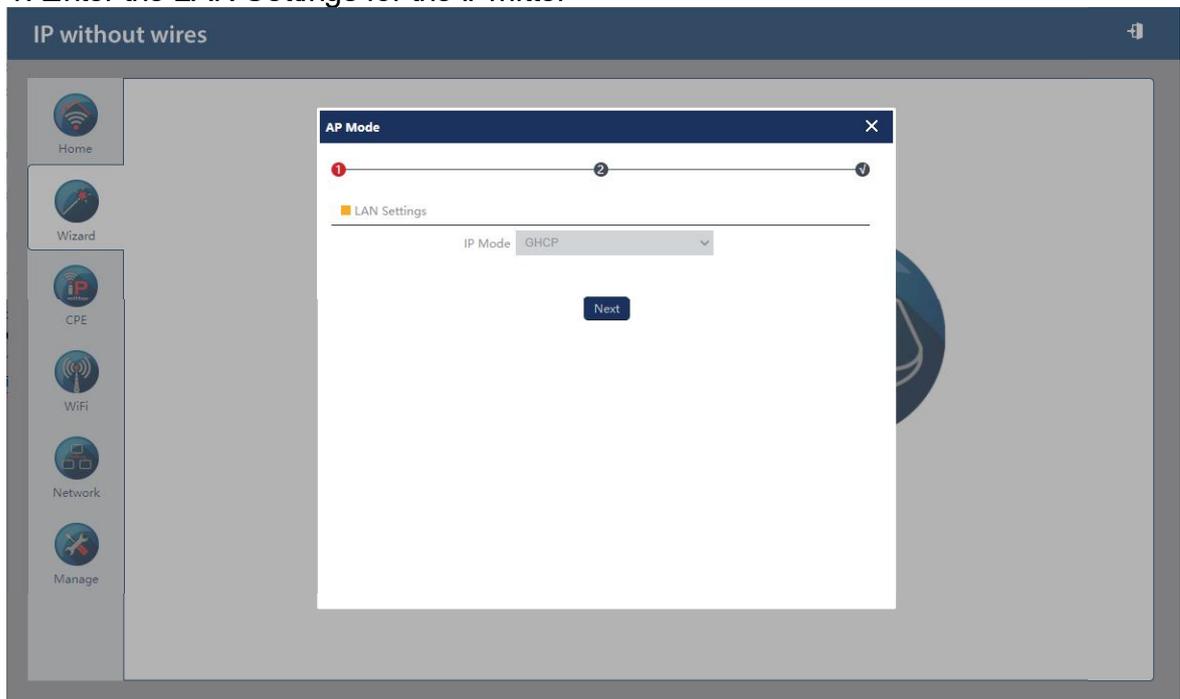
AP Mode sets the IPmitter up as a wireless access point, with the IPmitter connected via an Ethernet connection (LAN/ WAN socket) a network, then a WiFi device can connect to the network using the IPmitter.

Select AP Mode.



AP Mode

1. Enter the LAN Settings for the IPmitter



IP Mode can be set to either GHCP, static or DHCP. GHCP is set as standard, and will receive an address (similar to DHCP, but will also assign another IPmitter connected to an available address), static IP address is a unique fixed address which you can assign to the IPmitter. DHCP will obtain the address from the DCHP server or the router and assign IPmitter with an address from the network.

LAN IP is a unique local IP address of the IPmitter that identifies the device on the local area network.

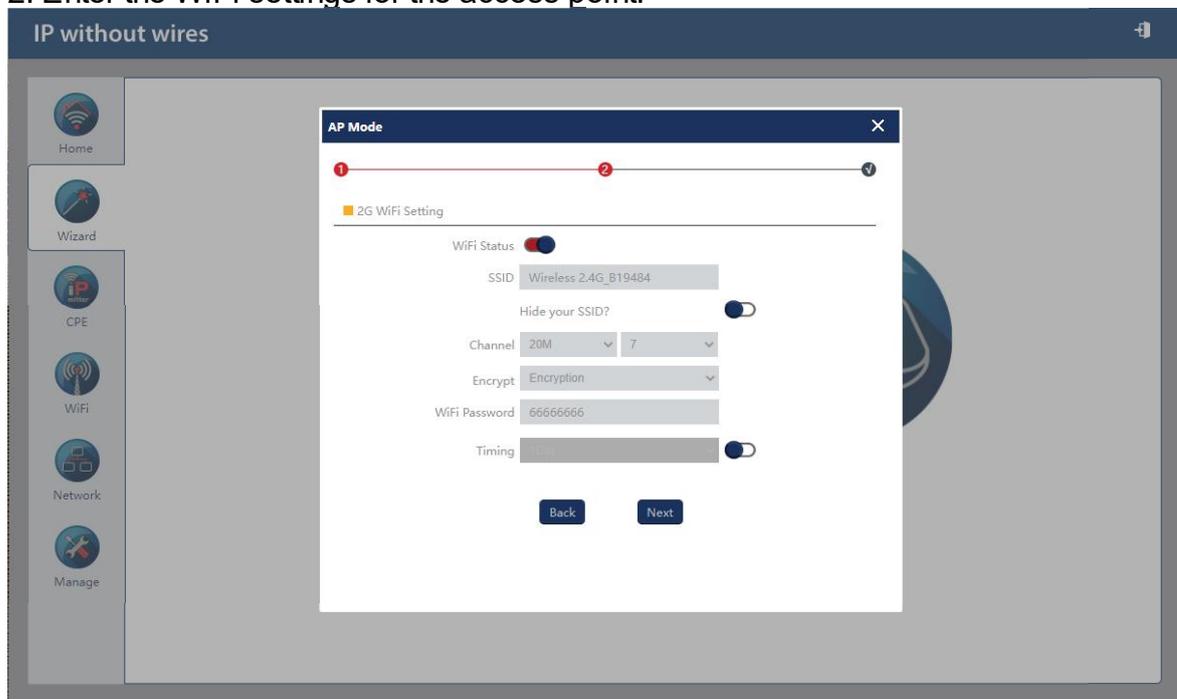
Subnet is the number that defines a range of IP address that can be used on the network. This should match other devices on the network. The most common subnet mask is 255.255.255.0

Gateway (or default gateway) is a router address connected to the local network that sends packets out of the local network. This is normally the local IP address of the router.

Primary DNS is usually the Gateway (router's) local IP address.

Select **Next** to confirm settings.

2. Enter the WiFi settings for the access point.



WiFi Status controls the WiFi on the access point. When enabled the access point will broadcast its own WiFi network as which extends the LAN connection.

SSID is the name of the WiFi network you will see broadcast.

Hide your WiFi name? Enable so that when a wireless device searches the area for the networks it will not be able detect the WiFi name.

Channel allows for the setting of the channel bandwidth and also the channel number.

It is recommended to use 20M for this, as there is less chance of collisions / cross over of the IPmitter WiFi onto existing WiFi networks.

