AXIS D8248 Managed PoE++ Switch

User manual

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About this document

Note

The product is intended for use by network administrators who are responsible for operating and maintaining network equipment. Basic working knowledge of general switch functions, security, the Internet Protocol (IP), and Simple Network Management Protocol (SNMP) is assumed.

This user manual will give you information on how you:
- access the product

- access connected IP devices in the product's topology view

- configure selected setup examples

- perform maintenance on the product

Product features and their settings are covered in more detail in the product's context-sensitive built-in help. For more information, see .

Solution overview
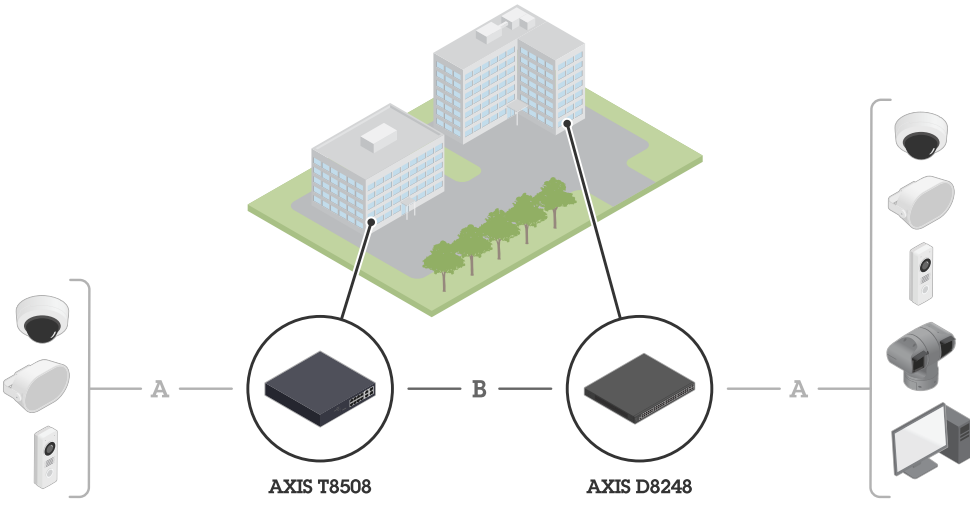
Axis edge devices are installed on the premises and are connected to Axis switches through Ethernet (A). The switches are connected through fiber (B).

Get started

Access the product from a browser

Note

Install, connect and power up the device as specified in its installation guide.

1. Use AXIS IP Utility or AXIS Device Manager to find the device on the network. For more information about how to discover devices, go to *axis.com/support*

2. Enter the username and password provided on the product label.
   The default username is root.

3. Follow the steps in the setup wizard to:

   – Change the password (recommended for security reasons)

   – Set the IP address via DHCP or manually

   – Configure the DHCP server

   – Set the date & time information

   – Set the system information

4. Click **Apply**.

5. Relogin using the new password.

You will now enter the product's web page, and will be able to configure and manage the product.

Get to know your product's web page
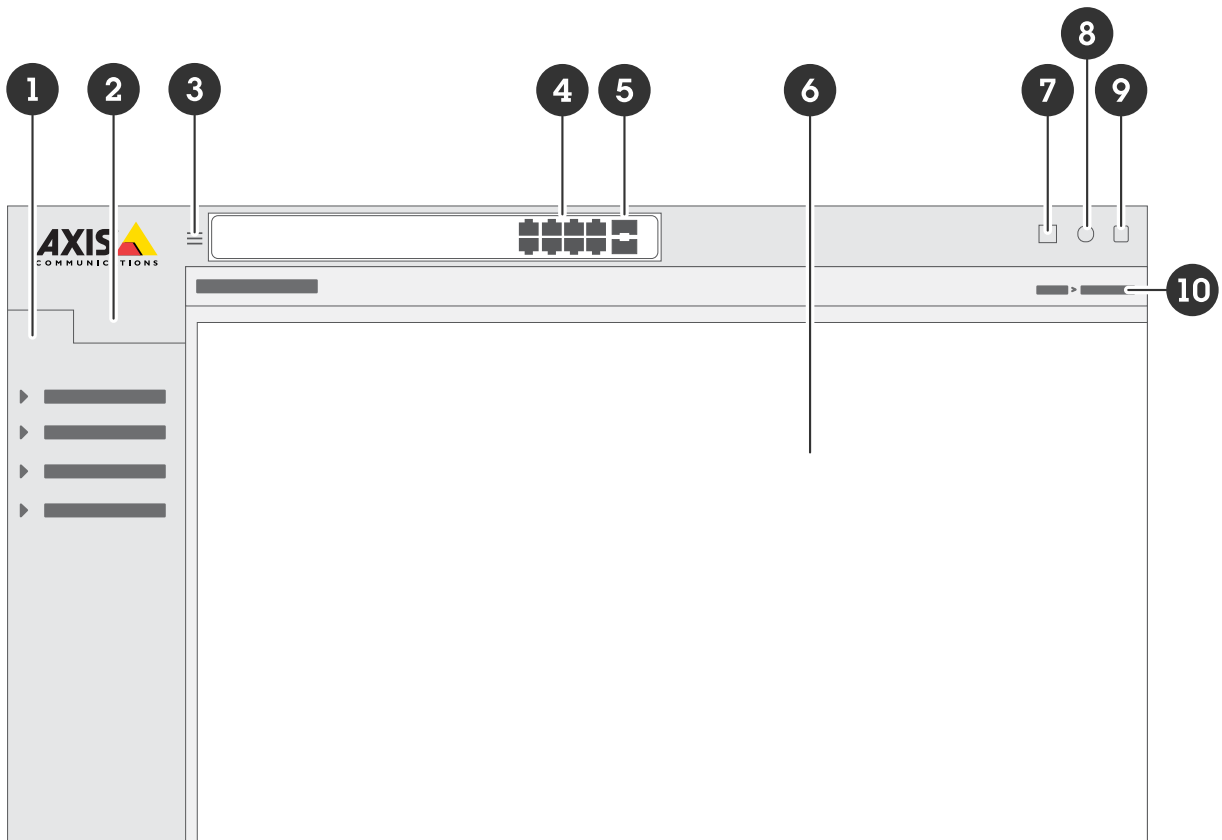
1 Basic features
2 Advanced features

