Setting up a Cisco Managed Ethernet Switch

This document provides information to set up and work with the Cisco Catalyst 2960+ Ethernet switch (WS-C2960+24TC-S) used in Christie Laser Module Racks.

It is assumed the Ethernet switch is in a factory default state and has not been configured previously.

Safety precautions

To prevent personal injury and to protect the device from damage, read and follow these safety precautions.

Danger! Failure to comply with the following results in death or serious injury.

- EXTREME BRIGHTNESS! When accessing a restricted access location for product service or maintenance, avoid exposure to the product beam path by turning the product power off and disconnecting the product from AC power, or by shuttering the lamprotating the Beam Stop to closed position to avoid emissions from the front aperature.

Warning! Failure to comply with the following could result in death or serious injury.

- Do not look directly into the lens or at the lamp. The extremely high brightness can cause permanent eye damage.
- FIRE HAZARD! Keep hands, clothes, and all combustible material away from the concentrated light beam of the lamplampsprojector.
- Christie products must be installed and serviced by Christie qualified technicians.
- Do not operate the cinema projector product without all of its covers in place.

Notice. Failure to comply with the following may result in property damage.

- Always wear clean, lint-free gloves when handling the product.
- Observe all electrostatic precautions. Use a grounded wrist strap and insulated tools when handling, servicing, or cleaning electronic assemblies.

Hardware and software requirements

The following hardware and software are required to configure the Cisco Ethernet switch.

- PC with dedicated Ethernet port
- AC line cord
- Ethernet cable
- Tera Term Telnet client program

Preparing the projector for service

Before loading the laser switch configuration file, you must prepare the projector for servicing.

1. On the projector touch panel, tap and hold **Power** (⏻) and wait 10 minutes for the projector to cool.
2. On the side or the rear of the projector, press **E-Stop**.
3. Move the projector breaker switch to the off position.
4. Disconnect the projector from AC power.
5. Rotate the beam stop to the closed position.
6. Remove the key from the rack key switch.

Loading the laser switch configuration file

Follow these instructions to prepare the Ethernet switch for use with the Laser Module Racks.

Do not connect any other devices to the Ethernet switch when loading the laser switch configuration file.

1. Connect the AC line cord to the Ethernet switch and power up the switch.
2. Let the switch complete the Power On Self-Test (POST), which can take several minutes.

   When the POST is complete, the SYST and STAT LEDs on the front panel turn solid green.
3. On the Ethernet switch, press and hold **Mode** until it restarts (for approximately eight to 10 seconds).

   Once the Ethernet switch restarts, it is in a factory default state and you can proceed with the loading of the laser switch configuration file.
4. Press and hold the **Mode** button on the Ethernet switch for three seconds or until four green LEDs are lit.

   The switch enters the Express Setup mode. Only use a PC and the Microsoft Internet Explorer browser to complete Express Setup.
5. To obtain an IP address automatically, configure the Ethernet port on the PC.
   a) Click **Start** > **Control Panel** > **Network and Sharing Center**.
   b) Click **Change Adapter Settings**.
   c) Right-click the connection for the dedicated Ethernet port and select **Properties**.
   d) From the This connection uses the following items list, select **Internet Protocol Version 4 (TCP/IPv4)**.
   e) Click **Properties**.

    f)   On the General tab, select **Obtain an IP address automatically**.

    g)   Click **OK**.

6.   Connect the PC to any port on the Ethernet switch using an Ethernet cable.

7.   Open Microsoft Internet Explorer and type the IP address **10.0.0.1** in the address bar.

8.   In the authentication screen, type a user name and password.

    If a message appears indicating the browser does not meet certain criteria, press **Continue**.

9.   In the **Express Setup** window, set the **Network Settings** fields as indicated.

- Leave the VLAN ID field set to 1.

- Set the IP address to 192.168.252.2.

- Set the IP Subnet Mask to 255.255.255.0.

- Set the Default gateway to 192.168.252.1.

- Enter a temporary switch password at least eight characters in length.

10. In Optional Settings, enable **Telnet** and type a temporary password at least eight characters in length.

11. To save the configuration and exit Express Setup mode, click **Submit**.

12. At the warning dialog, click **OK**.

13. When the HTTP 404 Not Found page appears, ignore it and close the page.

    The switch reconfigures after approximately 60 seconds. When configuration is complete, the SYST and STAT LEDs turn solid green.

14. Close all browser windows.

15. Configure the Ethernet port on the PC to use a static IP address of 192.168.252.201.

    a)   a. Click **Start** > **Control Panel** > **Network and Sharing Center**.

    b)   Click **Change Adapter Settings**.

    c)   Right-click the connection for the dedicated Ethernet port and select **Properties**.

    d)   From the This connection uses the following items list, select **Internet Protocol Version 4 (TCP/IPv4)**.

    e)   Click **Properties**.

    f)   On the General tab, select **Use the following IP address**.

    g)   In the IP address field, type the following:

```
192.168.252.201
```

    h)   In the subnet mask field, type the following:

```
255.255.255.0
```

    i)   Click **OK**.

16. Using a Telnet client, connect to the IP address 192.168.252.2.

    When using Tera Term, set the IP address and to enable the telnet client, select the **Telnet** checkbox.

17. When prompted, type the password from step 8.

18. At the `Switch>` prompt, type the following:

```
enable
```

19. Type the password from step 7.

20. At the `Switch#` prompt, type the following:

```
config terminal
```

The Ethernet switch responds with the message `Enter configuration commands, one per line. End with CNTL/Z.`

21. Using the computer connected to the Ethernet switch, download the Cisco Ethernet switch configuration file from *www.christiedigital.com*.

    Click **Products** > **Digital cinema projectors** > **Christie CP42LH** > **Downloads** > **Software Downloads**.

22. Unzip the configuration file and open it in a text editor.

23. Select and copy all the contents of the text file.

24. Paste the contents of the text file into the telnet client.

25. Wait until the configuration file is completely loaded and the `LaserSwitch#` prompt appears.

    This takes a few seconds.

26. At the `LaserSwitch#` prompt, type the following:

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

27. At the `Destination filename [startup-config]?` prompt, press **Enter**.

    The current running configuration file is loaded to the non-volatile memory so it can be used as the default configuration when the switch restarts.

28. At the `LaserSwitch#` prompt, type the following:

    ```
    reload
    ```

29. At the `Proceed with Reload?` prompt, press **Enter**.

    The Ethernet switch restarts after approximately 2.5 minutes. When the Ethernet switch has restarted, the SYST and STAT LEDs turn solid green.

30. Reconnect the Telnet client to 192.168.252.2.

31. Press **Enter**.

32. Verify the following text messages are seen from the Ethernet switch to indicate the switch is properly configured:

    ```
    Christie Digital Systems
    Laser Module Rack Ethernet Switch
    Configuration File P/N 001-112696-02 Ver 1.0.0
    User Access Verification
    Password
    ```

Resetting the Ethernet switch to factory defaults

Returning a previously configured Ethernet switch to the factory default state allows for the loading of the laser switch configuration file.

This procedure erases all configuration and setup files on the Ethernet switch and returns all parameters to factory defaults.

1. Power up the Ethernet switch and allow it to completely reboot.

    This takes several minutes.

2. On the Ethernet switch, press and hold **Mode** until it restarts (for approximately eight to 10 seconds).

    Once the Ethernet switch restarts, it is in a factory default state and you can proceed with the loading of the laser switch configuration file.