AXIS T85 PoE+ Network Switch Series

AXIS T8508 PoE+ Network Switch

AXIS T8516 PoE+ Network Switch

AXIS T8524 PoE+ Network Switch

User Manual
# AXIS T85 PoE+ Network Switch Series

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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 provides information mainly on how to:

- 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 Get to know your product’s built-in help on page 8.
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Solution overview

AXIS T8524

10x

2x

2x

2x

1x

AXIS T8508

4x

2x

Fiber

Ethernet
AXIS T85 PoE+ Network Switch Series

Product overview

AXIS T8508 PoE+ Network Switch

1. LEDs (front panel)
2. Mode/reset button
3. RJ45 ports (PoE+) x8
4. RJ45 ports (non-PoE) x2
5. SFP slots x2
6. Power connector
7. Product label

AXIS T8516 PoE+ Network Switch

1. Bracket
2. LEDs (front panel)
3. Mode/reset button
AXIS T85 PoE+ Network Switch Series

Product overview

4 RJ45 PoE ports 1-16
5 RJ45 port 17-18
6 SFP slot 17-18
7 Power connector
8 Product label

AXIS T8524 PoE+ Network Switch

1 Bracket
2 LEDs (front panel)
3 Mode/reset button
4 RJ45 ports (PoE+) x24
5 RJ45 ports (non-PoE) x2
6 SFP slots x2
7 Power connector
8 Product label
AXIS T85 PoE+ Network Switch Series

Get started

Access the product from a browser

Note
Install, connect and power up the product as specified in its Installation Guide.

1. Use AXIS IP Utility or AXIS Camera Management to find the product on the network. For information on how to discover and assign an IP address, go to www.axis.com/support

2. Enter the username and password provided on the product label.

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.
AXIS T85 PoE+ Network Switch Series

Get started

Get to know your product’s web page

1 Basic features
2 Advanced features
3 Toggle button - switch between windowed and full screens
4 RJ45 port (PoE+) status indicators
5 RJ45 port (non-PoE) status indicators
6 SFP port status indicators
7 Content area for basic/advanced features
8 Save button - save the start-up configuration
9 Help button - access the context-sensitive built-in help
10 Log out button
11 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
2. Zoom in and zoom out buttons
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**

**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.

**Create redundant links between switches for network redundancy**

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

In this example, there are 3 switches 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.

<table>
<thead>
<tr>
<th>Device Name</th>
<th>Model Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switch - 01</td>
<td>AXIS T8524</td>
</tr>
<tr>
<td>Switch - 02</td>
<td>AXIS T8516</td>
</tr>
<tr>
<td>Switch - 03</td>
<td>AXIS T8508</td>
</tr>
</tbody>
</table>

To create a redundant link on each switch’s web page:

1. Go to Advanced > Spanning Tree > Configuration > Bridge Settings.
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 25 and 26
   - Switch – 02: ports 17 and 18
   - Switch – 03: ports 9 and 10
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 chooses the port automatically. For example, if you want to use port 17 as the primary communication link, enter Path Cost value 10 to port 25 and Path Cost value 50 to port 18.

To save the start-up configuration, click on the product’s web page. See Get to know your product's web page on page 8.

**Reserve an IP address based on MAC address**
1. Go to Advanced > DHCP Server > Configuration > 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 F8-16-54-B2-35-63.
9. Click Apply.

To save the start-up configuration, click on the product’s web page. See Get to know your product's web page on page 8.

**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 > Configuration > 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.
**Setup examples**

- 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 Advanced > PoE > Configuration > 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 > Configuration > 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.
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**Maintenance**

**Restart the product**

*Note*

Any configuration files or scripts you have saved in the product are available after restart.

1. Go to Advanced > Maintenance > Restart Device.
2. If you want to simulate a power-on (cold restart), select **Force Cool Restart**. This will impact the traffic routed through the product.
3. Click Yes.

After restart, the product will boot normally.

**Set a reboot schedule**

*Note*

Any configuration files or scripts you have saved in the product are available after reboot.

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 configuration files or scripts you have saved in the product are 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.

*Note*

For more information on how to restore the product to factory default values using the mode/reset button, see the product’s Installation Guide.

**Upgrade the product firmware**

*Important*

Web access is not available during firmware upgrade. The firmware upgrade takes about one minute, and the system LED blinks green during the upgrade process. Do not restart or power off the device during this time.

1. Go to Advanced > Maintenance > Firmware > Firmware Upgrade.
2. To select the firmware file from a specified location, click **Browse**.
3. If you want to simulate a power-on (cold restart) after firmware upgrade, select **Force Cool Restart**. This will impact the traffic routed through the product.
4. Click Upload.

