

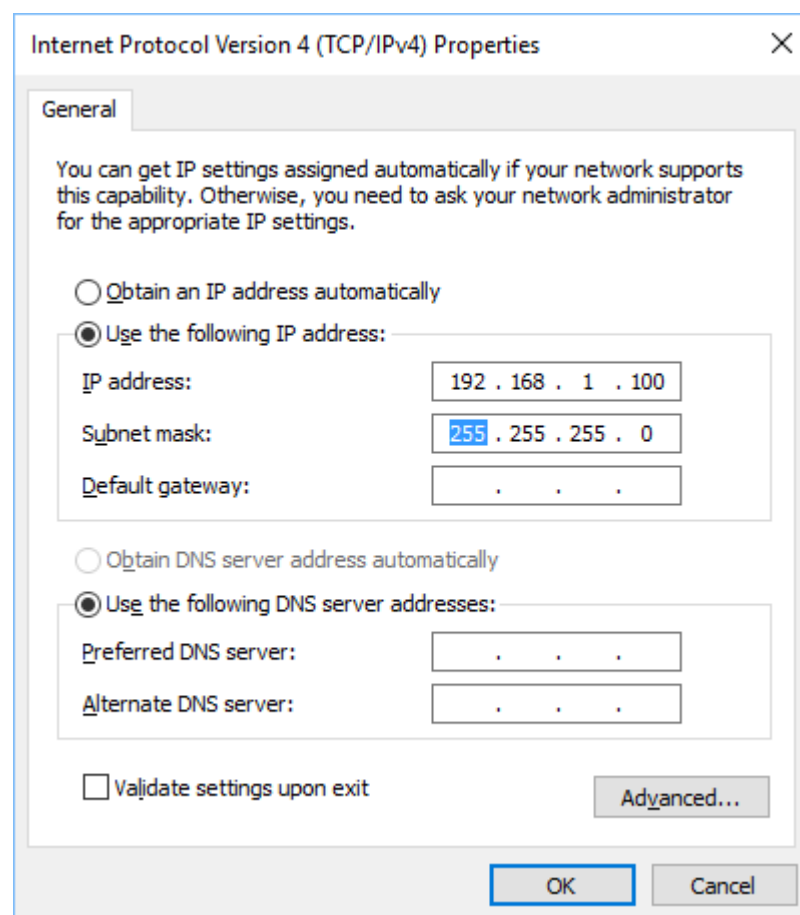
SILVERNET

How to configure a Point-to-Multipoint link

SilverNet equipment comes Pre-configured on IP addresses 192.168.0.229 or 192.168.0.228. There may be some instances where you need to reset the unit or the unit has been factory defaulted and you need to re-configure it.

If the unit has reset, it will go to the default IP address of 192.168.1.1.

Configure the Ethernet adapter on your computer with a static IP address on the 192.168.1.x subnet (for example, IP address: *192.168.1.100* and subnet mask: *255.255.255.0*)



Launch your web browser and enter the default IP address of your device (192.168.1.1) in the address field. Press **Enter**.



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Enter **admin** in the *Username* field and **password** in the *Password* field, and click **Login**.

Authorisation Required

Please enter your username and password.

Username	<input type="text" value="admin"/>
Password	<input type="password"/>

Go to Network > Interfaces > Click the edit button on the LAN interface

Network > Interfaces > LAN

Network	Status	Actions
LAN br-lan	Uptime: 0h 17m 22s MAC-Address: 50:11:EB:00:5D:AF Protocol: static RX: 316.82 KB (4037 Pkts.) TX: 164.88 KB (417 Pkts.) IPv4: 192.168.1.1/24	Connect Stop Edit

Enter the new IP address you want the device to have.

Interfaces - LAN

Common Configuration

General Setup	Advanced Settings	Physical Settings
Status	Uptime: 0h 20m 28s MAC-Address: 50:11:EB:00:5D:AF RX: 399.13 KB (4831 Pkts.) TX: 262.63 KB (712 Pkts.) IPv4: 192.168.1.1/24	
Protocol	Static address	
IPv4 address	<input type="text" value="192.168.168.229"/>	
IPv4 netmask	255.255.255.0	
IPv4 gateway	<input type="text"/>	
IPv4 broadcast	<input type="text"/>	
Use custom DNS servers	<input type="text"/>	
Accept router advertisements	<input type="checkbox"/>	
Send router solicitations	<input checked="" type="checkbox"/>	
IPv6 address	<input type="text"/>	
IPv6 gateway	<input type="text"/>	

Save and apply

Make sure you change the IP address of your laptop to be in the new IP address range. Log into the device using this new IP address.