3 *Toggle button - hide or unhide the menu*
4 *RJ45 port status indicators*
5 *SFP port status indicators*
6 *Content area for basic/advanced features*
7 *Save button - save your settings to the start-up configuration file*
8 *Help button - access the context-sensitive built-in help*
9 *Log out button*
10 *Menu path*

Get to know your product's built-in help

Your product has a context-sensitive built-in help. The help provides more detailed information on the product's basic and advanced features and their settings. To access the help content for any given view, click . Some help content also includes clickable terms and acronyms that are explained in more detail in the built-in glossary.

Access devices in your product's network

Topology view

The topology view allows you to remotely access, manage and monitor all discovered IP devices in your product's network, for example via a tablet or a smart phone. To display the discovered IP devices in a graphical network, go to **Basic > Topology View**.
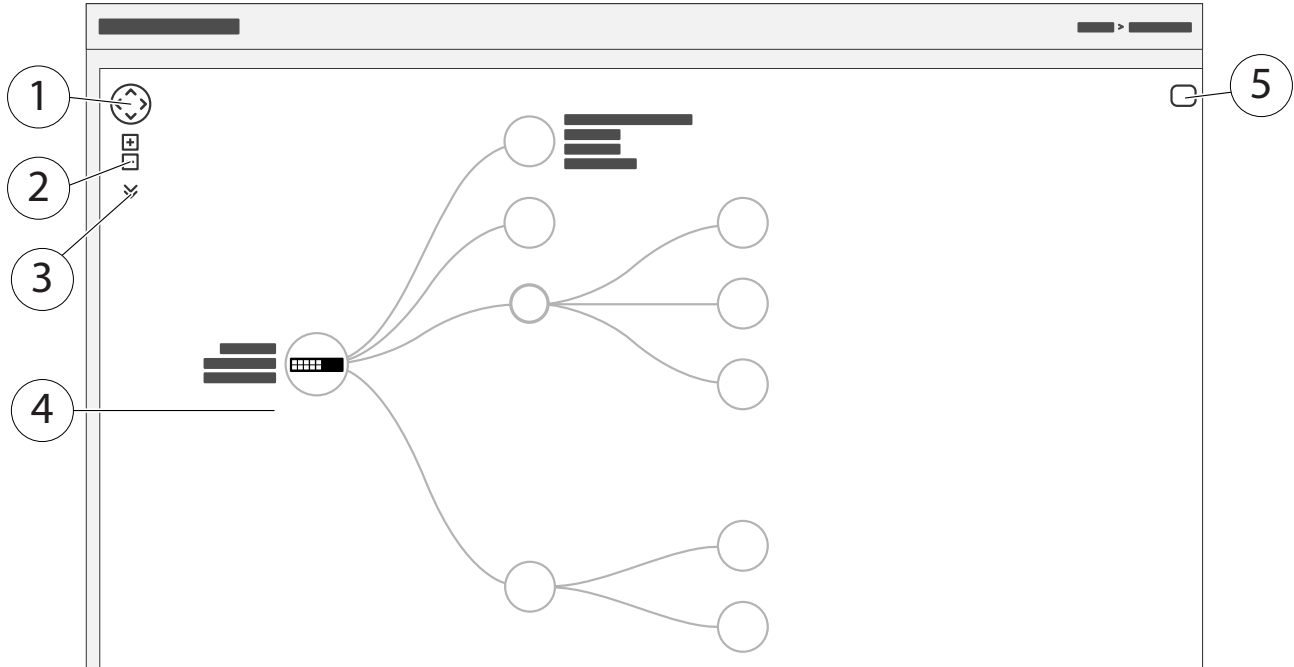
1 Arrow button to move the view in four directions. You can also use the mouse to drag and drop the topology into position.
2 Zoom in and zoom out buttons. You can also use the scroll wheel on the mouse to zoom in and out.
3 Drop-down button to access and change device information to be displayed in the view.
4 Content area for devices discovered in the network.
5 Settings button to access and change device, group and configuration information.

