



## Configuring the Cisco 2960 Switch for Livewire™

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### **Introduction**

Ethernet switches intended for use in constructing Axia Livewire IP-Audio networks must be properly pre-configured to provide required multicast filtering and quality of service (QoS) features. This document explains the required steps to configure Cisco 2960 switch specifically. These commands may be applicable to other members of the Catalyst product line that support these same commands.

For initial configuration of the device, you can use HyperTerminal with a serial port connection, or Telnet.

For serial connection to the switch use the console cable. Typical default serial port settings are 9600baud / 8 bit / no parity / no flow control.

In the case you use Telnet, make an Ethernet connection to one of the switch's FastEthernet ports. Note that before using Telnet connection you have to run express setup first (see switch starting guide)

Please refer to your Cisco switch manual for additional information about the command line interface.

### **Configuration**

To determine if your switch has Advanced IP Services or Basic IP Services (look for IPBASE string) software, use the "show ver" command.

```
show ver
```

To be able to make any configuration changes on the switch, you must enter Privileged User level by executing the "enable" command:

```
enable
```

In Cisco switches, ports are named according to their speed: "FastEthernet" or "GigabitEthernet". When configuring your switch, you must use "Fa" or "GigabitEthernet" accordingly (e.g.: "fa0/1" or "GigabitEthernet0/1"). The last digit specifies actual port number on the switch.

You can copy and paste the following configuration code fragments to your switch according to your software version and Ethernet port use.



## ***VLAN 1 interface configuration***

Enter your IP address and network mask.

```
config t
interface Vlan1
ip address 192.168.XXX.YYY 255.255.255.0
no shutdown
end
```

## ***Global IGMP configuration***

Enter the following instructions:

```
config t
ip igmp snooping querier
ip igmp snooping querier max-response-time 25
ip igmp snooping vlan 1 immediate-leave
ip igmp snooping querier timer expiry 205
end
```

## ***Global QoS configuration***

Enter the following instructions:

```
config t
mls qos srr-queue input buffers 50 50
mls qos srr-queue input cos-map queue 1 threshold 1 5
mls qos srr-queue input cos-map queue 2 threshold 1 6 7
mls qos srr-queue output cos-map queue 1 threshold 1 6 7
mls qos srr-queue output cos-map queue 3 threshold 1 5
mls qos
end
```

## ***Configuring FastEthernet and GigabitEthernet ports connecting to Axia Devices***

Enter the following instructions:

```
config t
interface fa0/x
switchport mode access
switchport nonegotiate
switchport voice vlan dot1p
srr-queue bandwidth share 30 20 25 25
srr-queue bandwidth shape 0 0 0 0
priority-queue out
spanning-tree portfast
mls qos trust cos
end
```

\* Where "x" is the port # to configure  
\* Use the RANGE command for multiple port configurations.  
Syntax: interface range fa0/x - yy



\* GigabitEthernet port configuration use syntax: GigabitEthernet0/x

## ***Configuring ports connecting to other CISCO Catalyst switches***

Enter the following instructions:

```
config t
interface GigabitEthernet 0/x
switchport mode trunk
srr-queue bandwidth share 30 20 25 25
srr-queue bandwidth shape 0 0 0 0
priority-queue out
mls qos trust cos
end
* Where "x" is the port # to configure
* Use the RANGE command for multiple port configurations.
Syntax: interface range fa0/x - yy
* On a stackable switch use this syntax:
fa1/0/x or GigabitEthernet1/0/x
```

## ***Configuring ports connecting to Allied Telesyn switches***

Enter the following instructions:

```
config t
interface gi0/x
switchport trunk encapsulation dot1q
switchport trunk native vlan 2
switchport mode trunk
switchport nonegotiate
srr-queue bandwidth share 30 20 25 25
srr-queue bandwidth shape 0 0 0 0
priority-queue out
mls qos trust dscp
end
* Where "x" is the port # to configure
* On a stackable switch use this syntax:
fa1/0/x or gi1/0/x
```

## ***Check your configuration***

To check your switch's complete configuration, enter:

```
show running-config
```



## ***Save your configuration***

Do not forget to save your new configuration. Enter the following instructions:

```
copy running-config startup-config
```

## ***For more assistance:***

If you have more questions about switch setup, contact Axia Support at [support@axiaaudio.com](mailto:support@axiaaudio.com) .