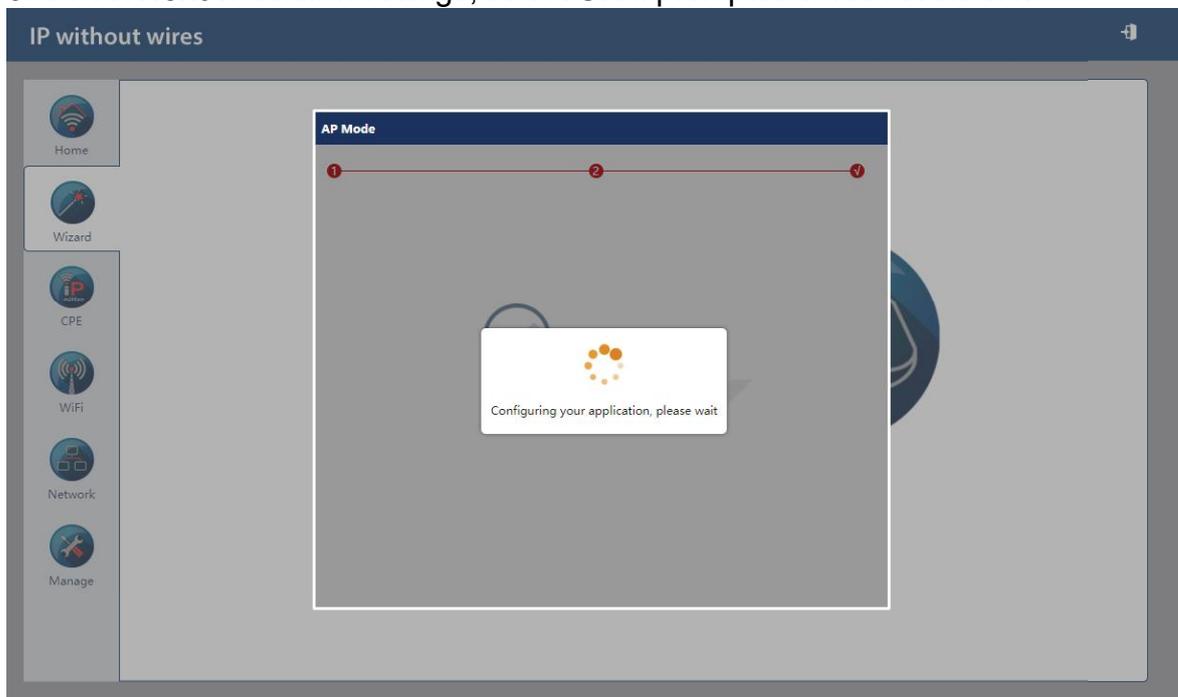
The channel number allows for a specific channel number to be selected, it is recommended to use a WiFi Analyser to see what channels are "least crowded" and then set the IPmitter to suit.

Encrypt controls the security of the access point, it is recommended to leave Encryption set. When set to open, there is no WiFi password requirement.

WiFi Password is the password used to access the WiFi network. A strong password consists of at least six characters (and the more characters, the stronger the password) that are a combination of letters, numbers and symbols.

Timing allows for a timed reboot or interval for the IPmitter.

3. Select **Next** to confirm settings, select **OK** if prompted to reboot the unit.



7.4 CPE

The CPE manage menu, displays information on the connected IPmitters.

This page will show when a pair of IPmitters are paired and both are online and connected.

The screenshot shows the 'CPE Manage' page in the 'IP without wires' browser interface. The left sidebar contains navigation icons for Home, Wizard, CPE, WiFi, Network, and Manage. The main content area displays 'Channel:64' and a table with the following data:

Device List	Operation Mode	Description	MAC Address	IP Address	Signal	Status	Uptime
DEV1	AP Mode	N/A	38:B1:9E:B1:A0:DD	192.168.1.61	-15 dBm	Online	00:38:23
DEV2	Repeater Mode	N/A	38:B1:9E:B1:A2:3D	192.168.1.123	-17 dBm	Online	00:38:29

This page shows an example of when a pair of IPmitters are no longer connected to each other, as one device is showing offline (in this example not powered).

The screenshot shows the 'CPE Manage' page in the 'IP without wires' browser interface. The left sidebar contains navigation icons for Home, Wizard, CPE, WiFi, Network, and Manage. The main content area displays 'Channel:64' and a table with the following data:

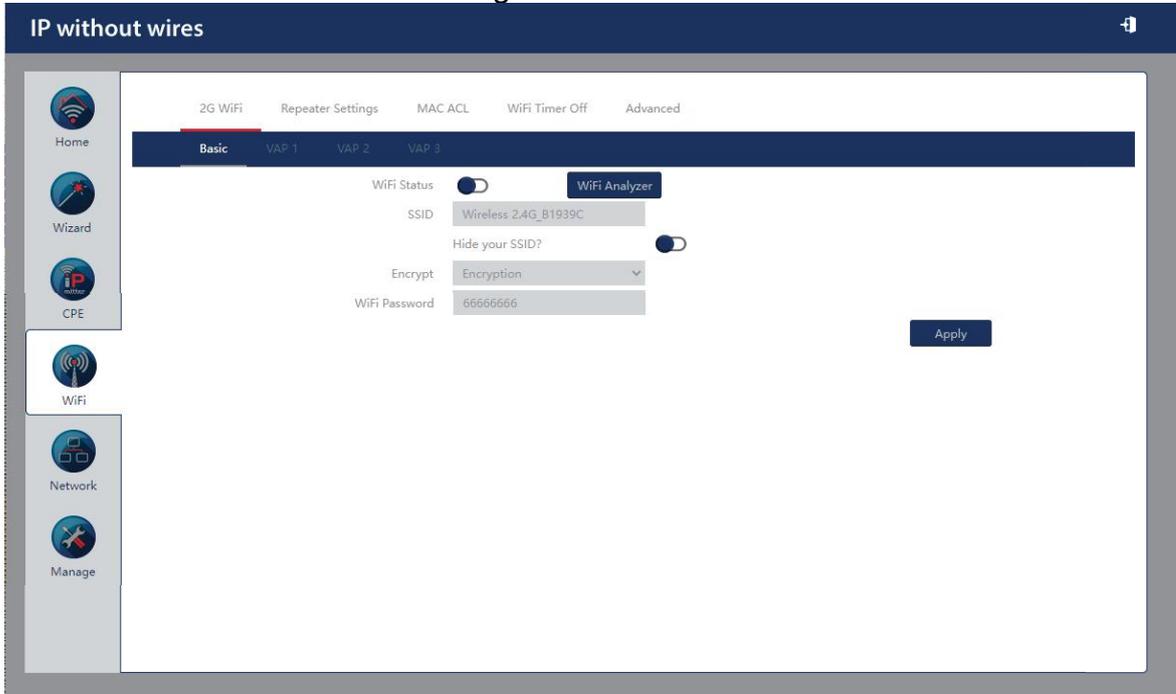
Device List	Operation Mode	Description	MAC Address	IP Address	Signal	Status	Uptime
DEV1	AP Mode	N/A	38:B1:9E:B1:A0:DD	192.168.1.61	-15 dBm	Online	00:39:25
DEV2	Repeater Mode	N/A	38:B1:9E:B1:A2:3D	192.168.1.123	-17 dBm	Offline	00:38:41

7.5 WiFi

The WiFi menu allows for custom setting of the WiFi settings on the IPmitter.

