Instruction Manual

IPMIT100

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Introduction

The IPmitter ceiling and wall access point (IPMIT100) boasts dual band technology and can simultaneously connect equipment to your LAN on both 5.8GHz and 2.4GHz channels.

A data rate of 750Mbs means it's a great Access Point. Streaming media and video files or linking CCTV equipment to a network.

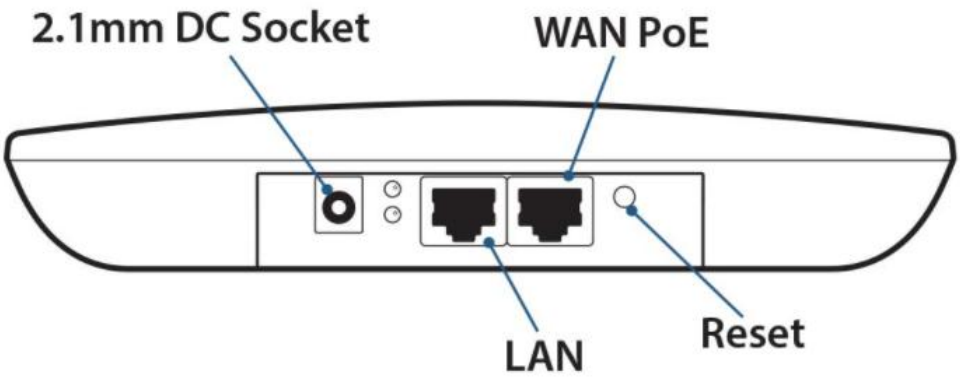
With a maximum of 90 connected concurrent devices it's aimed at professional, domestic or commercial installations.

The IPMIT100 works in 2 modes, Repeater mode and AP mode.

Powering and Connections

Option 1 - Power from 12V DC (via the 2.1mm DC Socket), the current consumption is 300mA.
The IPMIT100 is polarity sensitive so connections must be made correctly.

Option 2 - Power using 48V PoE, in the RJ45 **WAN/POE** Socket
The IPMIT100 will take approximately 1 minute to boot up.



Status LED

On the top surface of the IPmitter there is a status LED which displays the current status.

		Powering on/ rebooting
	Flashing	Normal
		5GHz Wi-Fi turned on.

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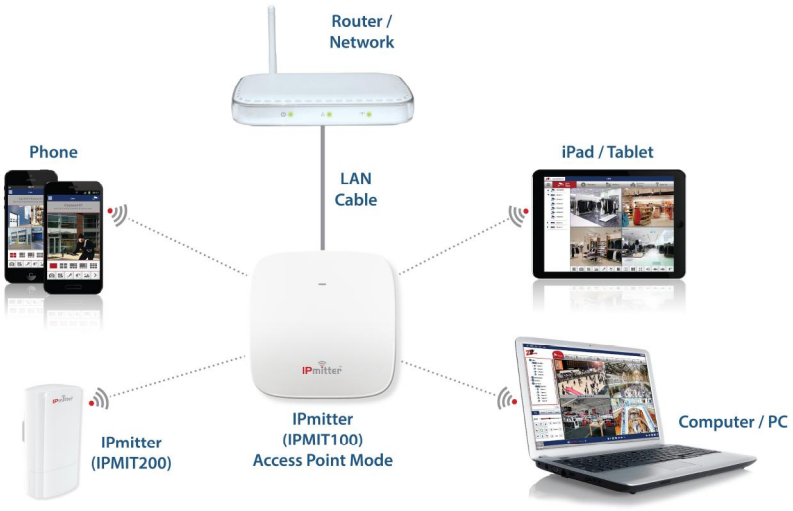
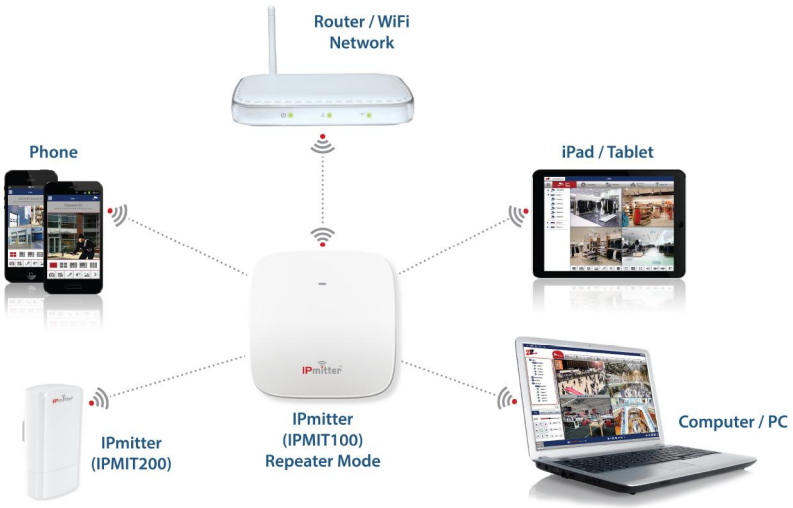
Setup Options

Access Point Mode - Set this mode to allow the ipmit100 to act as a wi-fi access point for devices to connect onto a wired network.



Repeater Mode - Set this mode for a Wi-Fi link of the IPmitter to another existing Wi-Fi network to "extend" and repeat the Wi-Fi signal. The network port then will act as an extension of the original existing network.



Default Settings

Default login details are:-

Default IP	**192.168.1.123**
Password	**ipmitter**

These are shown on the label on the back of the unit.

The default WiFi key is "**66666666**".

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

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Browser Interface

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

To setup the IPMIT100, login to the interface on a browser on a Windows PC/ Laptop.

Open a web browser, input the IP address of the device. (default = 192.168.1.123)

The web inteface allows for 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, incorrect use / setting could result in an inoperable unit.

- Option A. Ask the on site IT department or network administrator for guidance on the IP address information to assign to the IPmitter.

- Option B. Find a free IP address yourself, or use the default IP of the IPmitter.

If you're unable to access the IPmitter using the default IP.

6.1 Login

Input the username and password, and click Login.

Default login details are:-

Default IP **192.168.1.123**
Password **ipmitter**

6.2 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.

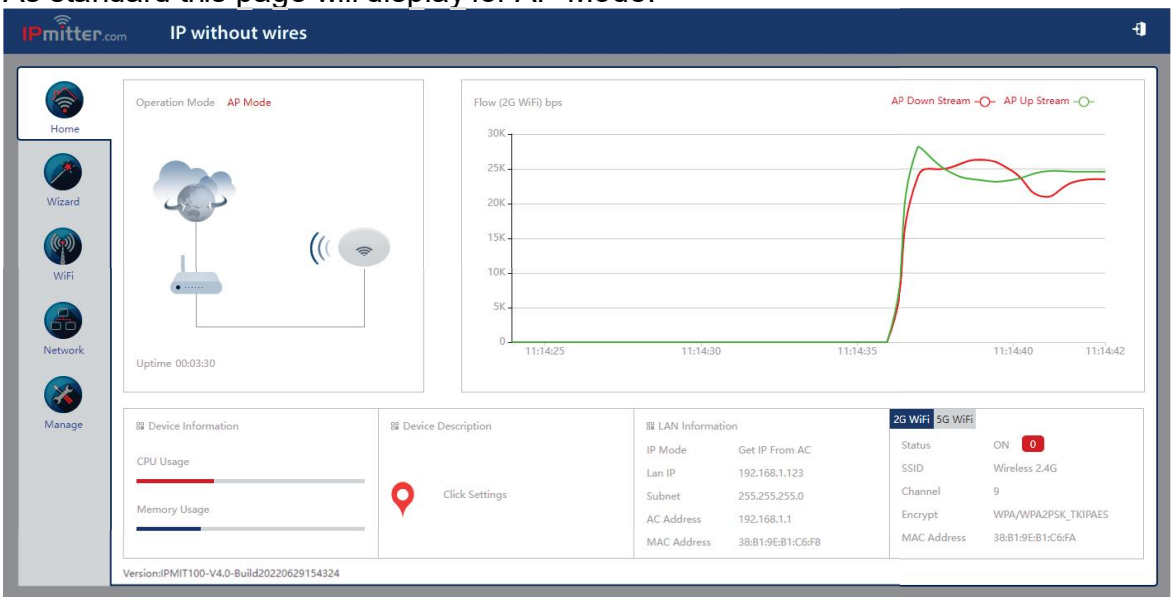
Device Information - Shows the current resource usage.