After firmware upgrade, the product will restart normally.

**Revert to alternate firmware image**

You can choose to use the alternate (backup) firmware image instead of the active (primary) firmware image in the product. Information tables on both images are shown under Advanced > Maintenance > Firmware > Firmware 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 corrupted primary image), and a new firmware image is uploaded to the product, the new image will automatically be set as the active image.
- Firmware version and date information may be empty for older firmware releases. This is normal.

To set the alternate image as the active image:

1. Go to Advanced > Maintenance > Firmware > Firmware Selection.
2. Click Activate Alternate Image.
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Specifications

To find the latest version of the product’s datasheet, go to the product page on axis.com and locate Support & Documentation.

LED Indicators

System LED

<table>
<thead>
<tr>
<th>LED</th>
<th>Color</th>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>Green (lit)</td>
<td>The switch is powered ON.</td>
</tr>
<tr>
<td>N/A</td>
<td></td>
<td>The switch is not receiving power.</td>
</tr>
<tr>
<td>Red (lit)</td>
<td></td>
<td>An abnormal state, such as exceeding operating temperature range, has been detected in the switch.</td>
</tr>
</tbody>
</table>

Mode LED

<table>
<thead>
<tr>
<th>LED</th>
<th>Color</th>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Link/Act/Speed</td>
<td>Green (lit)</td>
<td>The RJ45/SFP Port Status LEDs are displaying link status and network activity of each port, with connection speed of 1000Mbps.</td>
</tr>
<tr>
<td></td>
<td>Amber (lit)</td>
<td>The RJ45/SFP Port Status LEDs are displaying link status and network activity of each port, with connection speed of 10/100Mbps.</td>
</tr>
<tr>
<td>PoE</td>
<td>Green (lit)</td>
<td>The RJ45 Port Status LEDs are displaying PoE powering status of each port.</td>
</tr>
</tbody>
</table>

By pressing the Mode/Reset button in less than 2 seconds to change LED modes (Link/Act/Speed Mode or PoE Mode), users can check the port status by reading the LED behaviors in the tables below.

Link/Act/Speed Mode LED

<table>
<thead>
<tr>
<th>LED</th>
<th>Color</th>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>RJ45 ports</td>
<td>Green (lit)</td>
<td>The port is enabled and established a link to connected device, and the connection speed is 1000Mbps.</td>
</tr>
<tr>
<td></td>
<td>Green (blink)</td>
<td>The port is transmitting/receiving packets, and the connection speed is 1000Mbps.</td>
</tr>
<tr>
<td></td>
<td>Amber (lit)</td>
<td>The port is enabled and established a link to connected device, and the connection speed is 10/100Mbps.</td>
</tr>
<tr>
<td></td>
<td>Amber (blink)</td>
<td>The port is transmitting/receiving packets, and the connection speed is 10/100Mbps.</td>
</tr>
<tr>
<td></td>
<td>N/A</td>
<td>The port has no active network cable connected, or it is not established a link to connected device. Otherwise, the port may have been disabled through the product user interface.</td>
</tr>
</tbody>
</table>
### Specifications

<table>
<thead>
<tr>
<th>SFP ports</th>
<th>Color</th>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Green (lit)</td>
<td>The port is enabled and established a link to connected device, and the connection speed is 1000Mbps.</td>
</tr>
<tr>
<td></td>
<td>Green (blink)</td>
<td>The port is transmitting/receiving packets, and the connection speed is 1000Mbps.</td>
</tr>
<tr>
<td></td>
<td>Amber (lit)</td>
<td>The port is enabled and established a link to connected device, and the connection speed is 100Mbps.</td>
</tr>
<tr>
<td></td>
<td>Amber (blink)</td>
<td>The port is transmitting/receiving packets, and the connection speed is 100Mbps.</td>
</tr>
<tr>
<td></td>
<td>N/A</td>
<td>The port has no active network cable connected, or it is not established a link to connected device. Otherwise, the port may have been disabled through the product user interface.</td>
</tr>
</tbody>
</table>

### PoE Mode LED

<table>
<thead>
<tr>
<th>LED</th>
<th>Color</th>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>RJ45 ports</td>
<td>Green (lit)</td>
<td>The port is enabled and supplying power to connected device.</td>
</tr>
<tr>
<td></td>
<td>Amber (lit)</td>
<td>An abnormal state, such as overload status, has been detected in the product.</td>
</tr>
<tr>
<td></td>
<td>N/A</td>
<td>The port has no active network cable connected, or it is not connected a PoE PD device. Otherwise, the port may have been disabled through the product user interface.</td>
</tr>
</tbody>
</table>