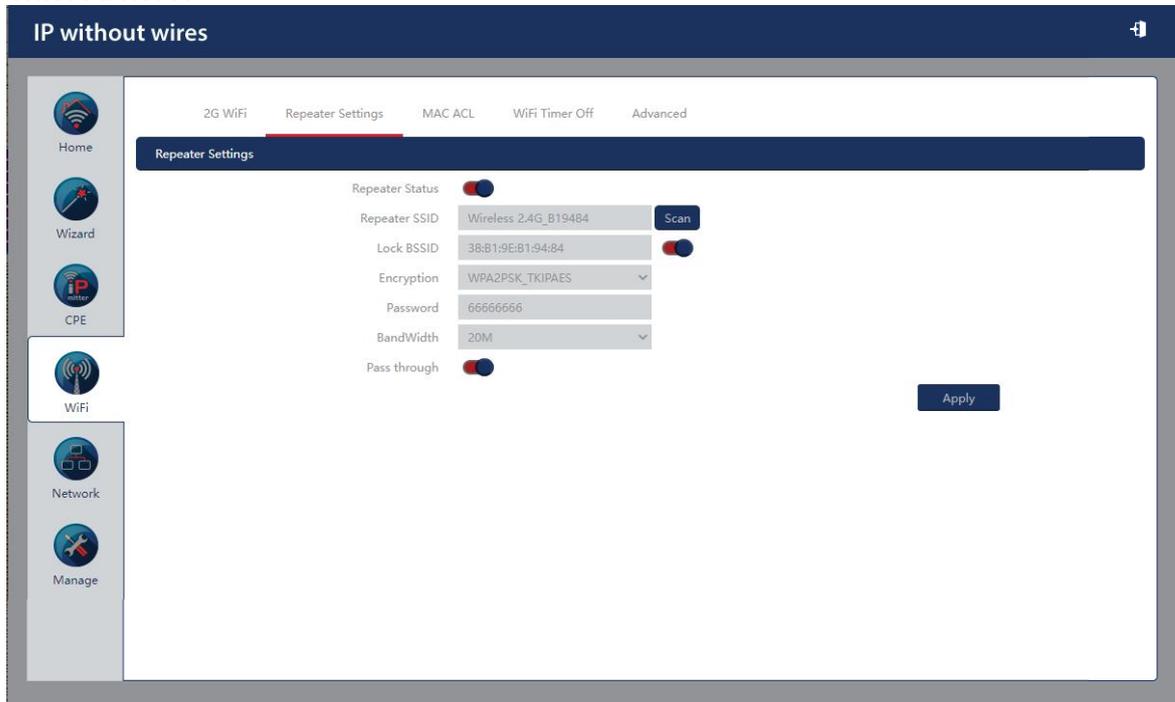
7.5.1 2G WiFi

Customise the standard WiFi settings.



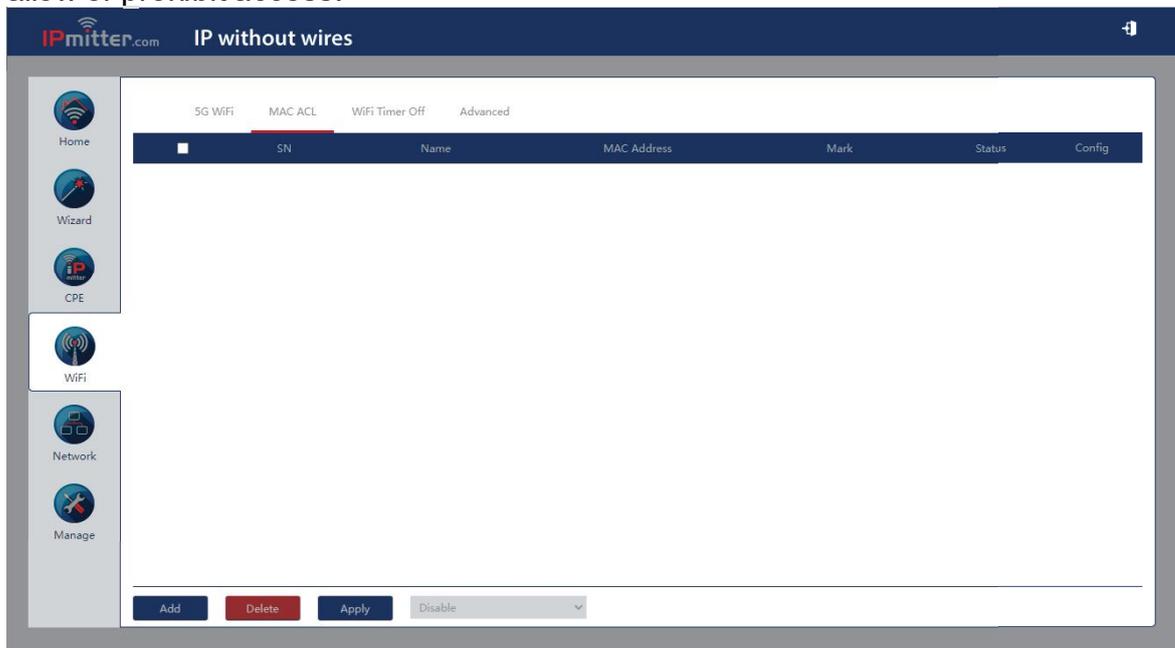
7.5.2 Repeater Settings

When set to repeater mode the details for the existing WiFi connection can be entered here.



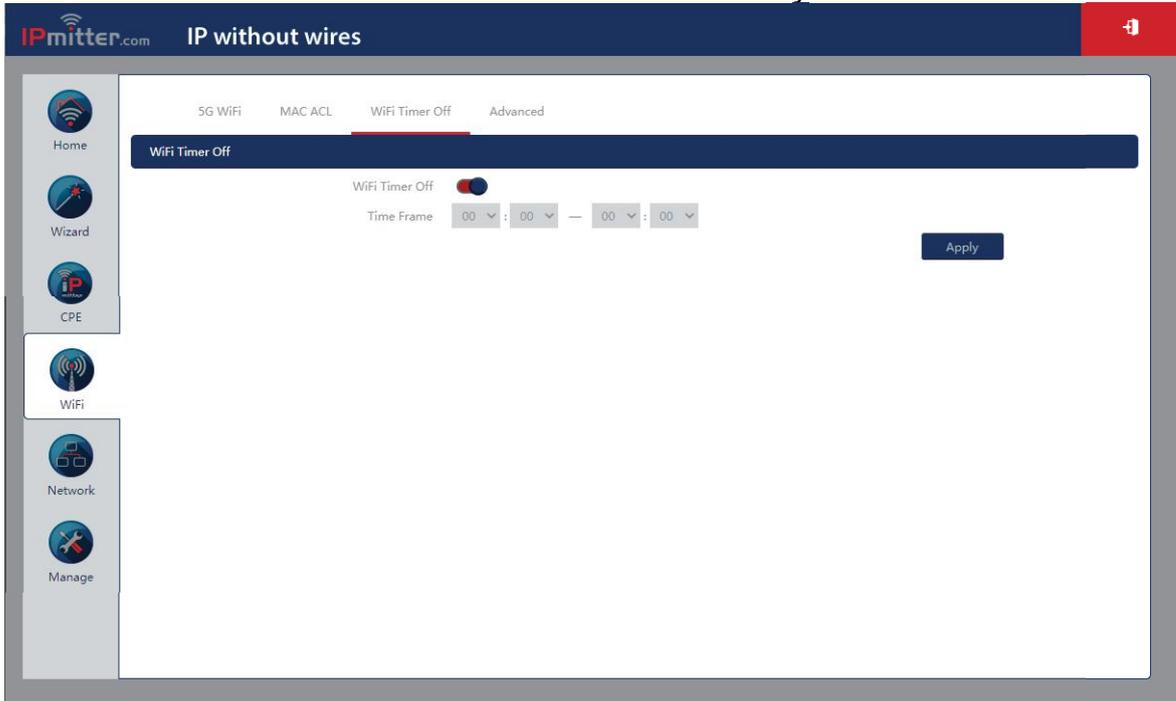
7.5.3 MAC ACL

This is the MAC address access list. By default this is disabled but it can be set to allow or prohibit access.