When you click a device icon in the topology view, a device console is opened to allow you access to:

- dashboard console with device information and available device-specific actions, such as login, diagnostics, find switch, PoE configuration and reboot

- notification console with information on alarms and logs triggered by events

- monitor console with information on device traffic

Setup examples

Note

When you configure or update the settings of your switch, make sure to click
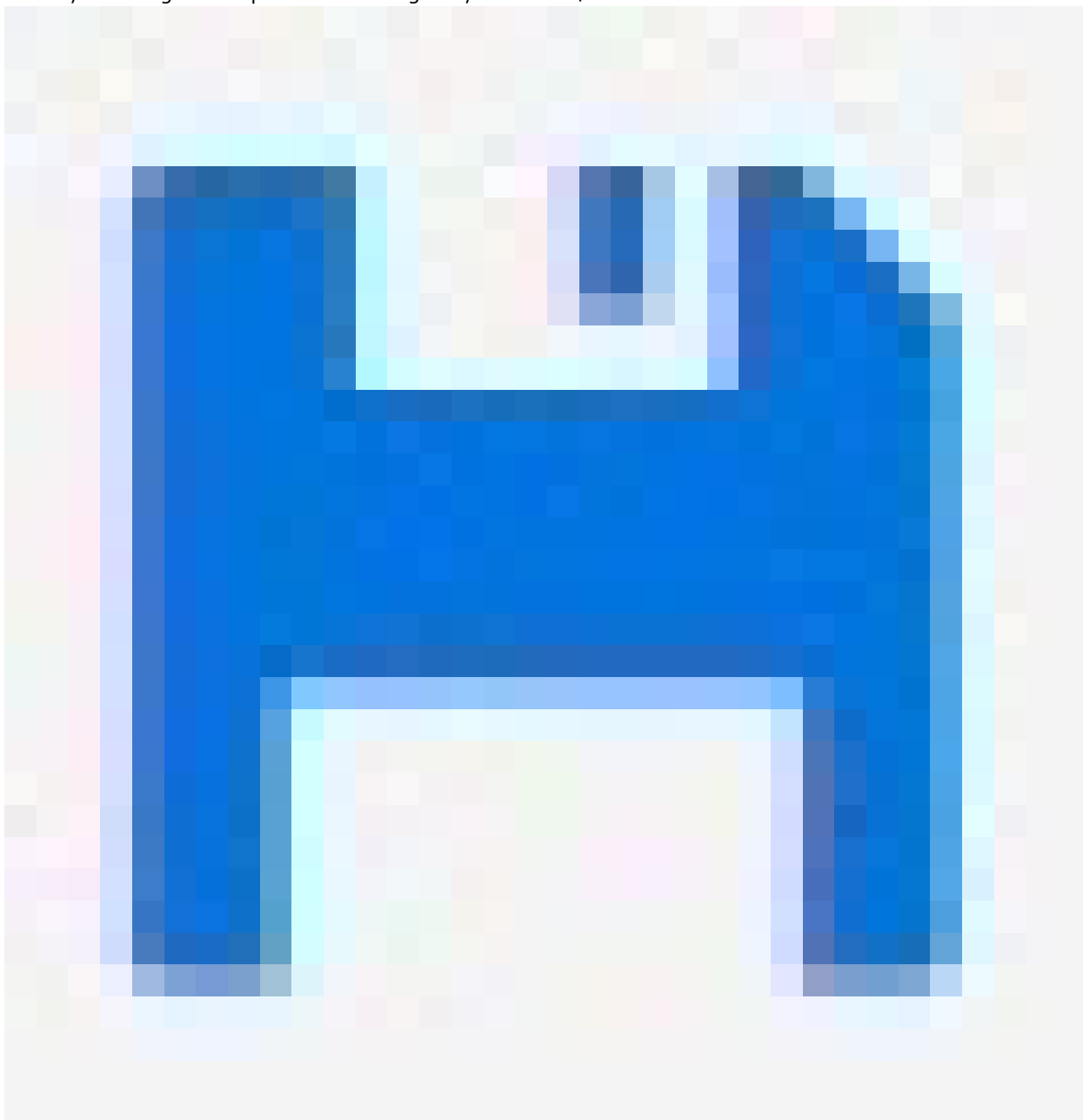
to save the updates to the start-up configuration file.