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 AP Mode.



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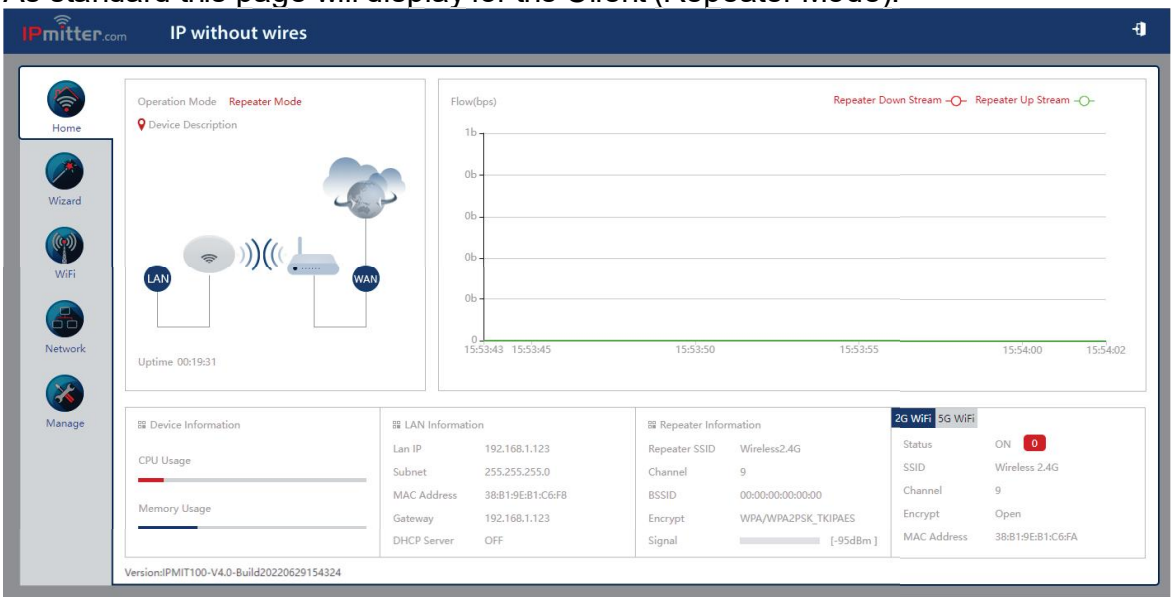
As standard this page will display for the Client (Repeater Mode).



6.3 Wizard

Setup for the IPmitter can be done via the Wizard.

The IPmitter needs to be set as AP Mode (Access Point Mode) or Repeater Mode (depending on the setup required - see Setup Options) 2

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6.3.1 Repeater Mode

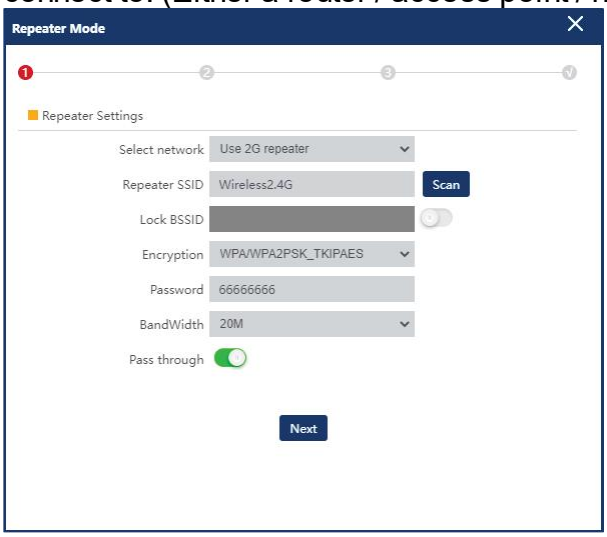
Repeater mode requires an existing WiFi connection from a router, access point or other IPmitter.

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.

Limitations:- Bandwidth is reduced by 50% as there is data being transmitted between the existing WiFi and the Repeater, then from the repeater to the connecting device. Instead of just a connection between the existing WiFi and the device.

Select 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.

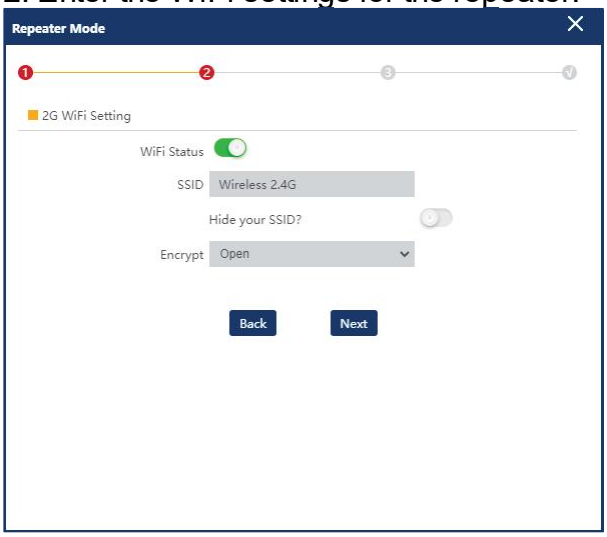
Password is the password used to access the WiFi network.

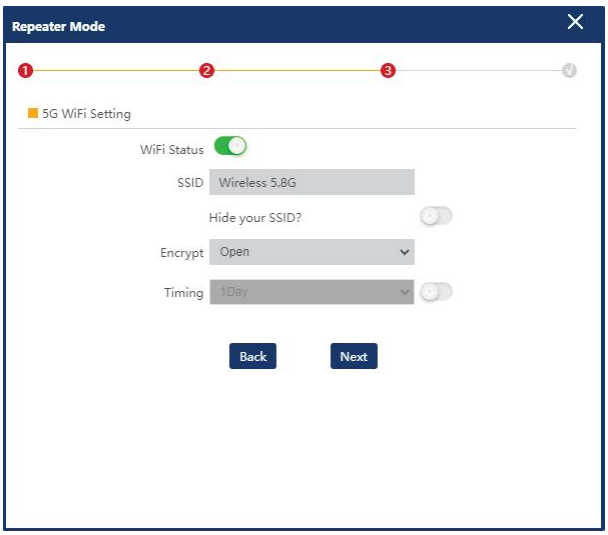
Bandwidth is the broadcasting bandwidth which this wireless network uses. This needs to set to match your router/ WiFi Bandwidth.

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.

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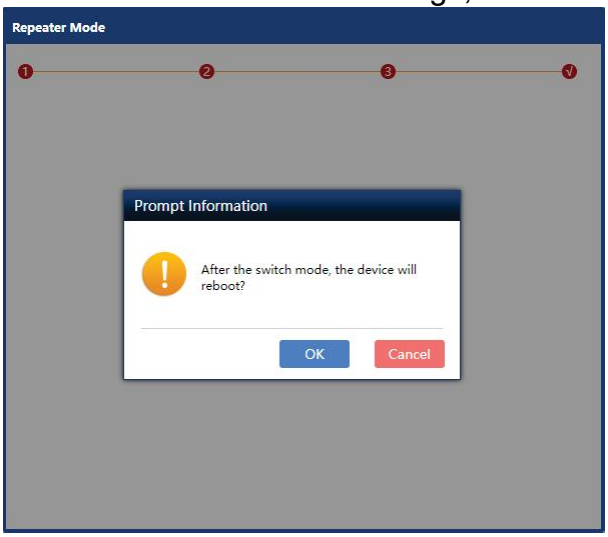
A strong password consists of at least six characters (and the more characters, the stronger the password) that are a combination of letters, numbers and symbols. This can be the same as the existing WiFi network or unique to the repeater.

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

Select **Next** to confirm settings.