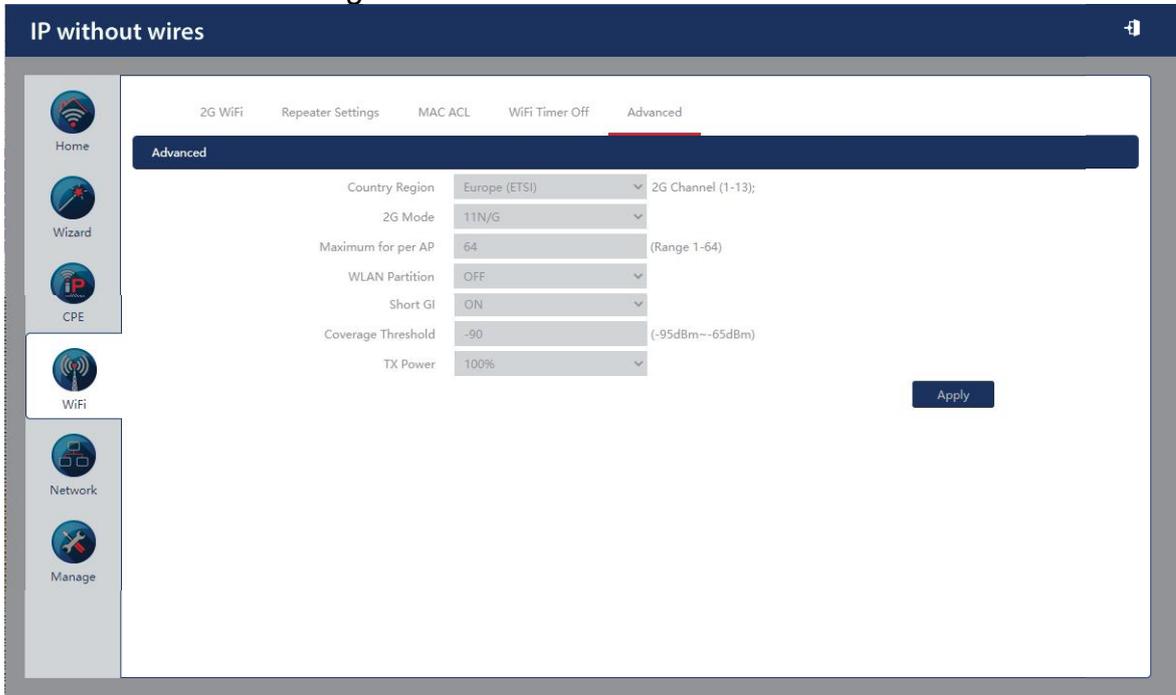
7.5.4 WiFi Timer Off

Can be set to reboot the IPmitter at a time frame each day.



7.5.5 Advanced

For advanced WiFi configuration.



7.6 Network

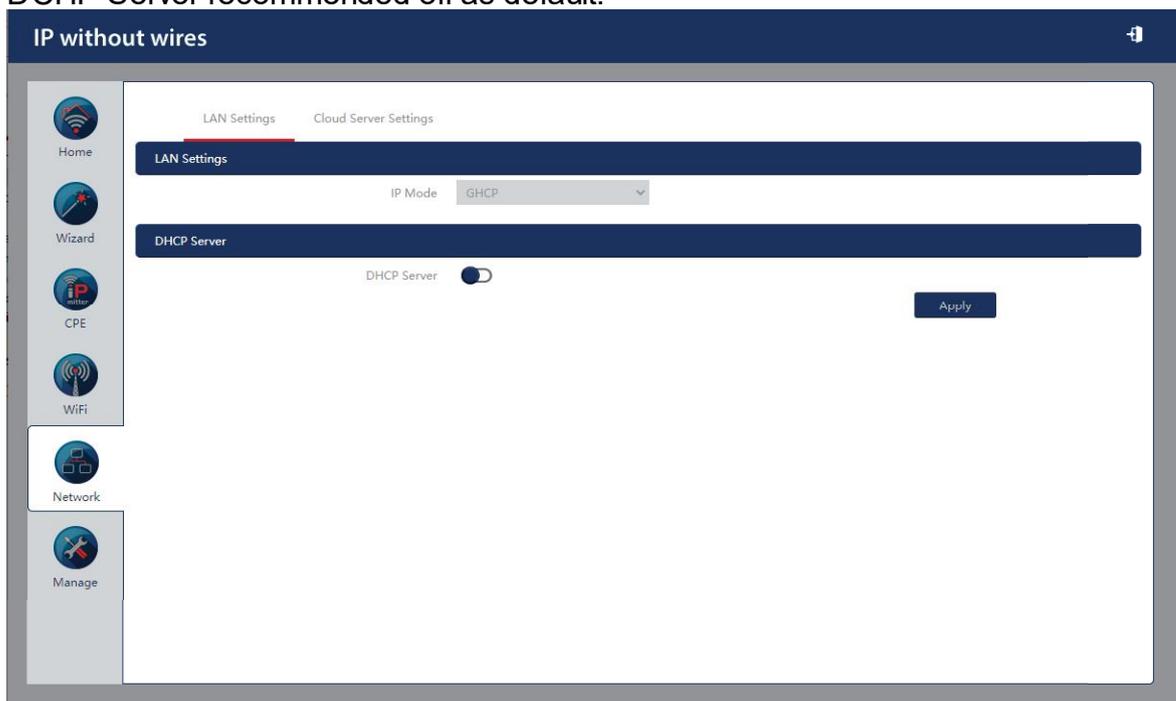
The network menu can be configured for specific network requirements.

7.6.1 LAN Settings

Enter the LAN Settings for the IPmitter.

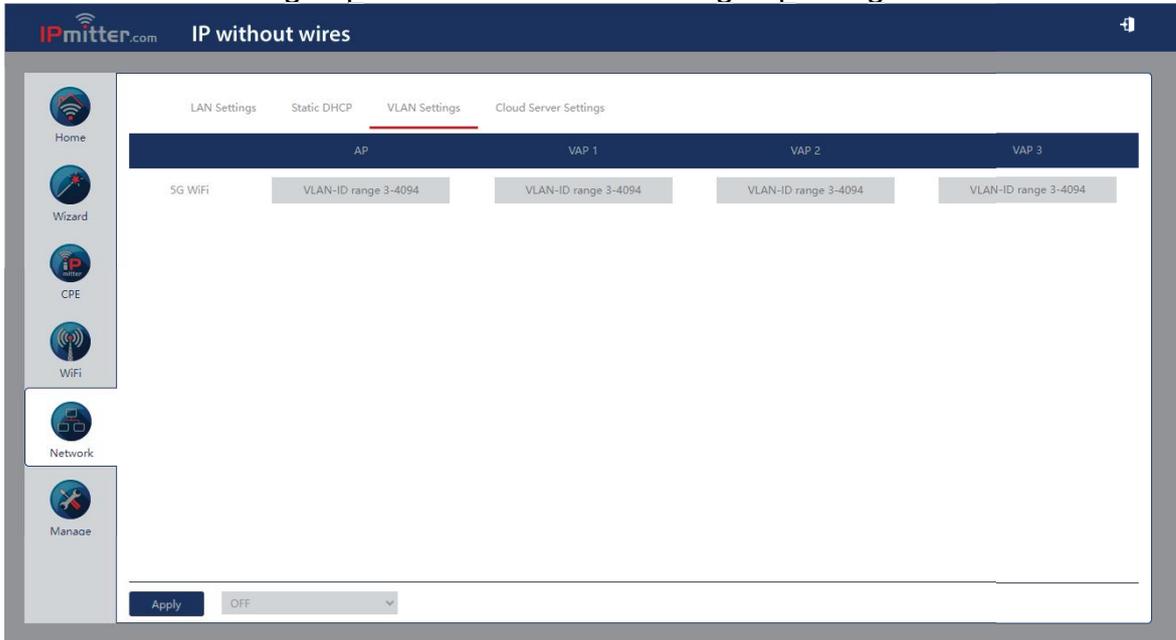
GHCP recommended as default.

DHCP Server recommended off as default.



7.6.2 VLAN Settings

VLAN Settings - A virtual-LAN can be configured when virtual access point (VAP) is enabled. Devices that connect to a VAP can be setup on also a different virtual LAN, this means different groups of WiFi devices can be grouped together.