The start-up configuration file remains when you restart or reboot the switch, but not after you reset the switch to its factory default settings.

Set up access VLANs

VLANS are typically used on large networks to create multiple broadcast domains, but they can also be used to segregate network traffic. For example, video traffic can be part of one VLAN, and other network traffic can be part of another.

1. Go to **Advanced > VLANs > Configuration**.

2. Under **Global VLAN Configuration**, enter the VLANs you want to create to the **Allowed Access VLANs** field. For example, if you enter, 1, 10-13, 200, 300, the following VLAN IDs will be created: 1, 10, 11, 12, 13, 200 and 300.

3. To assign a created VLAN ID to a given port under **Port VLAN Configuration**, enter the ID to the **Port VLAN** field.

4. Click **Apply**.

Reserve an IP address based on MAC address

1. Go to **Advanced > DHCP > Server > Pool**.

2. Click **Add New Pool**.

3. Enter a name for the pool, for example 00:01:02:03:04:05, and click **Apply**. No spaces are allowed in the name.

4. To access the pool settings, click the added name.

5. In the **Type** drop-down menu, select **Host**.

6. Enter other required settings, such as **IP** address, **Subnet Mask** and **Default Router**.

7. In the **Client Identifier** drop-down menu, select **MAC**.

8. In the **Hardware Address** field, enter the MAC address of the device.

9. Click **Apply**.

Set a PoE schedule

If you have a certain time frame where you want the switch to provide PoE, for example, to your cameras, it can be useful to create a PoE schedule and assign it to one or more PoE ports. You can create up to 16 PoE schedule profiles.

To create a PoE schedule:
1. Go to **Advanced > PoE > Schedule Profile**.

2. In the **Profile** drop-down menu, select a number for the profile.

3. Change the default profile name as needed.

4. To specify when you want PoE to switch on, select hours (**HH**) and minutes (**MM**) in the **Start Time** drop-down menu.

5. To specify when you want PoE to switch off, select hours (**HH**) and minutes (**MM**) in the **End Time** drop-down menu.

– If you want to use the same schedule for all days of the week, select the start and end times on the **Week Day** row marked with an asterisk (*****).

– If you want to use the same schedule for certain days of the week only, select the start and end times for selected days on the respective **Week Day** rows.

6. Click **Apply**.

To assign the created PoE schedule to one or more PoE ports:
1. Go to **Basic > Basic Settings > PoE > Power Management**.

2. Under **PoE Port Configuration** in the **PoE Schedule** drop-down menu, select the number of the specified PoE schedule profile.

– If you want to assign the same profile for all ports, select the profile number on the **Port** row marked with an asterisk (*****).

– If you want to assign the same profile for certain ports only, select the profile numbers for selected ports on the respective **Port** number rows.

3. Click **Apply**.

Check connection status via PoE auto checking

You can use PoE auto checking if you want to periodically check the connection status between your switch and the PoE enabled network device connected to it. If, during auto checking, the network device does not respond to the switch, the switch will automatically restart the PoE port the network device is connected to.

To enable auto checking via the topology view:
1. Go to **Basic > Topology View**.

2. To open the **Dashboard** console of your switch, click the switch icon.

3. Click **PoE Config**.

4. In the **PoE Auto Checking** drop-down menu, select **Enable**.

To configure the auto checking parameters:
1. Go to **Advanced > PoE > Auto Checking**.

2. In the **Ping IP Address** field, enter the IP address of the device that is connected to the port you want to assign auto checking for.

3. Enter the other needed parameters, for example:
- **Port**: 1

- **Ping IP Address**: 192.168.0.90

- **Startup Time**: 60

- **Interval Time (sec)**: 30

- **Retry Time**: 3

- **Failure Action**: Reboot Remote PD

- **Reboot time (sec)**: 15

4. Click **Apply**.

Use the console port

The switch has a serial console port that allows you to manage the switch through the command-line interface.

1. Connect a console cable to the console connector on the switch.

2. Connect the console cable to the USB port on your computer.

3. On your computer, open a teminal emulator to manage the switch.
   Use these port settings:
   - Baud rate: 115200

   - Stop bits: 1

   - Data bits: 8

   - Parity: N

   - Flow control: None

Create redundant links between switches for network redundancy

If network redundancy is required, you can create redundant links between switches using spanning tree configuration.