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



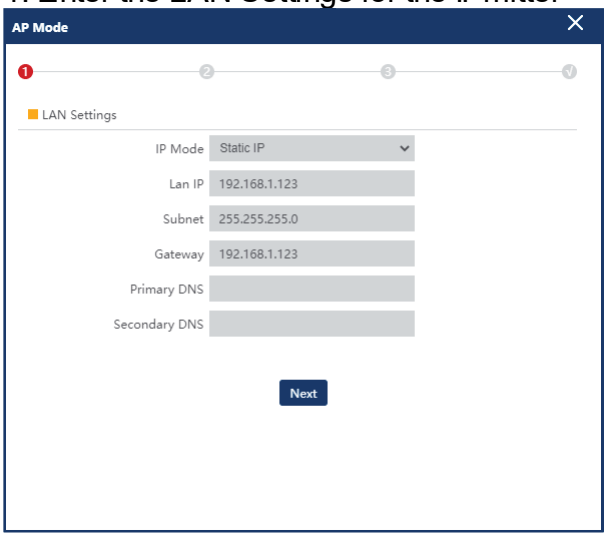
6.3.2 AP Mode (Access Point)

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.

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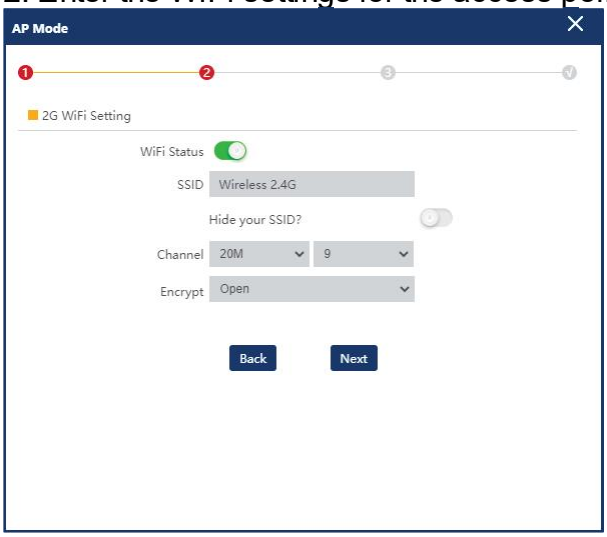
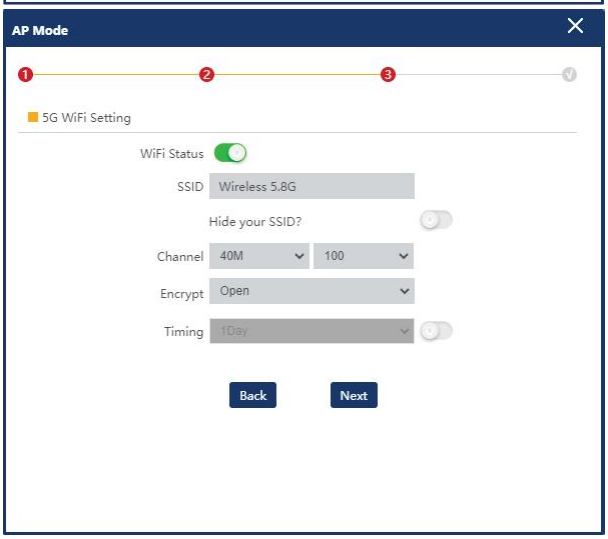
2. Enter the WiFi settings for the access point.





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.

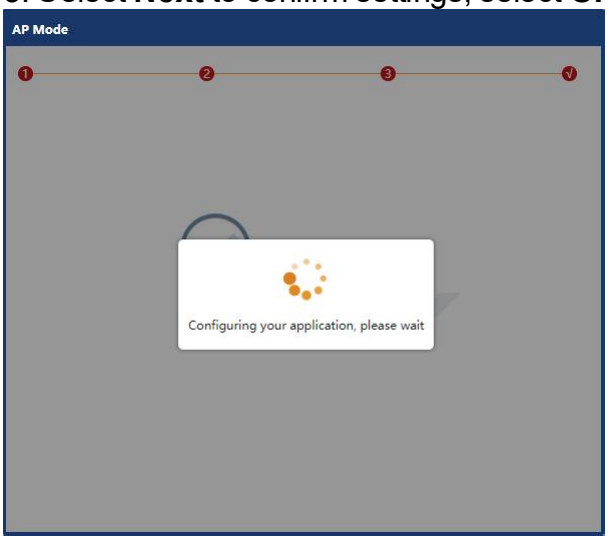
The channel number allows for a specific channel number to be selected, it is recommended to use a WiFi Analyser to see what channels are "least crowded" and then set the IPmitter to suit.

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.



6.3.3 Super WDS Mode

Mode Not Used.

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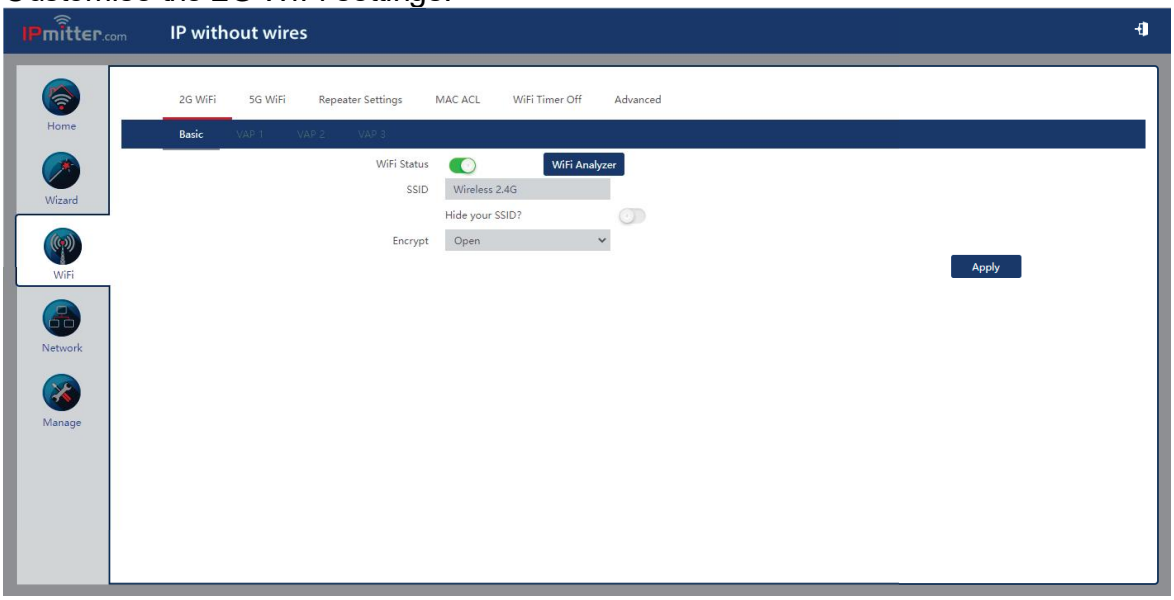
6.4 WiFi

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

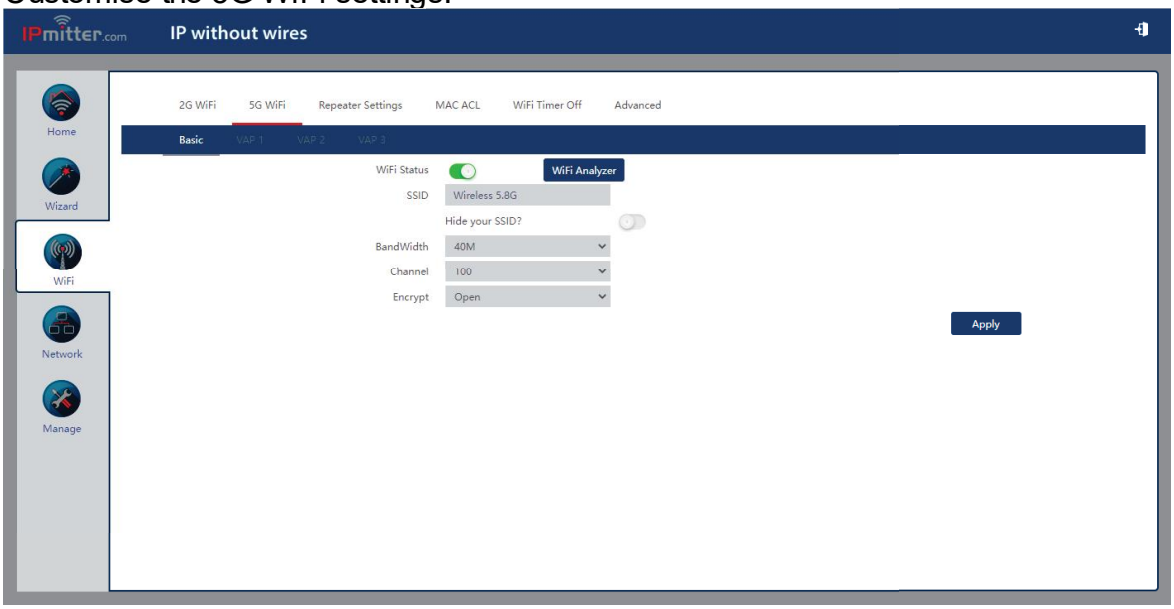
6.4.1 2G WiFi

Customise the 2G WiFi settings.