7.6.3 Cloud Server Settings

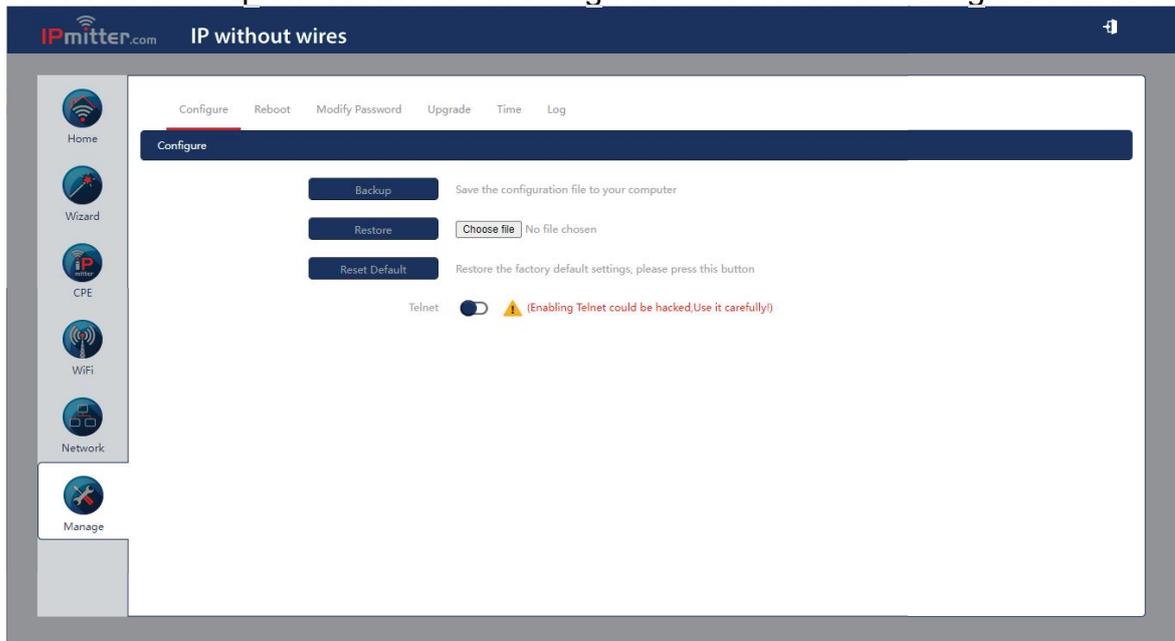
Cloud Server Settings - This setting is currently not supported.

7.7 Manage

The Manage menu provides system configuration options including uploading firmware and log information.

7.7.1 Configure

Allows for back up and restoration of configuration as well as defaulting the IPmitter.



Backup - saves the configuration to the computer using the web browser download.

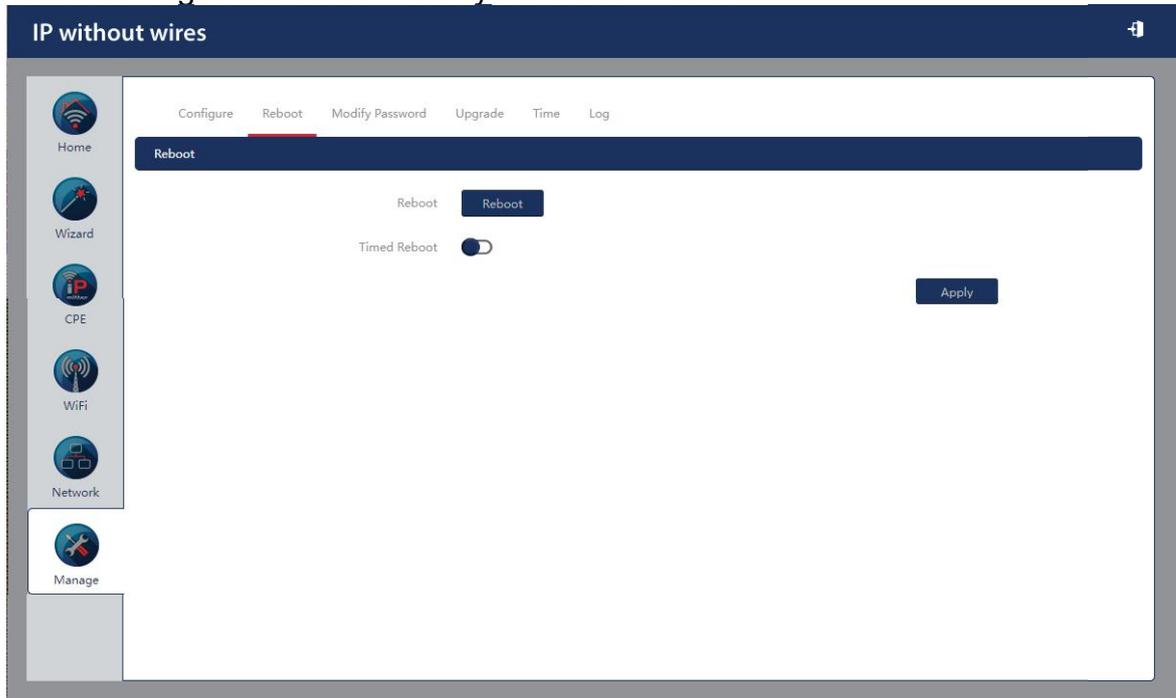
Restore - loads previously saved configuration.

Reset Default - Restores the factory default settings.

Telnet - Allows a telnet connection to the IPmitter. This is not normally used and is recommended to be left disabled.

7.7.2 Reboot

For rebooting the IPmitter manually or via a schedule.



Reboot - Manually reboots the IPmitter.

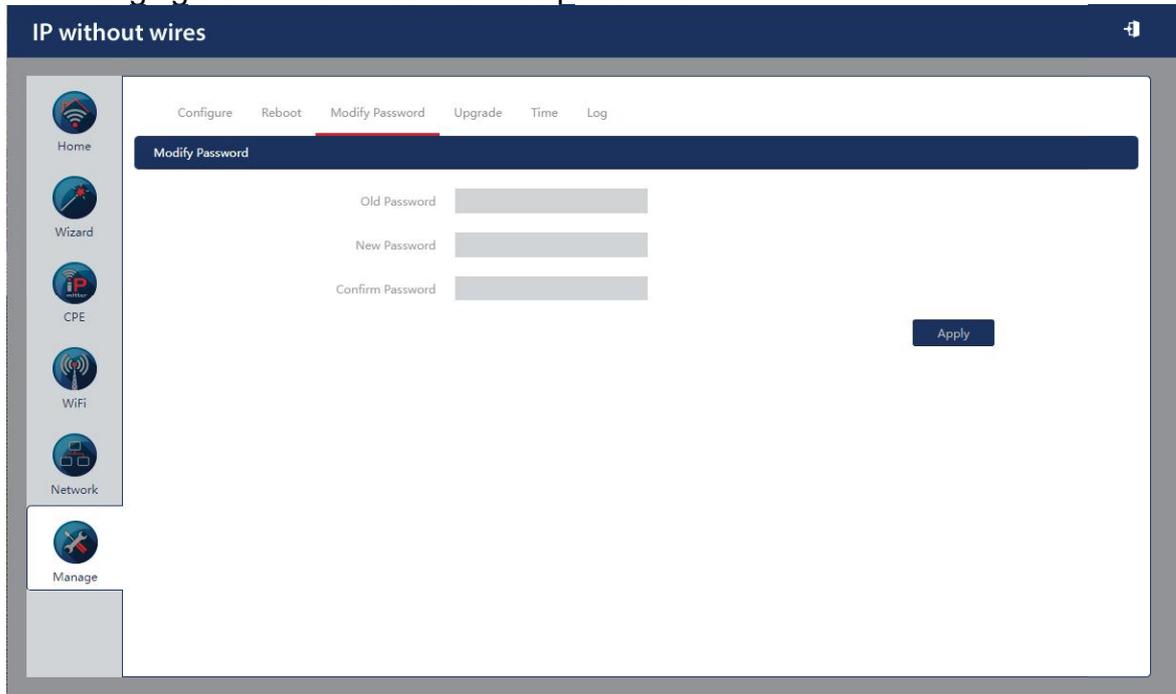
Timed Reboot - Enable to allow configuration of a specific reboot date and time.

Reboot Time - Allows for a time to be set for a reboot every day or on a specific day of the week.

Restart Interval - Allows for an interval of 1 to 10 days to be set for an automatic reboot.

7.7.3 Modify Password

For changing the IPmitter web interface password.