Access Point WDS Configuration – Device 1

Once you have logged back in, go to Network > Wireless > Click the edit button on the 5Ghz radio



Once in the wireless page scroll to the bottom of the screen and you will see the **Interface Configuration** section.

Interface Configuration

General Setup | Wireless Security | MAC-Filter | Advanced Settings

Mode	Access Point
ESSID	MimoSeries1
Guard Interval	Short
Data Rate (Mbps)	Auto
Hide ESSID	<input type="checkbox"/>

Our first device will be our Access Point (AP)

Mode Set the mode as Access Point WDS

ESSID Set this to "silvernetwireless"

Guard Interval Set this to short

Data Rate Set this to auto

Hide SSID Leave this as unticked

Save and apply

For more information on these settings please refer to the manual

Interface Configuration

General Setup | Wireless Security | MAC-Filter | Advanced Settings

Mode	Access Point (WDS)
ESSID	silvernetwireless
Guard Interval	Short
Data Rate (Mbps)	Auto
Hide ESSID	<input type="checkbox"/>

In the next tab along you can set the Wireless Security

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Interface Configuration

General Setup	Wireless Security	MAC-Filter	Advanced Settings
Encryption	WPA2-PSK AES		
Cipher	Auto		
Key	silvernetwireless		

WPA2-PSK AES

No Encryption

WEP Open System

WEP Shared Key

WPA-PSK AES

WPA2-PSK AES

WPA2-PSK AES+

WPA-PSK/WPA2-PSK AES Mixed Mode

IEEE802.1X/WPA-EAP

IEEE802.1X/WPA2-EAP

Select WPA2-PSK AES and enter "silvernetwireless" as the key

Interface Configuration

General Setup	Wireless Security	MAC-Filter	Advanced Settings
Encryption	WPA2-PSK AES		
Cipher	Auto		
Key	silvernetwireless		

Save and apply

For more information on these settings please refer to the manual

At the top of the same page you will need to go to advanced settings and enter the distance.

Device Configuration

General Setup	Advanced Settings
Distance Optimisation (Auto-ACK Timeout)	<input type="checkbox"/> For Point to Multi-Point customers, please disable this Auto-ACK Timeout and select the furthest distance of the client to this device, otherwise it may cause instability
Distance (meters)	2000
	Min: 300, Max: 24000
Chainmask Selection	2x2
Beacon Interval	100
Adaptive noise immunity	<input checked="" type="checkbox"/> Controls radio sensitivity in the face of noise sources
Dynamic channel selection	Disable
	Automatically switches channel to avoid interference

Interface Configuration

General Setup	Wireless Security	MAC-Filter	Advanced Settings
Encryption	WPA2-PSK AES		
Cipher	Auto		
Key	*****		

Save and apply

For more information on these settings please refer to the manual

Station WDS Configuration – Device 2

Go to Network > Interfaces > Click the edit button on the LAN interface



Enter the new IP address you want the device to have.

Interfaces - LAN

Common Configuration

General Setup | Advanced Settings | Physical Settings

Status

Uptime: 5h 44m 9s
MAC-Address: 50:11:EB:00:63:2B
RX: 3.96 MB (48948 Pkts.)
TX: 3.73 MB (10608 Pkts.)
IPv4: 192.168.168.228/24

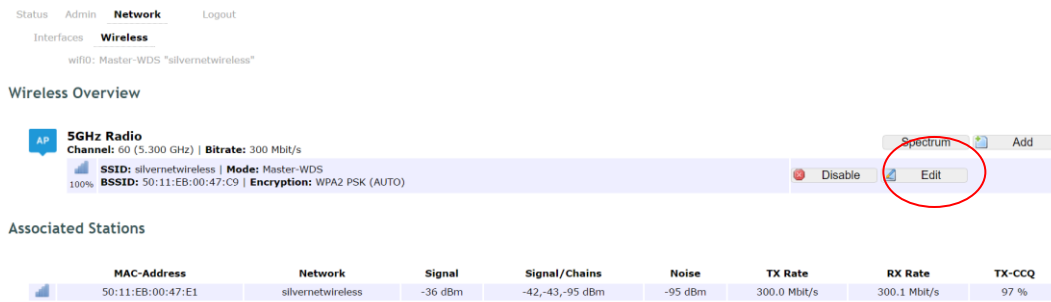
Protocol	Static address
IPv4 address	192.168.168.228
IPv4 netmask	255.255.255.0
IPv4 gateway	
IPv4 broadcast	
Use custom DNS servers	
Accept router advertisements	<input type="checkbox"/>
Send router solicitations	<input checked="" type="checkbox"/>
IPv6 address	
IPv6 gateway	

Save and apply

Make sure you change the IP address of your laptop to be in the new IP address range. Log into the device using this new IP address.