6.4.2 5G WiFi

Customise the 5G WiFi settings.



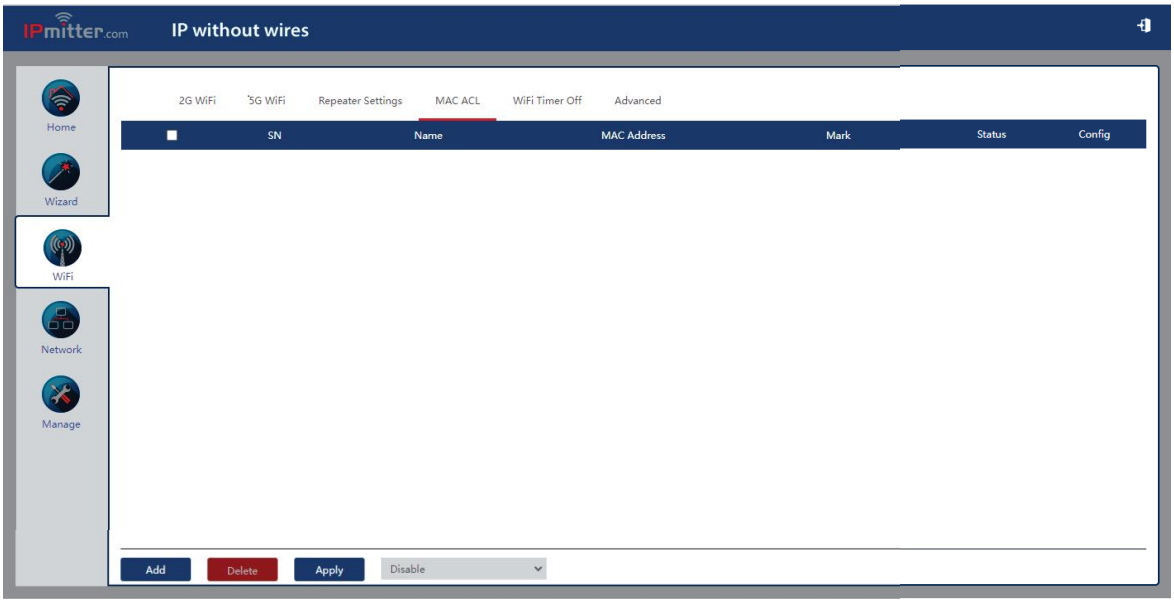
6.4.3 MAC ACL

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

Add - the MAC address can be typed or scanned. Only currently connected devices will show in the Station List when scanned. Mark allows you to enter a name for identifying the device.

Delete - this deletes the selected MAC addresses.

Apply - this applies changes when the access list is changed from Disable to Allow or Prohibit.

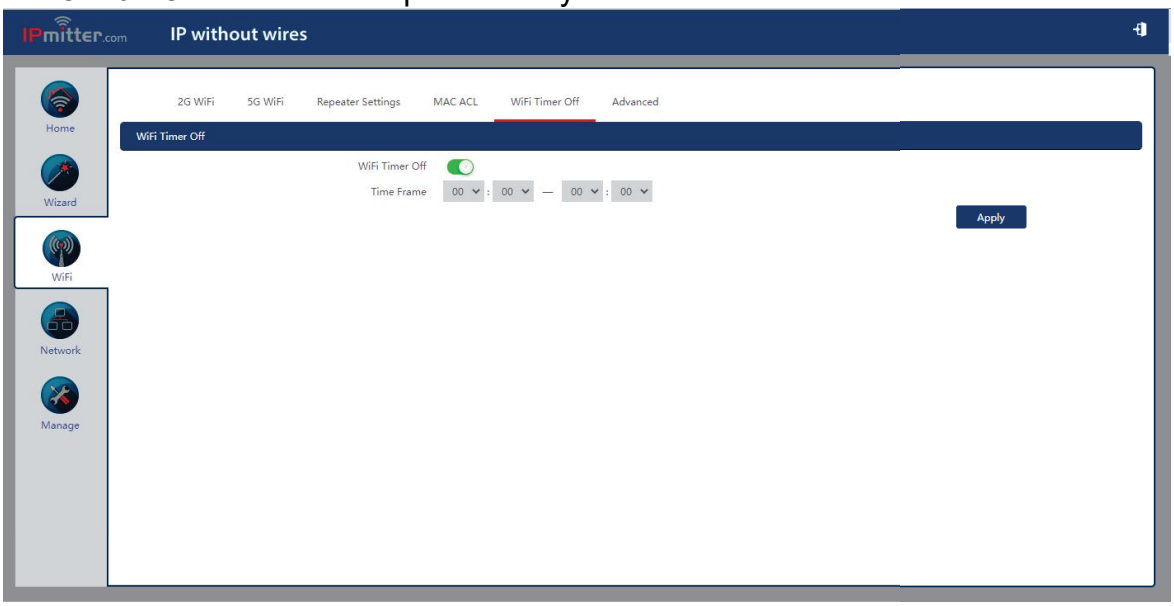


6.4.4 WiFi Timer Off

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

WiFi Timer Off - turn this on to enable the timer.

Time Frame - enter the time period that you want the Wi-Fi turned off for.



6.4.5 Advanced

For advanced WiFi configuration. It is recommended to leave these settings as default.