The screenshot displays the IPmitter web interface. At the top, a dark blue header contains the text 'IP without wires' and a small icon. Below the header, a navigation menu includes 'Configure', 'Reboot', 'Modify Password' (which is highlighted with a red underline), 'Upgrade', 'Time', and 'Log'. The main content area is titled 'Modify Password' and features three input fields: 'Old Password', 'New Password', and 'Confirm Password'. An 'Apply' button is positioned to the right of the 'Confirm Password' field. On the left side of the interface, there is a vertical sidebar with icons and labels for 'Home', 'Wizard', 'CPE', 'WiFi', 'Network', and 'Manage'.

Old Password - Enter the current password here.

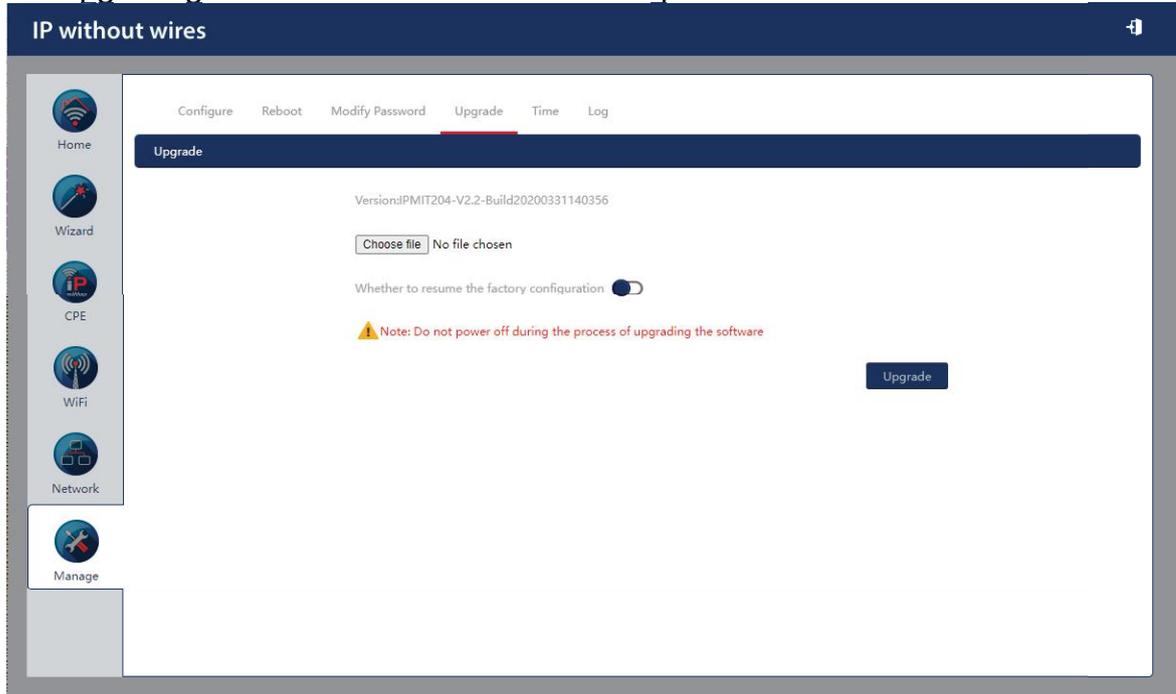
New Password - Enter the new password here.

Confirm Password - Enter the new password again here.

Note – If the password to login to the IPmitter is forgotten then it will need to be defaulted. See [Default Settings](#)¹⁰

7.7.4 Upgrade

For upgrading the firmware on the IPmitter if required.



Browse - Search for the upgrade file on the local PC.

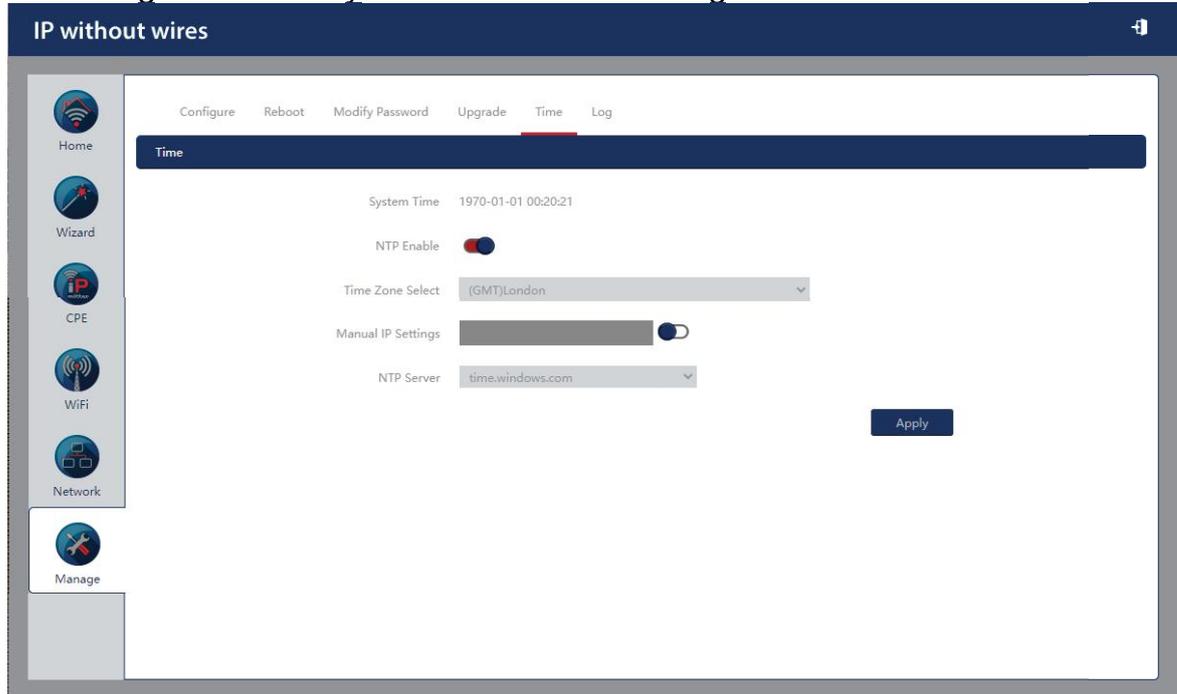
Whether to resume the factory configuration - Select on to set the IPmitter to default after the firmware upgrade.

Upgrade - Uploads the file to the IPmitter and updates the firmware.

Do not disconnect the power or network when upgrading. Only use a wired connection to the IPmitter when upgrading.

7.7.5 Time

For setting the IPmitter system time and NTP settings.



Sync With Host - Set the time to the same as computer time. This is only available if NTP is not enabled.

NTP Enable - Allows the IPmitter to connect to a network time server. Note: this requires internet connection.

Time Zone - Select allows you to select a time zone.