Example:
In this example, the switches AXIS D8248 (1), AXIS T8508 (2), and AXIS T8516 (3) are connected by a redundant link, and no extra VLANS. If any of the uplinks between the switches should fail, the redundant link is activated and provides network connectivity.
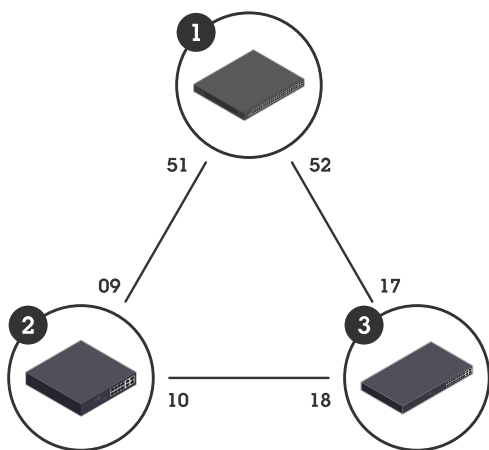
Device name	Model name	CIST ports
Switch - 01	AXIS D8248	51, 52
Switch - 02	AXIS T8508	9, 10
Switch - 03	AXIS T8516	17, 18

To create a redundant link on each switch's web page:
1. Go to **Advanced > Spanning Tree > Configuration > Bridge Settings**.

2. Under **Basic Settings** in the **Protocol Version** drop-down menu, select **RSTP**, and click **Apply**.

3. Go to **Advanced > Spanning Tree > Configuration > CIST Port**.

4. Under **CIST Normal Port Configuration**, make sure that **STP Enabled** is selected for the switch's ports as follows:

– Switch – 01: ports 51 and 52

– Switch – 02: ports 9 and 10

– Switch – 03: ports 17 and 18

5. Click **Apply**.

Note

If you want to make sure that a certain port is used as a primary communication link, enter **Path Cost** for that port under **CIST Normal Port Configuration**. If not specified, the switch selects the port automatically. For example, if you want to use port 17 as the primary communication link, enter **Path Cost** value 10 to port 52 and **Path Cost** value 50 to port 18.

Use VAPIX to turn PoE on or off for a port

You can use the following commands in VAPIX to turn PoE on or off for a specific port:

- Turn PoE on:
  ```
  http://[IP address of the switch]/axis-cgi/nvr/poe/setportmode.cgi?
  port=[number of the port on the switch]&enabled=yes&schemaversion=1
  ```
- Turn PoE off:
  ```
  http://[IP address of the switch]/axis-cgi/nvr/poe/setportmode.cgi?
  port=[number of the port on the switch]&enabled=no&schemaversion=1
  ```

