

Common Networking Problems and Solutions

My Stream Magic product doesn't see the wireless network in its 'Scan for networks' list.

The wireless router's ESSID may be hidden or the Stream Magic product can't see the ESSID due to interference or a weak signal.

Solution:

If the router is configured to use a hidden ESSID, then select 'Settings > Network Config > Enter network name' from the Stream Magic product and enter in the router's ESSID and allow the Stream Magic product to connect.

If the router is not configured to use a hidden ESSID, then your Stream Magic product may only have a weak signal available to it or a signal that is experiencing interference. Please see the 'Viewing neighbouring wireless networks and network signal strength' section below.

My Stream Magic product displays the following message when attempting to connect to the network: "Error connecting to Reciva Gateway" or "Port 80 connect failed. Unable to load station list".

The Stream Magic product successfully connected to the network, but was then unable to connect to our servers.

Solution:

There are a number of reasons for the Stream Magic product displaying this message. Firstly, the Stream Magic product's connection to the Internet may be getting blocked by a firewall. Please ensure that any firewalls that the Stream Magic product's connection may come into contact with will allow it to use UDP port 53 and TCP port 80. You may need to temporarily turn off your firewall to check the Stream Magic product's connection.

The Stream Magic product may have received unsuitable network settings from a DHCP sever on the network or, if the Stream Magic product is using a static IP address, it may have unsuitable network settings configured. Please check that the Stream Magic product's network settings are correct for the network it is using - i.e. is the Stream Magic product using the correct gateway and DNS IP addresses? You may need to configure the Stream Magic product to use a static IP address if you're unsure about the network settings the Stream Magic product is receiving from the network. Please see the 'Using static network settings on the Stream Magic product' section below.

Finally, if the Stream Magic product is using a wireless network, then it is possible that the it is experiencing a poor connection. Please see the 'Viewing neighbouring wireless networks and network signal strength' section below.

My Stream Magic product displays the following message when attempting to connect to the network: "Wireless error (error code)" or "Incorrect key".

The wireless router has rejected the radio's attempt to connect due to the password (encryption key) provided by the Stream Magic product being different to what the router was expecting.

Solution:

Please ensure that the encryption key entered on the Stream Magic product is the same as that required by the router - remember, the key is case sensitive (unless it's hexadecimal). You may find it helpful to temporarily disable encryption on the router and then try to get the Stream Magic product to connect to the network again.

Once the Stream Magic product is able to connect to the router, re-enable encryption on the router with a different key and then attempt to get the Stream Magic product to connect again.

Please note, if your router uses a list of WEP keys, then you will need to enter the first key in the router's list (i.e. key 0 or key 1) into the Stream Magic product. Also, if the router is using a 40/64-bit key, then the Stream Magic product will need to use 5 ASCII characters or 10 hex characters. If the router is using a 128-bit key, then the Stream Magic product will need to use 13 ASCII characters or 26 hex characters. If the router uses a passphrase, don't use the passphrase on the Stream Magic product - use the actual encryption key instead.

My Stream Magic product displays the following message when attempting to connect to the network: "DNS servers invalid".

The Stream Magic product has successfully connected to the network, but is unable to resolve host names.

Solution:

If the Stream Magic product's network connection comes into contact with any firewalls, then please ensure that it is able to access UDP port 53. You may find it helpful to temporarily turn off any firewalls on the network and then check the Stream Magic product's connection.

The Stream Magic product may have received unsuitable network settings from a DHCP server on the network or, if the Stream Magic product is using a static IP address, it may have an unsuitable gateway or DNS IP address configured. Please check that the Stream Magic product's network settings are correct for the network it is using. You may need to configure the Stream Magic product to use a static IP address if you're unsure about the network settings it is receiving from the network. Please see the 'Using static network settings on the Stream Magic product' section below.

My Stream Magic product displays the following message when attempting to connect to the network: "Timeout getting IP address" or "Negotiating IP address".

The Stream Magic product did not receive an IP address when it attempted to connect to the network.

Solution:

There are a number of reasons why the Stream Magic product may have failed to receive an IP address. Certain routers have a security setting that only allows one device to connect to them by default (examples include the BT HomeHub and LiveBox) in order to stop unwanted users connecting to the wireless network. If this is the case, then the router will need to be configured to allow the Stream Magic product access.

Similarly, some routers are configured to use MAC filtering and may be filtering out the Stream Magic product's network connection due to its MAC address not being on the router's list of authorized MAC addresses. If this is the case, then router's configuration will need to be updated to allow the Stream Magic product to connect.