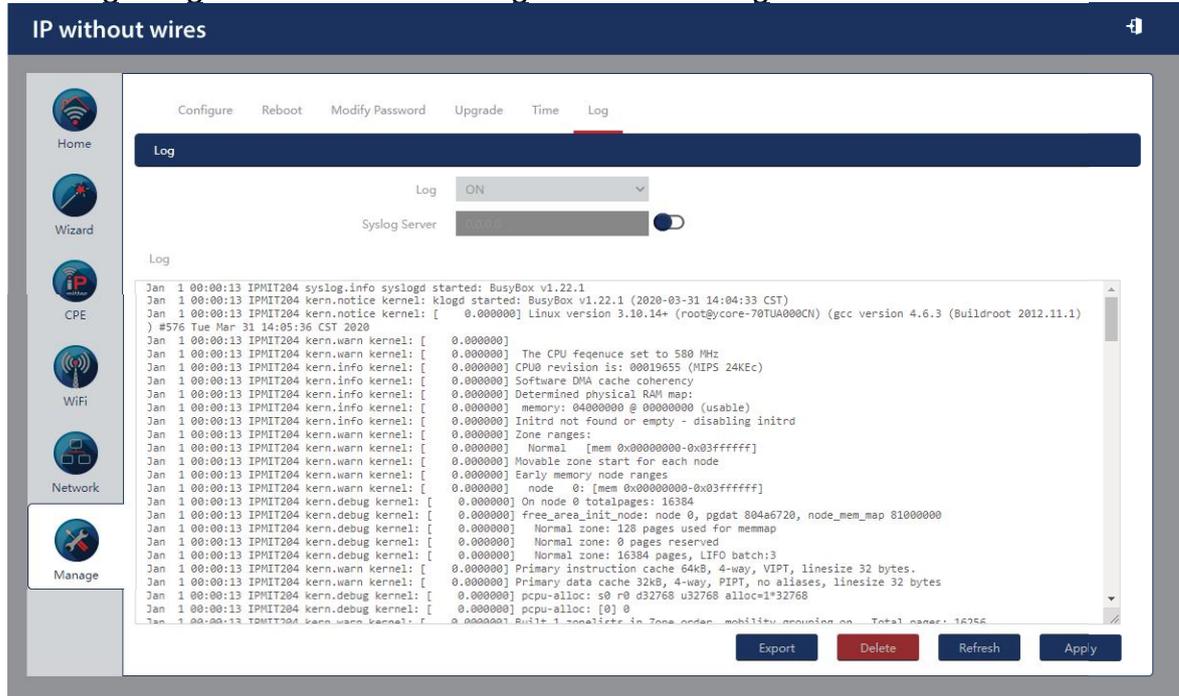
Manual IP Settings - Enter a specific IP address of an NTP server or select one from the drop down list in NTP Server.

NTP Server - Select from a pre-set list of NTP Servers.

Note – If the time is synced with host and NTP is not used then the time will be lost on reboot or power off.

7.7.6 Log

Viewing of log information for tracking faults and testing.



Log - Turns logging on or off.

Syslog Server - Enable and enter the IP address to send information to a Syslog Server on the network.

Export - Will export the log file in a compressed format (.rar). The file will need to be extracted in order to view it as text.

Delete - Deletes the logs.

Refresh - Refreshes the log screen.

Troubleshooting

8.1 Pairing Issues

1. Check the signal strength on the LED display at the Host and Client IPmitter. Please see page 33 for different sites effecting the range.
2. Check the SYS light at the Host and Client IPmitter > If the SYS light is not lit then check your 48V PoE source or 12V DC source.
3. Check the WAN or LAN indicator Host and Client IPmitter > This will light up if a device connected and powered correctly. Please note this may not just be a power issue for the device connected but the cable connecting the IPmitter and the devices may be wired incorrectly or have a fault.

8.2 Signal strength of P-095

1. Check the pairing > The signal strength of P-095 shows they have not paired up correctly. Reset both IPmitters, holding the R (reset) button down on both IPmitters for 10 seconds. Once both units have booted back up, then try the pairing process again.
2. Between P-070 and P-095 is too low for transmission > Try the pairing process with the devices closer together.

8.3 IP camera not working through IPmitter

1. Check the IP Camera works fine without the IPmitter > This ensures the setup for your NVR/ network has the correct settings, set up a test network via a switch plugged into your NVR/ network.
2. Check the LED displays on both IPmitters > see Pairing Issues
3. Check signal strength of the IPmitters > see Signal strength of P-095
3. Ensure your IP Camera is powered and connected.
4. Check IP address settings, your IP Cameras needs match your NVR/ network.

8.4 Not powering up

1. Check the power supply for your IPmitter > The 48V PoE needs to be connected to the WAN/ PoE Ethernet socket.
2. If you using the 2.1mm DC Socket then check the DC Socket is properly plugged into the IPmitter and powered.

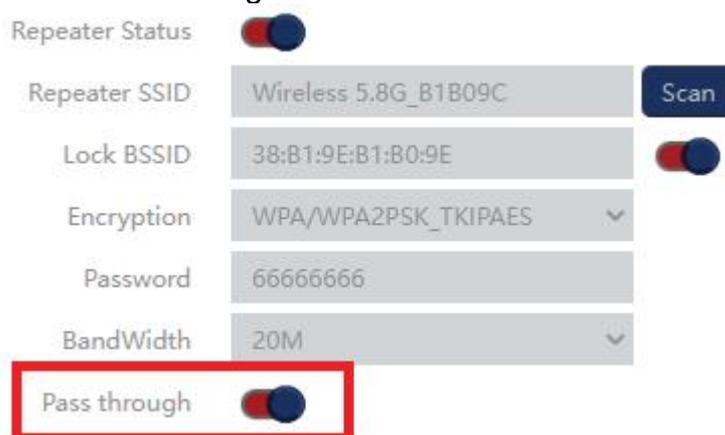
8.5 Poor image quality or streaming speed

1. Check if the WiFi channel set on the IPmitter > If there are devices using the same channels (Like a Router) then change the channel on the IPmitters.
2. Check the bandwidth which the IPmitter has available > Please note some video streaming devices like IP Cameras can use a considerable amount of bandwidth and data speed.
3. Move the IPmitter away from other WiFi devices > This should reduce the interference and help provide a more stable transmission between the IPmitters.

8.6 Issues with Internet data pass through

Check the "Pass through" option in the IPmitter web interface is turned on;

1. Go to the browser interface of the Client (repeater).
2. Go to WiFi > Repeater Settings
3. Enable Pass through.



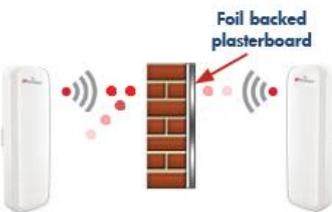
8.7 Signal low - different sites with affect the range



1. The Signal will no go through hills. The density of the hill and water contained in the soil absorbs the microwave signal.



2. The may will go through branches of trees but remember that microwave signals will be attenuated greatly by water. Leafs and plants are partly made up of water so the distance is reduced. It is best to avoid plants and trees when positioning.



3. In modern buildings the structure can be lines with "foil" insulation or metal. This can refelect or "ground" the wireless signal. Avoid transmitting through such materials.



4. When installing the units in good weather the signal may be sufficient. However during heavy rain/ other poor weather the signals between the IPmitters will be absorbed, therefore reduce the distance achievable. Keep the distance between the two units as short as possible and within the recommended specification.



5. It is common that other RF equipment can interfere with the IPmitters, as the IPmitters use the same frequencies that routers and other WiFi equipment uses. This will reduce the range of the IPmitters and reduce the performance. Check the WiFi channels being used nearby to the IPmitter, or avoid placement of the IPmitters near other RF equipment and routers.

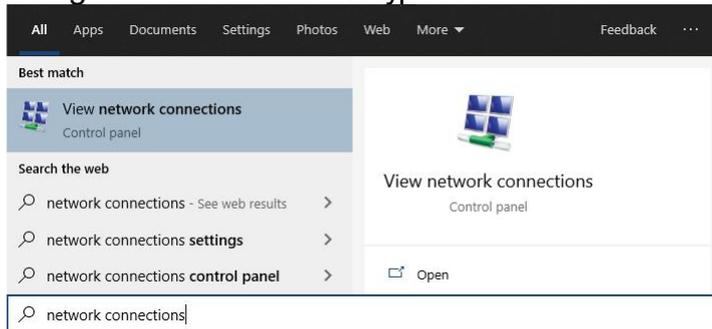
8.8 Cannot login to the IPmitter browser interface

This section describes how to add the IPmitter's address range to a Windows PC which is on a different IP range.

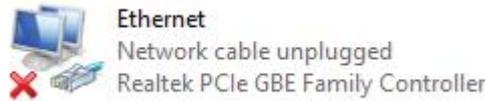
1. Identify the network adaptor the PC is currently using.

Close all programs currently in use.

Using the PC's search tool type **Network Connections**.