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Once you have logged back in, go to Network > Wireless > Click the edit button on the 5Ghz radio



Once in the wireless page scroll to the bottom of the screen and you will see the **Interface Configuration** section.

Interface Configuration

General Setup | Wireless Security | MAC-Filter | Advanced Settings

Mode: Access Point

ESSID: MimoSeries1

Guard Interval: Short

Data Rate (Mbps): Auto

Hide ESSID:

Our first device will be our Access Point (AP)

Mode Set the mode as Access Point WDS

ESSID Set this to "silvernetwireless"

Guard Interval Set this to short

Data Rate Set this to auto

Hide SSID Leave this as unticked

Save and apply

For more information on these settings please refer to the manual

Interface Configuration

General Setup | Wireless Security | Advanced Settings

Mode: Station (WDS)

ESSID: silvernetwireless

BSSID:

Guard Interval: Short

Data Rate (Mbps): Auto

TxCCQ Watchdog:

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In the next tab along you can set the Wireless Security

Interface Configuration

General Setup **Wireless Security** MAC-Filter Advanced Settings

Encryption

Cipher

Key

- WPA2-PSK AES
- No Encryption
- WEP Open System
- WEP Shared Key
- WPA-PSK AES
- WPA2-PSK AES**
- WPA2-PSK AES+
- WPA-PSK/WPA2-PSK AES Mixed Mode
- IEEE802.1X/WPA-EAP
- IEEE802.1X/WPA2-EAP

Select WPA2-PSK AES and enter "silvernetwireless" as the key

Interface Configuration

General Setup **Wireless Security** MAC-Filter Advanced Settings

Encryption

Cipher

Key

Save and apply

For more information on these settings please refer to the manual

At the top of the same page you will need to go to advanced settings and enter the distance.

Device Configuration

General Setup **Advanced Settings**

For Point to Multi-Point customers, please disable this Auto-ACK Timeout and select the furthest distance of the client to this device, otherwise it may cause instability

Distance Optimisation (Auto-ACK Timeout)

Distance (meters)

Chainmask Selection

Interface Configuration

General Setup **Wireless Security** Advanced Settings

Encryption

Cipher

Key

Save and apply

For more information on these settings please refer to the manual

Station WDS Configuration – Device 3

Go to Network > Interfaces > Click the edit button on the LAN interface



Enter the new IP address you want the device to have.

Interfaces - LAN

Common Configuration

General Setup | **Advanced Settings** | Physical Settings

Status

Uptime: 5h 45m 4s
MAC-Address: 50:11:EB:00:63:2B
RX: 3.98 MB (49089 Pkts.)
TX: 3.77 MB (10686 Pkts.)
IPv4: 192.168.168.228/24

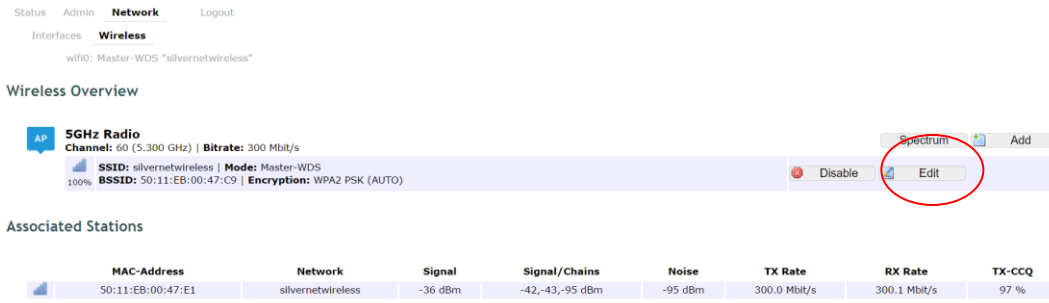
Protocol	Static address
IPv4 address	192.168.168.227
IPv4 netmask	255.255.255.0
IPv4 gateway	
IPv4 broadcast	
Use custom DNS servers	
Accept router advertisements	<input type="checkbox"/>
Send router solicitations	<input checked="" type="checkbox"/>
IPv6 address	
IPv6 gateway	

Save and apply

Make sure you change the IP address of your laptop to be in the new IP address range. Log into the device using this new IP address.

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Once you have logged back in, go to Network > Wireless > Click the edit button on the 5Ghz radio



Once in the wireless page scroll to the bottom of the screen and you will see the **Interface Configuration** section.

