Echo Singular Point to Point Optimum Settings

Key Radio Settings

| STATUS | **RADIO** | WIRELESS | NETWORK | SERVICES | SYSTEM | ADVANCED |

Basic Settings

Wireless Mode : Access Point WDS

Region Code : Band C

IEEE 802.11 Mode : 802.11an

Channel Width : Auto 20/40 MHz

Channel Shifting : Disable

Channel : Auto

Auto Adjust EIRP Limit : ☑

Antenna Gain : 13 dBi

Tx Power : 10 dBm

Max TX Rate : MCS 15 - 144.4 [300]Mb

Frequency List(MHz) : ☐ Enable

Wireless Mode: One ECHO device should be set to **Access Point WDS** and the other end (its partner) to **Station WDS**. This will create a transparent link.

Note: A device set to Access Point WDS (APWDS) will only connect to a device set to Station WDS (STWDS) and vice versa. Having both radios set to the same operating mode will cause the radios to not connect.

Region Code: Set this to your desired country. Band C offers outdoor channels from 5745 to 5825.

Auto Adjust EIRP Limit: Tick this box to allow you to set the antenna gain.
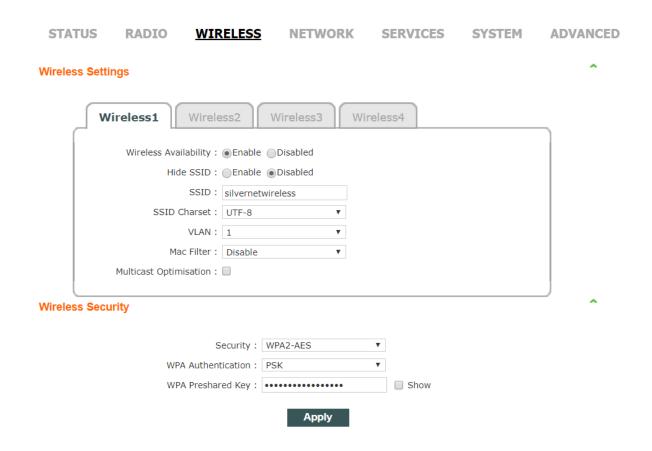
Antenna Gain: This should be set correctly so the device knows what size antenna is attached to it and can adjust the Tx Power to work correctly with DFS. If the Antenna gain is set to 0 the unit will be more sensitive to DFS causing the channel to change when radar is detected.

Note: The Antenna Gain can only be set in the Access Point WDS (APWDS) device.

TX Power: Works in unison with the antenna gain and is set to be within the regulatory power of the region the device is operating in.

Max TX Rate: MCS 15 is the highest transmition rate that can be set on the unit giving you full radio speed at 300Mbps.

Key Wireless Settings

SSID: This needs to be the same in both ends of the link.

Security: The highest level of security you can set on the link is WPA2-AES.

WPA Authentication: Highest level of authentication you can set on the link is PSK.

WPA Preshared Key: This needs to be the same in both ends of the link.

Note: The SSID and Security Key MUST to be the same on both ends of a link, however, the IP addresses must be different.
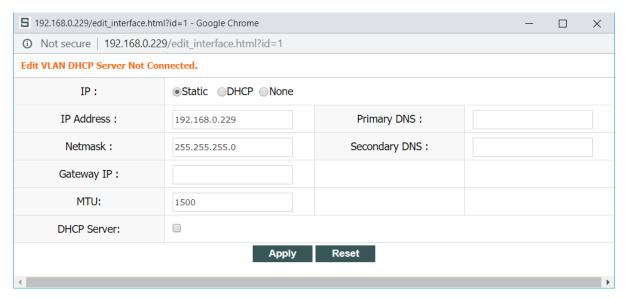
For example:

Access Point WDS, SSID 'link1', Security '12345678', IP address 192.168.0.229

Station WDS, SSID 'link1', Security '12345678', IP address 192.168.0.228

Key Network Settings

STATUS   RADIO   WIRELESS   **NETWORK**   SERVICES   SYSTEM   ADVANCED

Network Role

Network Mode : Bridge ▼

Auto IP Aliasing : vlan1 ▼ ✓

VLAN Interface

ID	Interface	Mode	IP	Mask	Gateway	DHCP	MTU	Edit
1	vlan1	Static	192.168.0.229	255.255.255.0		Disable	1500	✏️

Vlan Interface: Click edit to change the IP address of your unit and below tab will appear.

Edit VLAN DHCP Server Not Connected.

IP :	⦿Static ○DHCP ○None		
IP Address :	192.168.0.229	Primary DNS :	
Netmask :	255.255.255.0	Secondary DNS :	
Gateway IP :			
MTU:	1500		
DHCP Server:	☐		

Apply   Reset

IP: Select from Static, DHCP and None. Static allows you to set an IP address that you want the device to use. DHCP allows you to set a fall-back IP in case a DHCP server is not present.
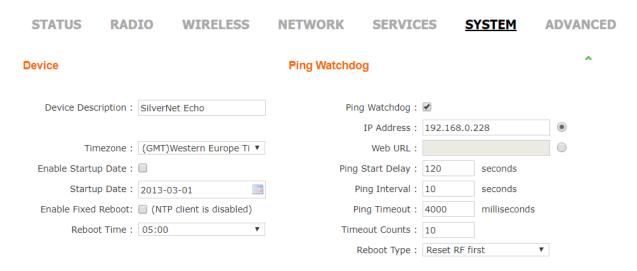
Note: The device is set to DHCP by default

If this is not changed to Static and a DHCP sever is present on the network the unit will be issued an IP address by the DHCP server and will not be accessible on 192.168.1.1 (or any other IP address you may have set)

IP Address: Set the IP address of the device here.

Netmask: Set Subnet mask here.

Key System Settings

Device   **Ping Watchdog**   ^

Device Description :	SilverNet Echo
Timezone :	(GMT)Western Europe Ti ▼
Enable Startup Date :	☐
Startup Date :	2013-03-01
Enable Fixed Reboot:	☐ (NTP client is disabled)
Reboot Time :	05:00 ▼

Ping Watchdog :	☑	
IP Address :	192.168.0.228	◉
Web URL :		○
Ping Start Delay :	120	seconds
Ping Interval :	10	seconds
Ping Timeout :	4000	milliseconds
Timeout Counts :	10	
Reboot Type :	Reset RF first ▼	

Ping Watchdog allows you to set an IP address for the device to ping. If the device cannot ping the IP address within certain time (set out in the parameters) then it will reboot the wireless card first and try to re-establish a connection. If that does not help, then it will reboot itself.

Ping Watchdog: Tick this to enable Ping Watchdog

IP Address: Input the IP Address of the device you want to ping.

Note: This is usually the partner device and must be within the same IP address range as the device.

For example:

Access Point WDS, IP address 192.168.0.229

Station WDS, IP address 192.168.0.228

Ping Start delay: The unit will not start to Ping for 120 seconds to allow the device to boot up. This is the recommended time.

Ping Interval: The unit will send a ping every 10 seconds. This is the recommended ping interval

Ping Timeout: Any Ping higher than this number is classed as a ping timeout by the unit.

Timeout Counts: This is the number of timeouts that occur before the unit reboots. 10 is the recommended setting.

Reboot Type: The Unit can be set to do a full reboot or to Reboot RF first. Reboot RF first is the recommended setting.

Note: Setting Reboot RF first will restart the wireless radio driver in the first instance then reboot the device if it cannot receive pings from the partner device.