Connect a 1Gbps SFP module

1. Go to **Advanced > Ports > Configuration**.

2. For the port that you connected the module to (49, 50, 51 or 52), set **Configured** to **1 Gbps FDX**.
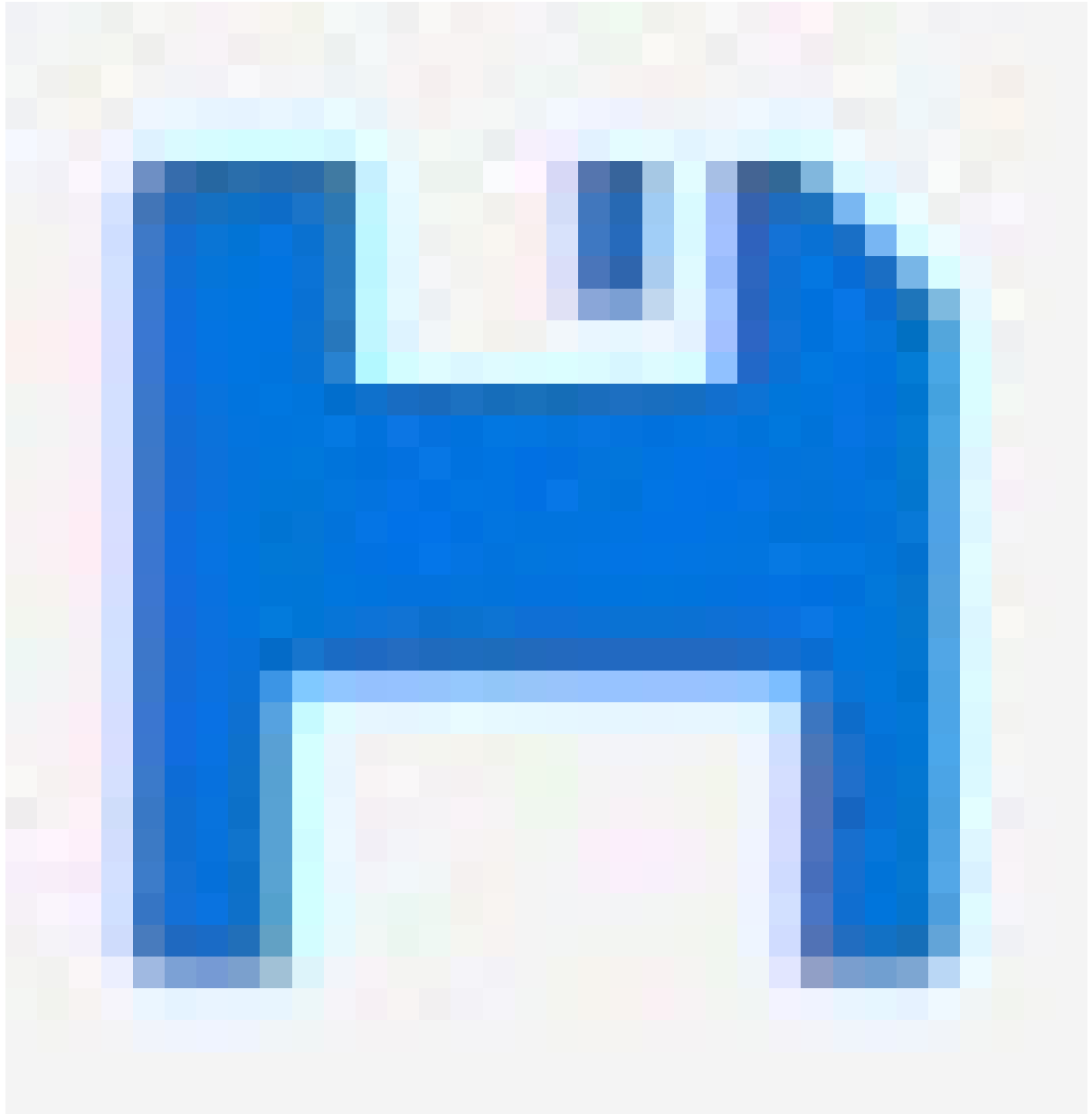
Note

If you set the port to **Auto**, both SFP and SFP+ will work.

If you set the port to **Auto**, both SFP and SFP+ will work.

Maintain your system

Restart the product

Note

- The traffic through the product is affected during restart.

- Before you restart the device, click

  to save your settings to the start-up configuration file.

1. Go to **Advanced > Maintenance > Restart Device**.

2. If you want to keep the power on for connected PoE devices during restart, select **Non-Stop PoE**.
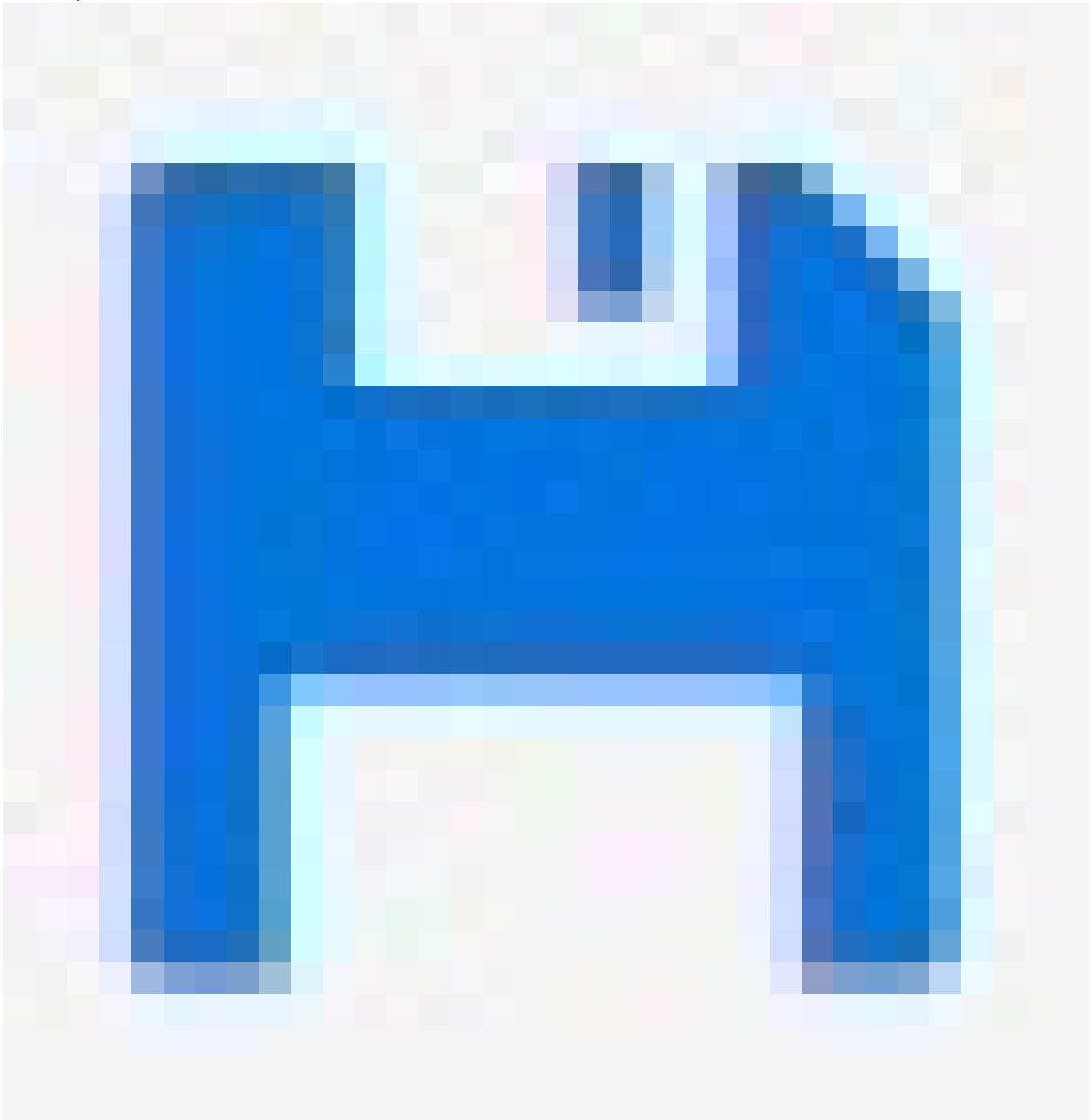
3. Click **Yes**.