- If the hardware connection (Ethernet) is already connected, watch the icon change to indicate "unplugged" by simply unplugging the cable.



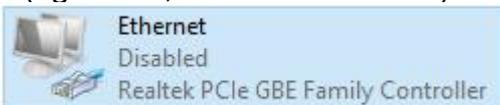
If there are multiple cabled adaptors, distinguish between them by connecting/ disconnecting the cable, the status should change.

We can identify the adaptor entry associated with an Ethernet port simply by unplugging and re-plugging the Ethernet cable and watching the icon change. For example:

- Plug back in to determine if that adaptor is being used, below shows the adaptor **Ethernet** being used.



- If using WiFi then ensure all other adaptors are unplugged and disabled (right click, then select disable).



Make a note of the current "Connections:" type by name :

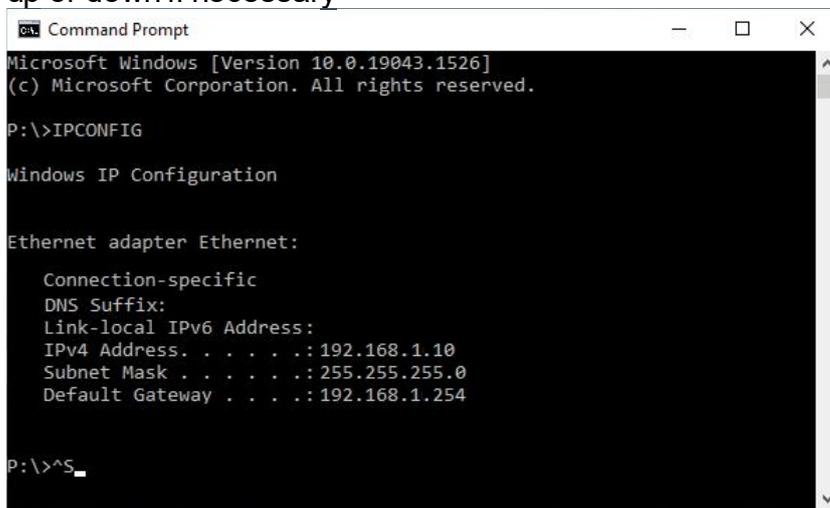
For example **Ethernet**

2. Find the PC's current IP address.

Using the PC's search tool type **CMD** then click enter to launch command prompt.

Type in **IPCONFIG** and click enter.

Look for the adaptor name identified in step 1, for example **Ethernet adapter**. Scroll up or down if necessary



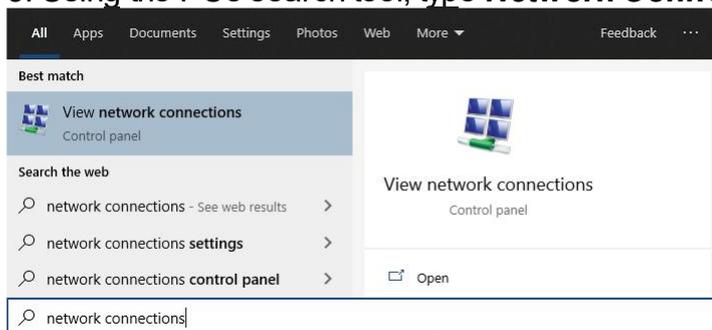
Make a note of this adapters address settings (it will be needed later) :

IPv4 Address: _____

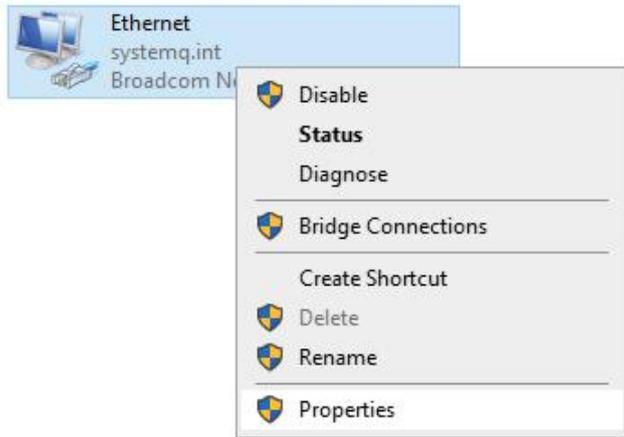
Subnet Mask: _____

Default Gateway: _____

3. Using the PC's search tool, type **Network Connections**.

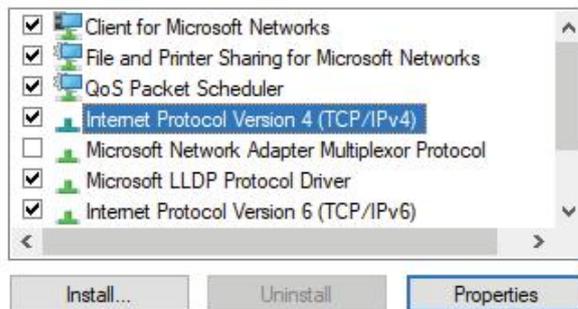


Right-click on the connection type, select **Properties**.



Double click on **Internet Protocol Version 4 (TCP/IPv4)**.

This connection uses the following items:



Select **Use the following IP address** and enter the address noted earlier.

Internet Protocol Version 4 (TCP/IPv4) Properties

General

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: 192 . 168 . 0 . 10

Subnet mask: 255 . 255 . 255 . 0

Default gateway: 192 . 168 . 0 . 1

Obtain DNS server address automatically

Use the following DNS server addresses:

Preferred DNS server: . . .

Alternative DNS server: . . .

Validate settings upon exit

Advanced...

OK Cancel

For example:

IP address:	192.168.0.10
Subnet mask:	255.255.255.0
Default Gateway:	192.168.0.1

4. Select **Advanced** and then **Add**.

Enter the IP address but in the third segment enter a 1.

For example: **IP address:** **192.168.1.10**
 Subnet mask: **255.255.255.0**

Select **Add > Ok > Ok > Close**

5. Attempt to login to the browser interface on the default IP address (**192.168.1.123**)

6. Once adjustments in the IPmitter have been completed, ensure the PC is set back to the original network settings.

Extra Resources

IPmitter.com



<http://www.ipmitter.com/>

ZIPNVR.com



<https://zipnvr.com/>

9.1 Tech Tips

How to Add IP Cameras to a ZIP Recorder



www.zipdvr.com/howto/TIP459-How-To-Add-IP-Cameras.html

If using the IPMIT430 with a ZIP Recorder then the cameras needs to be manually configured, scan the QR code above for the "how to guide".

How to Select a Network Address on a ZIP Recorder



www.zipnvr.com/howto/TIP457-How-To-Select-A-Network-Address.html

Specifications

Frequency	2.4Ghz
Wireless Data Speed	300Mbps
12V Input Option	Yes (300mA)
LAN Port 1 Speed	10Mbps / 100Mbps
LAN Port 2 Speed	10Mbps / 100Mbps
Max Tx Distance	700m (Recommend 350m)
Wireless Standard	IEEE802.11B/G/N
Easy Pair Technology	Yes
Support 1 - 1	Yes
Support 1 - Many	Yes
Modes	Access Point / Bridge / Repeater
Power	48V PoE / 12V DC
Finish	Black
Mounting	Wall Or Pole (Not Supplied)
Dimensions	(H) 165 x (W) 88 x (D) 56mm

Conditions

All specifications are approximate. System Q Ltd reserves the right to change product specifications or features without notice. Whilst every effort is made to ensure that these instructions are complete and accurate, System Q Ltd cannot be held responsible for any losses, no matter how they arise, from errors or omissions in these instructions, or the performance or non-performance of the equipment referred to.

This symbol indicates that equipment must not be mixed with general household waste. For treatment, recovery and recycling please return to your local designated WEE/CG0783SS collection point as defined by your local council.



© Copyright 2021

IPmitter is a registered trademark of System Q Ltd, Chesterfield. Derbyshire. S40 2WB