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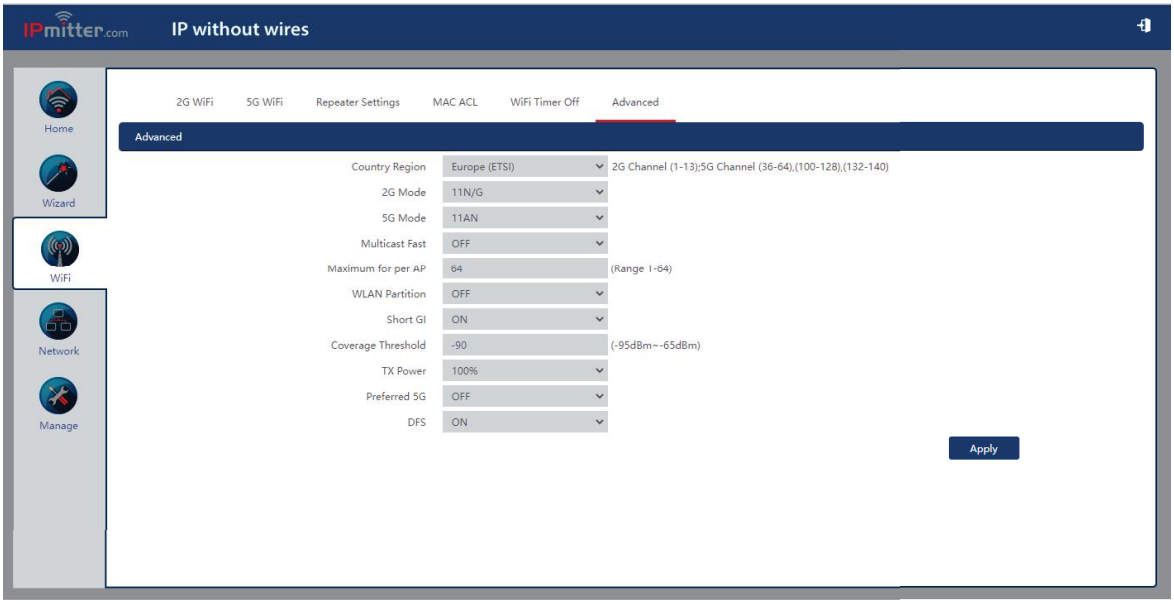
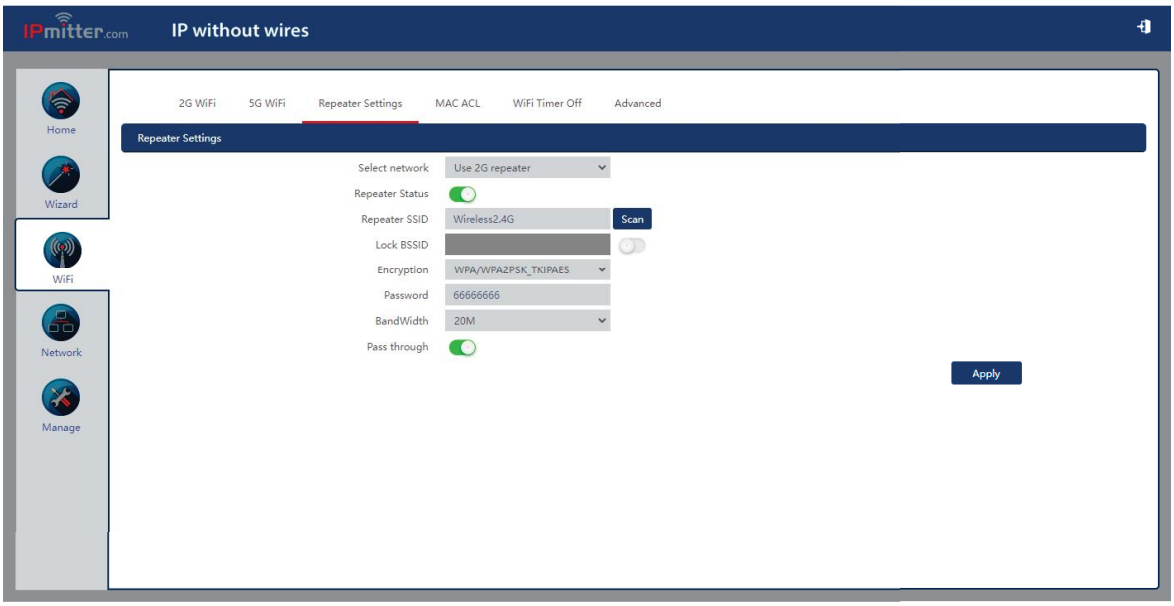

IPmitter.com
IP without wires
Home
Wizard
WiFi
Network
Manage
2G WiFi
5G WiFi
Repeater Settings
MAC ACL
WiFi Timer Off
Advanced
Advanced
Country Region
Europe (ETSI)
2G Channel (1-13);5G Channel (36-64),(100-128),(132-140)
2G Mode
11N/G
5G Mode
11AN
Multicast Fast
OFF
Maximum for per AP
64
(Range 1-64)
WLAN Partition
OFF
Short GI
ON
Coverage Threshold
-90
(-95dBm~-65dBm)
TX Power
100%
Preferred 5G
OFF
DFS
ON
Apply

6.4.6 Repeater Settings

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



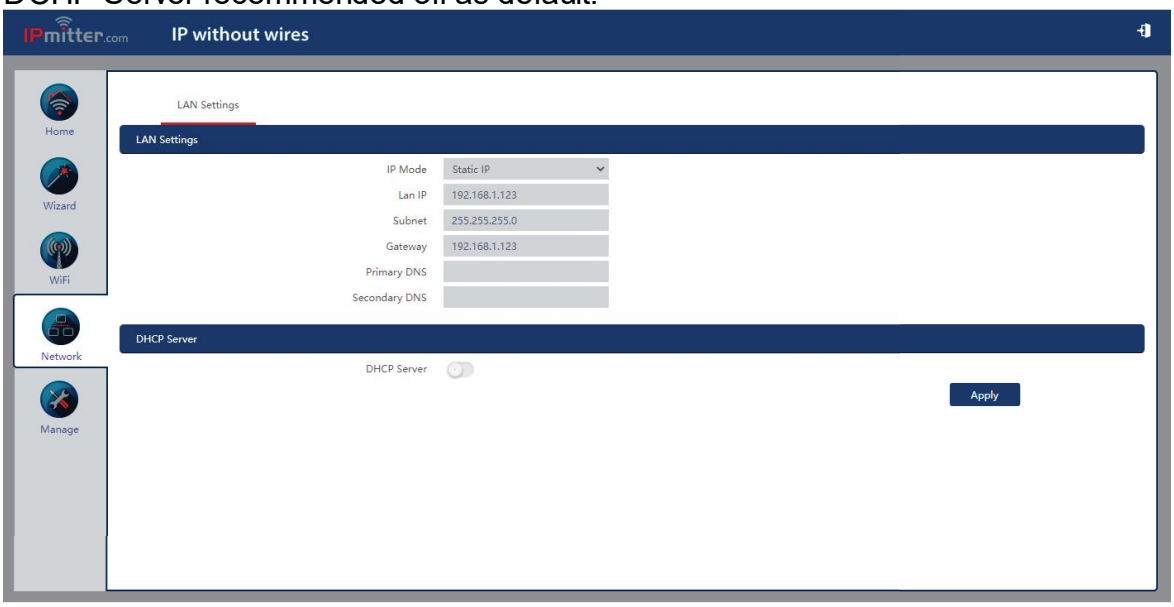
6.5 Network Config

The network menu can be configured for specific network requirements.

Enter the LAN Settings for the IPmitter.

GHCP recommended as default.

DCHP Server recommended off as default.



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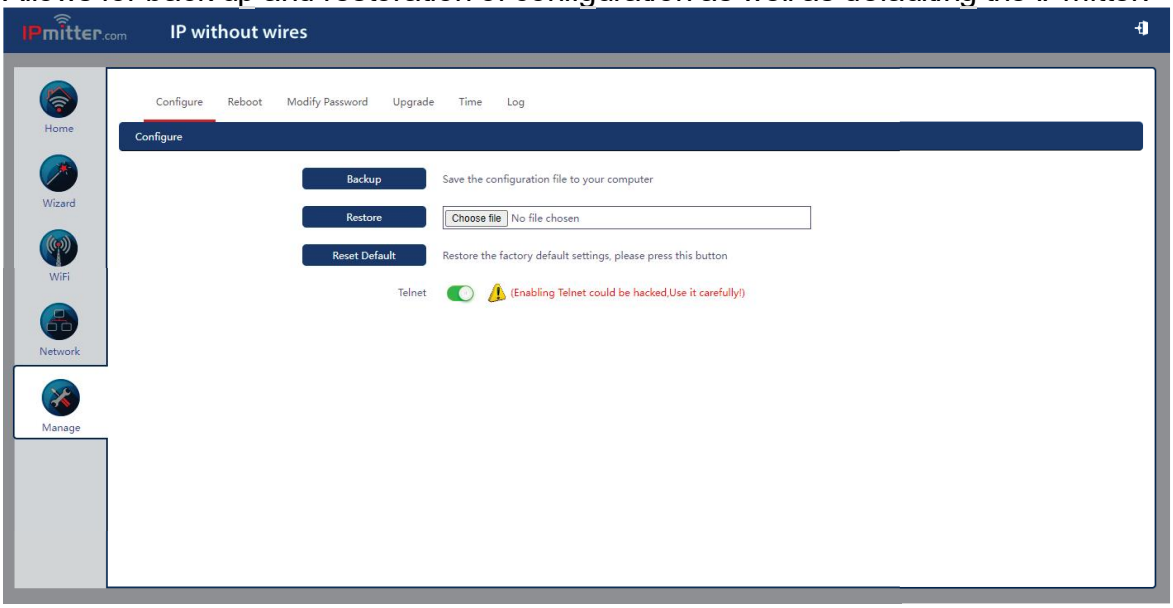
6.6 Manage

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

6.6.1 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.