Interface Configuration

General Setup | Wireless Security | MAC-Filter | Advanced Settings

Mode: Access Point

ESSID: MimoSeries1

Guard Interval: Short

Data Rate (Mbps): Auto

Hide ESSID:

Our first device will be our Access Point (AP)

Mode Set the mode as Access Point WDS

ESSID Set this to "silvernetwireless"

Guard Interval Set this to short

Data Rate Set this to auto

Hide SSID Leave this as unticked

Save and apply

For more information on these settings please refer to the manual

Interface Configuration

General Setup | Wireless Security | Advanced Settings

Mode: Station (WDS)

ESSID: silvernetwireless

BSSID:

Guard Interval: Short

Data Rate (Mbps): Auto

TxCCQ Watchdog:

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In the next tab along you can set the Wireless Security

Interface Configuration

General Setup **Wireless Security** MAC-Filter Advanced Settings

Encryption

Cipher

Key

- WPA2-PSK AES
- No Encryption
- WEP Open System
- WEP Shared Key
- WPA-PSK AES
- WPA2-PSK AES**
- WPA2-PSK AES+
- WPA-PSK/WPA2-PSK AES Mixed Mode
- IEEE802.1X/WPA-EAP
- IEEE802.1X/WPA2-EAP

Select WPA2-PSK AES and enter "silvernetwireless" as the key

Interface Configuration

General Setup **Wireless Security** MAC-Filter Advanced Settings

Encryption

Cipher

Key

Save and apply

For more information on these settings please refer to the manual

At the top of the same page you will need to go to advanced settings and enter the distance.

Device Configuration

General Setup **Advanced Settings**

Distance Optimisation (Auto-ACK Timeout) For Point to Multi-Point customers, please disable this Auto-ACK Timeout and select the furthest distance of the client to this device, otherwise it may cause instability

Distance (meters) Min: 300, Max: 24000

Chainmask Selection

Interface Configuration

General Setup **Wireless Security** Advanced Settings

Encryption

Cipher

Key

Save and apply

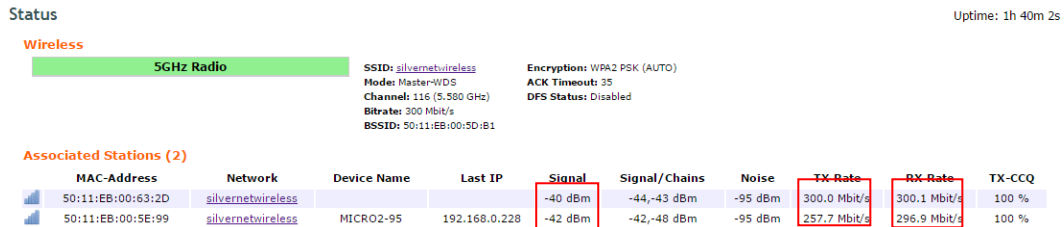
For more information on these settings please refer to the manual

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Check your link

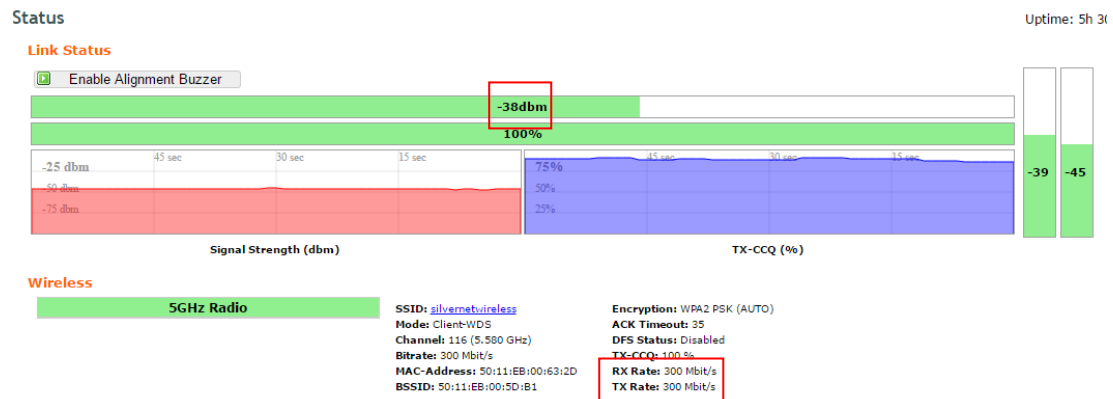
Once you have configured your link you will want to check it is up and running. Go to the status page of either device.

The Access Point Status page will show you any associated stations (we should have at least 2) along with the Signal, TX rate and RX Rate.



Ideally, we want to see a signal between -30 to -60 with TX/RX rates of 300

The Station Status page will show you the same information but uses a graph instead.



As above, we want to see a signal between -30 to -60 with TX/RX rates of 300 on both Station ends.

Finished

Your link should now be configured.

This document is only meant as a guide and there are settings you should change once you have the link up and running.

If you need any further assistance then please email us at support@silvernet.com or call our support team on 08712233067