After restart, the product will boot normally.

For information about how to restart the product using the mode/reset button, see .

Set a reboot schedule

Note
>
> Before you set a reboot schedule, click

> to save your settings to the start-up configuration file.

1. Go to **Advanced > Maintenance > Reboot Schedule**.

2. Set **Mode** to **Enabled**.

3. Select the weekday and time for reboot.

4. Click **Apply**.

Restore the product to factory default values

Important
>
> Any saved configuration will be restored to factory default values.

1. Go to **Advanced > Maintenance > Factory Defaults**.

2. If you want to keep the current IP settings, select **Keep IP setup**.

3.   Click **Yes**.

For information about how to restore the product to factory default values using the mode/reset button, see .

Upgrade the device software

Important
   The software upgrade takes up to 10 minutes. Do not restart or power off the device during this time.

Note
   The traffic through the product is affected during upgrade.

1.   Go to **Advanced > Maintenance > Device Software > Software Upgrade**.

2.   To select the software file from a specified location, click **Browse**.

3.   If you want to keep the power on for connected PoE devices during upgrade, select **Non-Stop PoE**.

4.   Click **Upload**.

After software upgrade, the product will restart normally.

Revert to alternate software image

You can choose to use the alternate (backup) software image instead of the active (primary) software image in the product. Information tables on both images are shown under **Advanced > Maintenance > Device Software > Software Selection**.

Note
   • If the active image is already set as the alternate image, only the **Active Image** table is shown, and the **Activate Alternate Image** button is disabled.

   • If the alternate image is already set as the active image (either manually or due to a corrupted primary image), and a new software image is uploaded to the product, the new image will automatically be set as the active image.

   • Software version and date information may be empty for older software releases. This is normal.

To set the alternate image as the active image:
1.   Go to **Advanced > Maintenance > Device Software > Software Selection**.