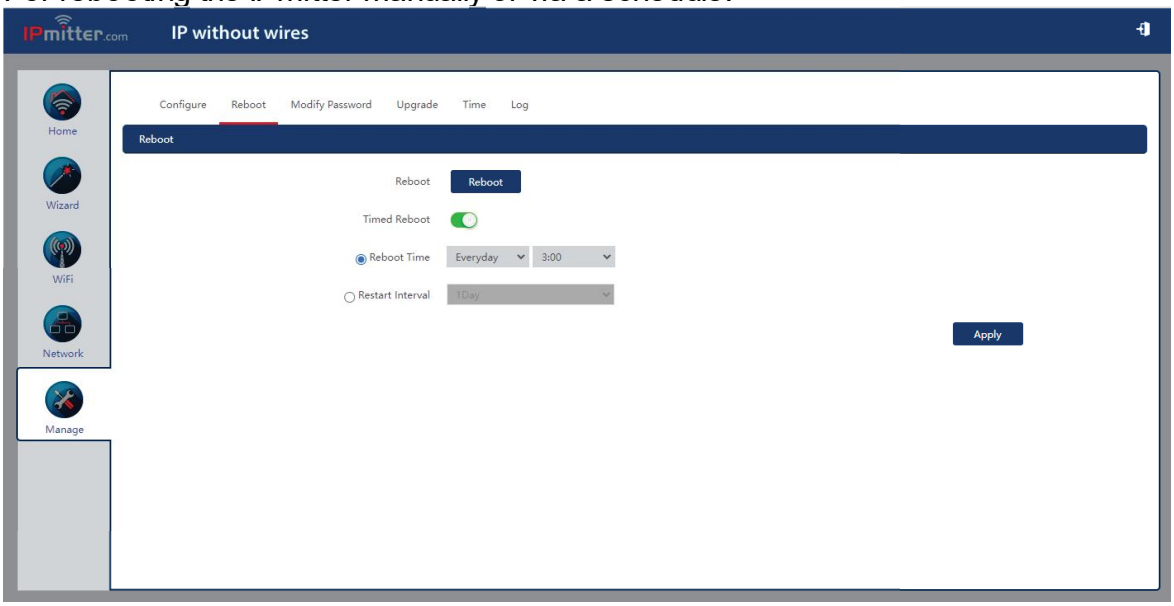
Restore - loads previously saved configuration.

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.

6.6.2 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.

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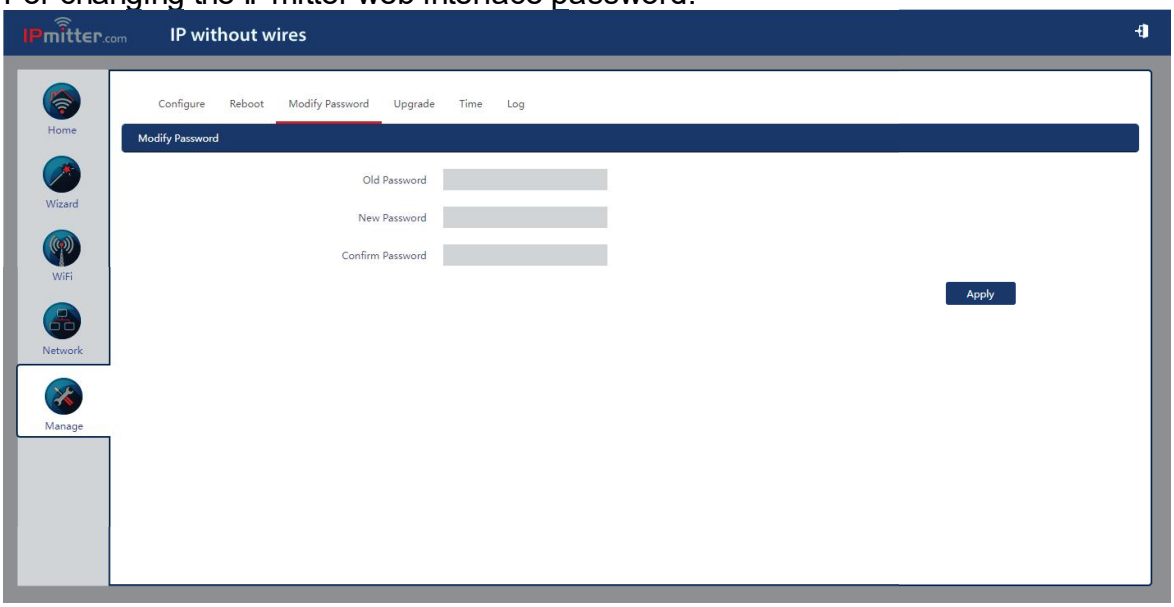
6.6.3 Modify Password

For changing the IPmitter web interface password.



Old Password - Enter the current password here.

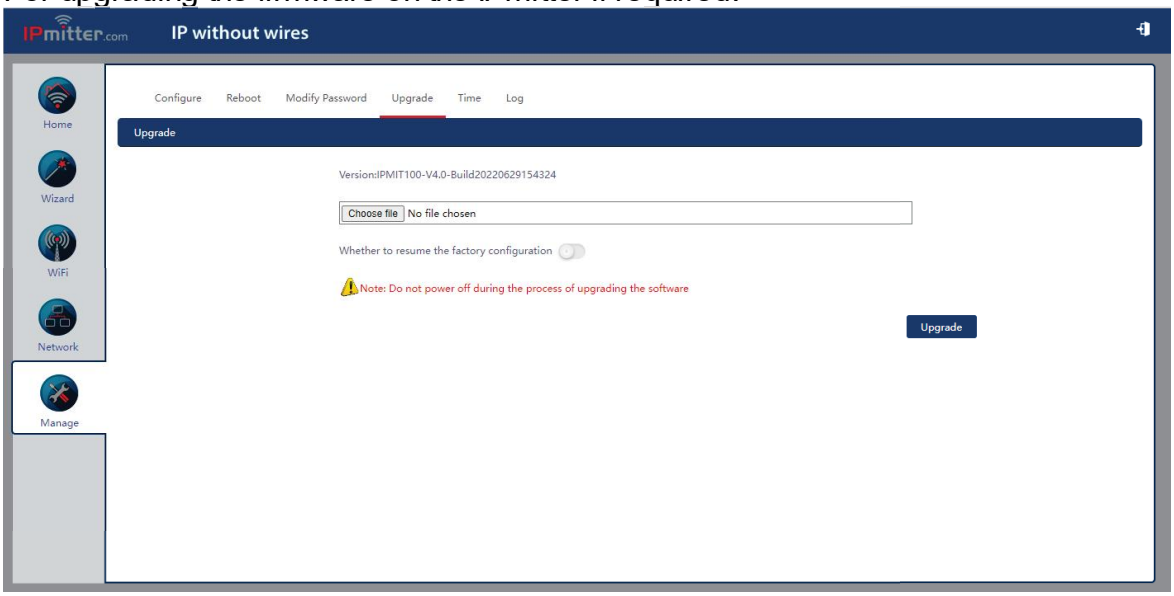
New Password - Enter the new password here.

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 3

6.6.4 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.

To obtain firmware upgrade files please email - support@ipmitter.com

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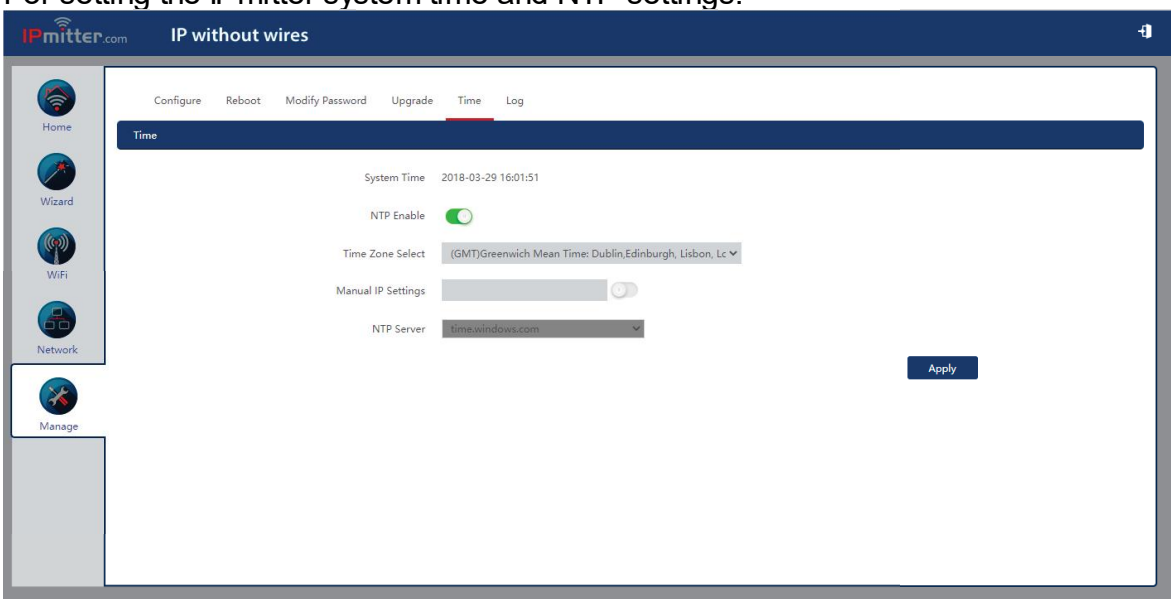
6.6.5 Time

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.