Some routers will ignore attempts made to connect to them if the required password (encryption key) is incorrect, which would leave the Stream Magic product to timeout in its attempt to connect. Please ensure that the encryption key entered on the Stream Magic product is correct (you may find it helpful to read the section titled 'Stream Magic product displays the following message when attempting to connect to the network: "Wireless error (error code)" or "Incorrect key"').

It is possible that there is no DHCP server available on the network, in which case the 'Using static network settings on the Stream Magic product' section (below) should be read.

If the Stream Magic product is using a wireless network, then it is possible that it is experiencing a poor connection. Please see the 'Viewing neighbouring wireless networks and network signal strength' section below.

Further Information

Viewing neighbouring wireless networks and network signal strength.

It is possible that the wireless network the Stream Magic product is attempting to connect to could be experiencing some interference from a neighbouring wireless network or another source emitting signals around 2.4GHz (e.g. Bluetooth). Please move the Stream Magic product away from any sources of signals that may interfere with its connection and place it close to a PC or Mac that also uses the same wireless network to view the Stream Magic product's WiFi environment. It is also advisable to keep both the router and the Stream Magic product away from microwave ovens, cordless phones and large metal surfaces.

In order to view the Stream Magic product's WiFi environment you can execute the following commands on the PC or Mac that uses the same network as the Stream Magic product and is in the same position as the Stream Magic product.

If you are using Windows then ensure that you have the latest Windows service pack installed and that your wireless network card is using a (standard) NDIS driver.

Open a DOS prompt (or Windows PowerShell) and type this command (don't include the '>'):
> netsh wlan show networks mode=bssid

If you are using a Mac, you could see the available networks by using the 'Airport' application or by typing this command from the terminal (don't include the '\$'):
\$ sudo
/System/Library/PrivateFrameworks/Apple80211.framework/Versions/Current/Resources/airport -s

If you are using a PC running Linux, type the following command:
\$ sudo iwlist <network device>

Where <network device> is the PC's active wireless network device e.g one of the devices displayed from this list (probably wlan0):
\$ /sbin/ifconfig

In light of the PC's / Mac's WiFi environment, ensure that the wireless network you are attempting to connect to with your Stream Magic product is operating on a channel that is at least 2 channels different to the neighbouring networks. You may need to configure your wireless router to use a different channel number to ensure this.

Also, ensure that the perceived signal strength is above 80% when testing the Stream Magic product's connectivity, but don't position the Stream Magic product right next to the wireless router as the strong signals from the Stream Magic product and the router will interfere with one another. When getting the Stream Magic product to connect to the wireless network, remember to keep the Stream Magic product away from the PC / Mac that also uses a wireless connection.

Using static network settings on the Stream Magic product.

Stream Magic products that have trouble accessing a network may benefit by using a static IP address. For example, some wireless routers will inform devices on the network that it is itself the DNS rather than the user's ISP's DNS and this can sometimes confuse the Stream Magic product.

In order to configure the Stream Magic product to use a static IP address, select 'Settings / Configure > Network config > Edit Config' on the Stream Magic product and then set 'Auto (DHCP)' to 'No'. Then the Stream Magic product will prompt for the static IP address to be entered. Please enter in the appropriate information for the Stream Magic product, which should be comparable to the network information on the other PCs / Macs on the same network. Select 'END' following each IP address entered on the Stream Magic product. When the radio asks for a DNS IP address, enter the ISP's DNS IP address - which should be available from your ISP's support webpage. If the DNS IP address is difficult to get hold of, then you can try using a public IP address (at the time of writing this document, there is a list of public DNSs here: <http://www.tech-faq.com/public-dns-servers.shtml>). To check if a DNS IP address is working correctly, you could type the following command from a your PC's DOS / shell prompt or Mac's terminal prompt:

```
nslookup <host> <DNS>
```

e.g.

```
nslookup www.google.com 4.2.2.1
```

The command should successfully resolve the host name to an IP address if the DNS is working.

Ports that need to be available for the Stream Magic product to use the network effectively.

General Network Connectivity

UDP 67 (DHCP)

UDP 68 (DHCP)

UDP 53 (DNS)

TCP 80 (HTTP)

UDP 123 (NTP)

TCP 5000 (upgrades)

TCP 6000 (upgrades)

Media Streaming

TCP and UDP 554 (RTSP)

TCP and UDP 7070 (RTSP)

TCP and UDP 1755 (Microsoft Streaming)

Windows Shares

UDP 137 (netbios name service)

UDP 138 (netbios data)

TCP 139 (netbios-ssn)

TCP 445 (microsoft-ds)

UPnP

UDP 1900 (SSDP)

TCP 5000 (Events)