2.   Click **Activate Alternate Image**.

Specifications

Product overview
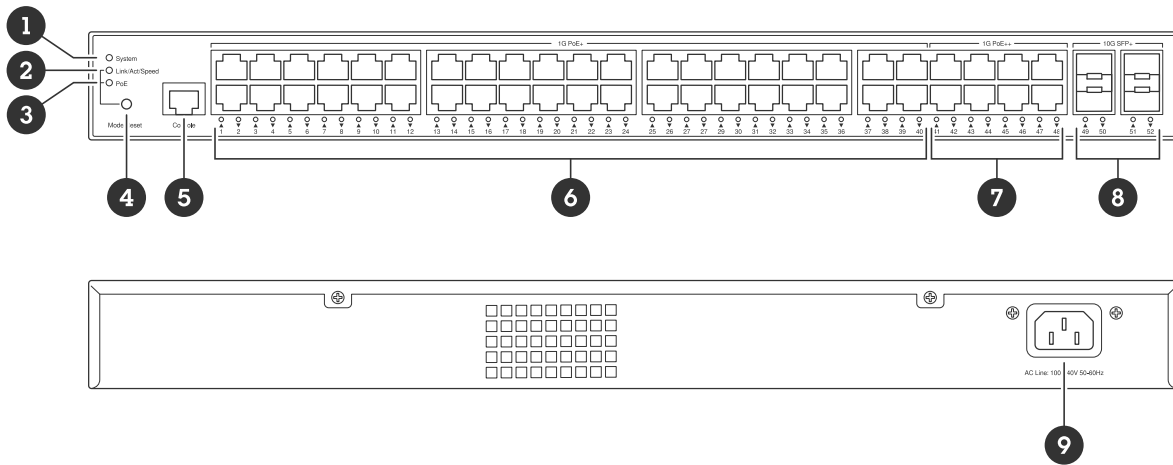
1   System LED
2   Link/act/speed LED
3   PoE LED
4   Mode/reset button
5   Console port
6   PoE+ ports x40
7   PoE++ ports x8
8   SFP+ ports x4
9   Power connector

Buttons

Mode/reset button

To restart the switch:
1.   Make sure the switch is started.

2.   Press and hold the mode/reset button.

3.   As soon as the LED turns off, release the button.

To reset the switch to factory default settings:
1.   Make sure the switch is started.

2.   Press and hold the mode/reset button.

3.   When the LEDs light up, release the button.

LED indicators

System LED

LED	Color	Indication
System	Green (lit)	The switch is powered and ready.
	Green (blinking)	POST running
	N/A	The switch doesn't receive any power.
	Red (lit)	The switch has detected an abnormal state, for example an exceeded operating temperature.

	Red (blinking)	POST running

Mode LED

LED	Color	Indication
Link/Act/Speed	Green (lit)	Change the port LED to Link/Act/Speed mode
	N/A	The port LED has been changed to another mode
PoE	Green (lit)	Change the port LED to PoE mode
	N/A	The port LED has been changed to another mode

Port status LEDs – Link/Act/Speed mode

LED	Color	Indication
PoE+ and PoE++ ports (1–48)	Green (lit)	The port is enabled and has established a link to a connected device. The connection speed is 1000Mbps.
	Green (blinking)	The port is sending or receiving data. The connection speed is 1000Mbps.
	Amber (lit)	The port is enabled and has established a link to a connected device. The connection speed is 10/100Mbps.
	Amber (blinking)	The port is sending or receiving data. The connection speed is 10/100Mbps.
	N/A	The port has no active network cable connected, or has not established a link to a connected device. It's also possible that the port has been disabled through the web interface.
SFP+ ports (49–52)	Blue (lit)	The port is enabled and has established a link to a connected device. The connection speed is 10Gbps.
	Blue (blinking)	The port is transmitting/receiving packets. The connection speed is 10Gbps.
	Green (lit)	The port is enabled and has established a link to a connected device. The connection speed is 1000/100Mbps.

	Green (blinking)	The port is transmitting/receiving packets. The connection speed is 1000/100Mbps.
	N/A	The port has no active fiber optic cable connected, or has not established a link to connected device. It's also possible that the port has been disabled through the web interface.

Port status LEDs – PoE mode

LED	Color	Indication
PoE+ and PoE++ ports (1–48)	Green (lit)	The port is enabled and supplies power to the connected device.
	Amber (lit)	PoE failure has been detected.
	Amber (blinking)	PoE overload has been detected.
	N/A	The port has no active network cable connected, or is not connected to a PoE device. It's also possible that the port has been disabled through the web interface.

Troubleshooting

Technical issues, clues, and solutions

If you can't find what you're looking for, try the troubleshooting section at *axis.com/support* or in the *Axis Network Switches Configuration Guide.*

System LED	
The system LED is off	If the system LED is off, the switch doesn't receive any power. Try the following: - Check that the power cord is connected properly to the switch and the AC outlet. - Unplug the power connector from the switch, and connect it again. - Try connecting the power cord to a different AC outlet.
The system LED is green but **Total PoE Available** says "0 W"	Try to unplug the power connector from the switch, and connect it again.
The system LED is red	If the system LED is red, the switch has detected an issue. Check the log in the switch's web interface to discover the source of the issue.

Port status LED	
The port status LED is off	If the port status LED is off, there is an issue with the connection to the port. Try the following: - Check that the cable of the connected device has been inserted properly and locked in the port, both for the switch and for the connected device. - Check that the connected device works properly. - Try using a different cable. - Try to connect the cable to a different port. - Check that the port hasn't been disabled in the switch's web interface.

Contact support

If you need more help, go to *axis.com/support.*