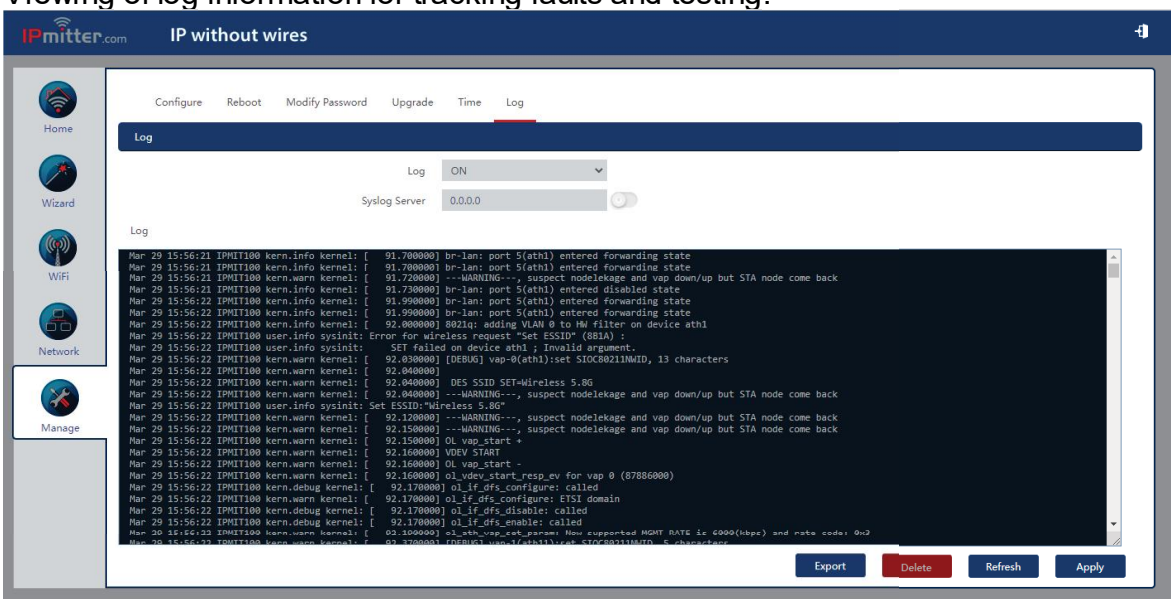
Manual IP Settings - Enter a specific IP address of an NTP server or select one from the drop down list in NTP Server.

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.

6.6.6 Log

Viewing of log information for tracking faults and testing.



Log - Turns logging on or off.

Syslog Server - Enable and enter the IP addres 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.

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Troubleshooting

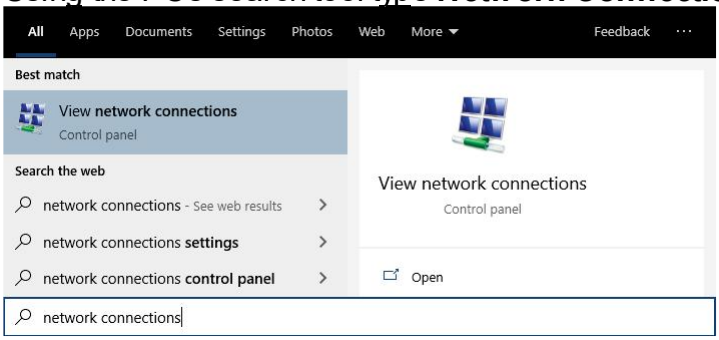
7.1 Cannot login to the IPmitter browser interface

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

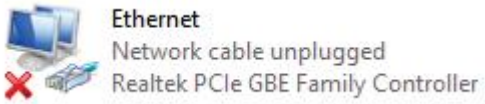
1. Identify the network adaptor the PC is currently using.

Close all programs currently in use.

Using the PCs 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 adapter is being used, below shows the adaptor ***Ethernet*** being used.

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

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

_____

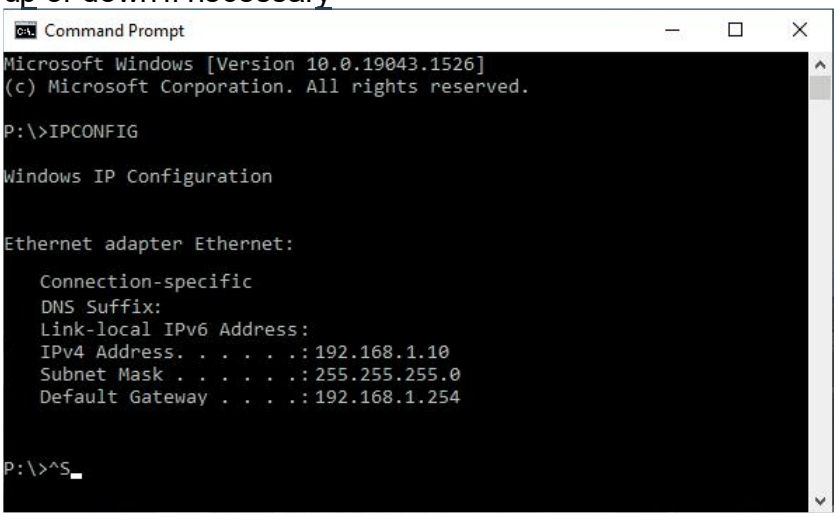
For example ***Ethernet***

2. Find the PC's current IP address.

Using the PCs 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



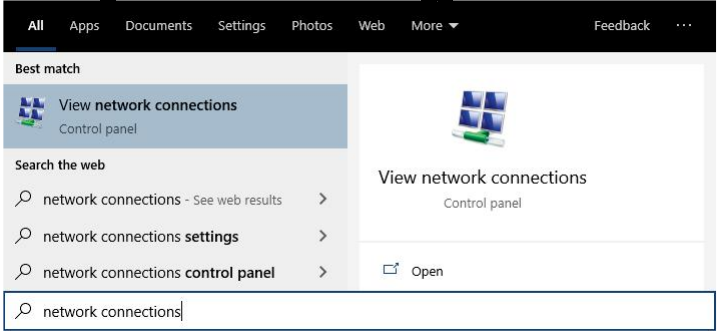
Make a note of this adapters address settings (it will be needed later) :

IPv4 Address: _____

Subnet Mask: _____

Default Gateway: _____

3. Using the PCs search tool, type ***Network Connections.***



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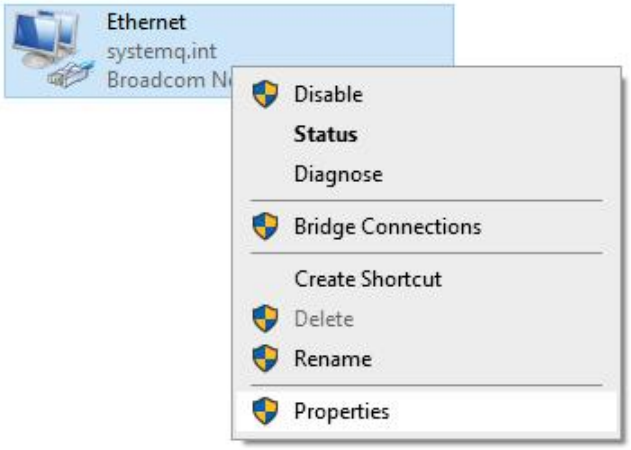
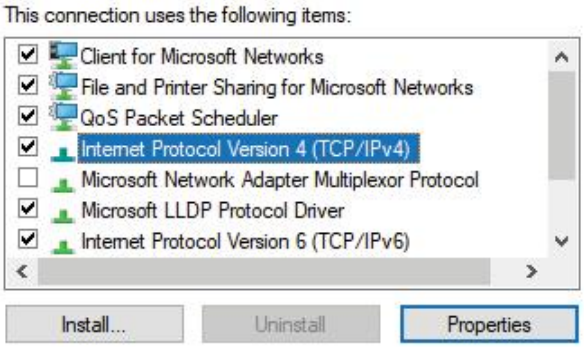
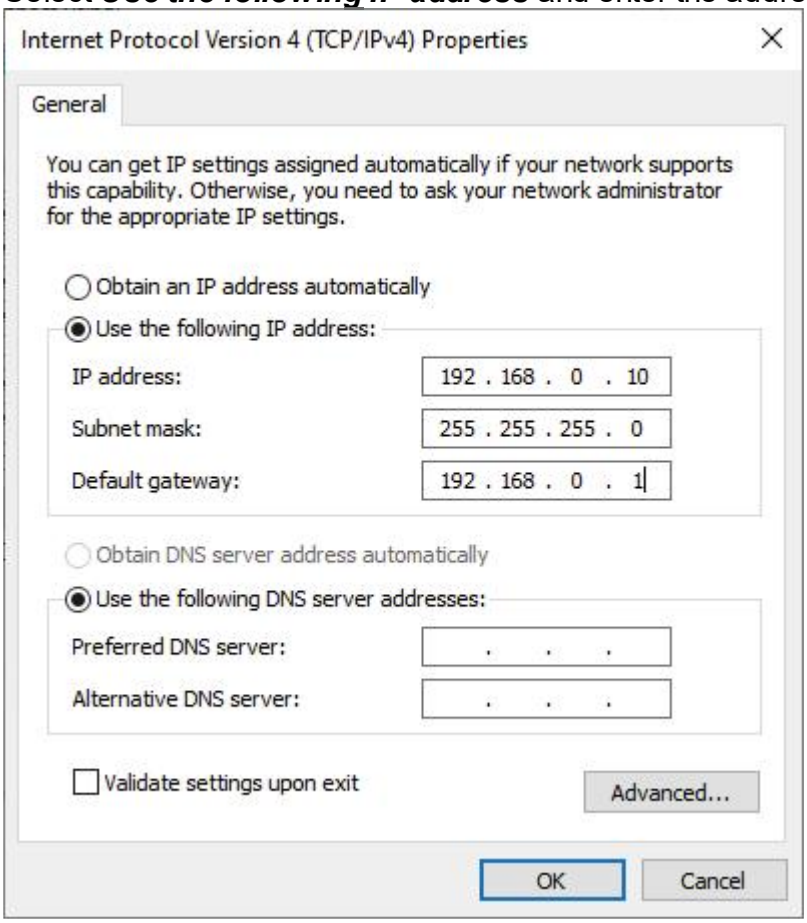
Right-click on the connection type, select ***Properties***.



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



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



For example:

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

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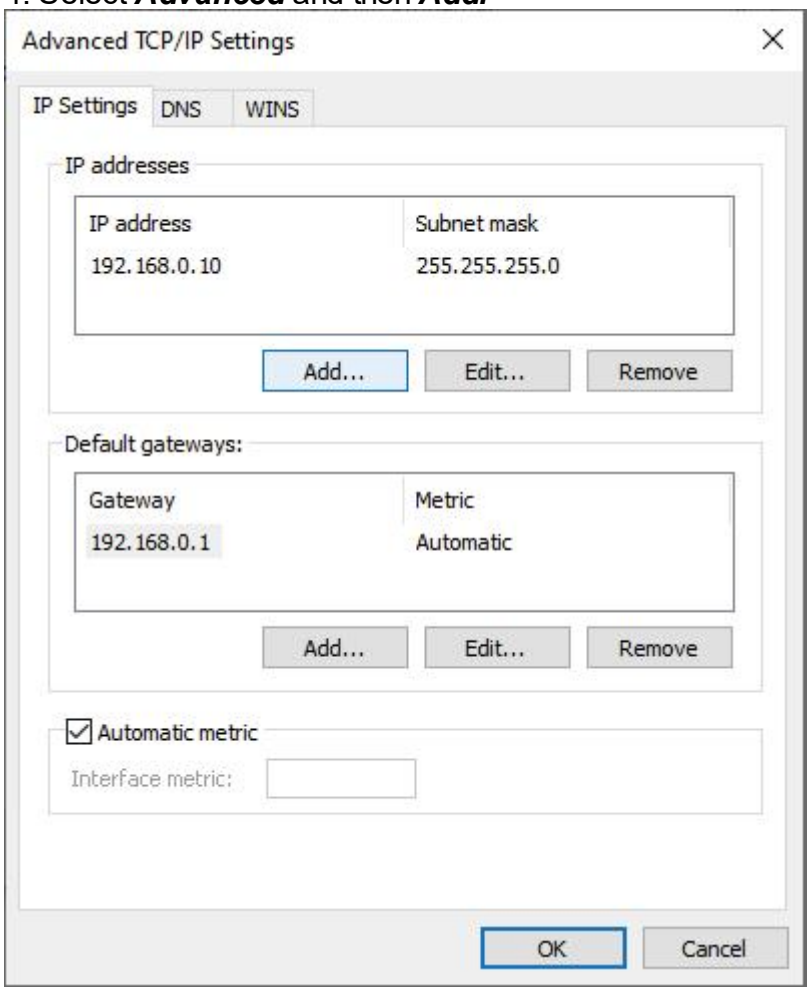
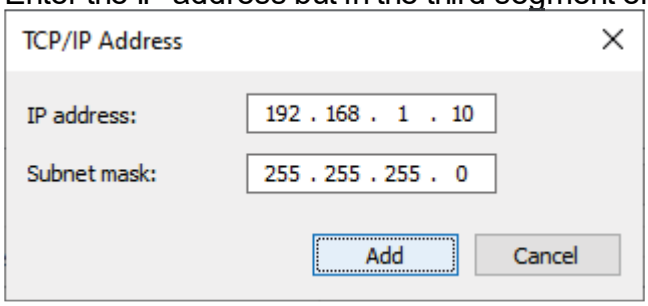
4. Select ***Advanced*** and then ***Add.***



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.

7.2 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.

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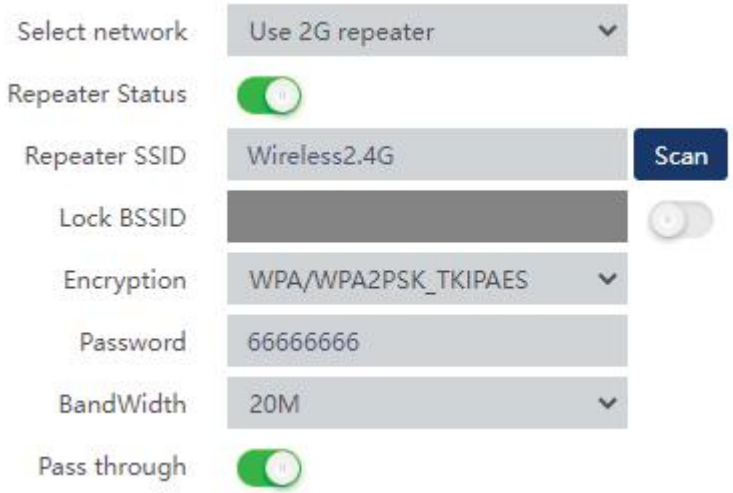
7.3 Issues with Internet data pass through

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.



Extra Resources

IPmitter.com

http://www.ipmitter.com/

ZIPNVR.com

https://zipnvr.com/

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8.1 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 / 5.8Ghz
Wireless Data Speed	750Mbps
12V Input Option	Yes (300mA)
LAN Port 1 Speed	10Mbps / 100Mbps
LAN Port 2 Speed	10Mbps / 100Mbps
Wireless Standard	IEEE802.11AC/N/G
Modes	Access Point / Repeater
Power	48V PoE / 12V DC
Finish	White
Mounting	Wall or Ceiling
Dimensions	185 x 185 x 30mm

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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 refered 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.

WEE/CG0783SS

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