

AXIS Camera Station S1232 Rack Recording Server

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About your device

AXIS Camera Station S12 Recorder series consist of out-of-the-box ready rack servers and workstations validated for reliable high-definition surveillance up to 4K. For quick and easy installation, the recorder series is preconfigured and preloaded with AXIS Camera Station Pro video management software including licenses plus all necessary system software. The system configuration can easily be imported from AXIS Site Designer, and AXIS Camera Station Pro lets you take full advantage of Axis wide range of video surveillance devices. With enterprise-grade hard disks, operating system stored on solid-state drive, the recorder series provides high-performance and reliability for your system.

Get started

The standard workflow to configure an AXIS Camera Station Pro recording server is:

1. *Install your device.*
2. Initial Windows® setup: After installing your device, you are guided through a few steps to set up the region, language, keyboard layout, an administrator account and its password.
3. Initial Axis recorder setup: After the initial Windows® setup, AXIS Recorder Toolbox is opened and you are guided through a few steps to set up basic and necessary settings, for example, computer name, date and time, and network. See *Initial Axis recorder setup, on page 7*.
4. Configure Windows®. We recommend to:
 - Update Windows® to the latest version. See *Update Windows®, on page 19*.
 - Create a standard user account. See *Create a user account, on page 11*.
5. Update AXIS Camera Station Pro to the latest version.
 - If your system is online: open the AXIS Recorder Toolbox app and click **Update AXIS Camera Station Pro**.
 - If your system is offline: go to *axis.com* and download the latest version.
6. Start the AXIS Camera Station Pro client.
7. *Connect to AXIS Camera Station Pro server.*
8. *Configure AXIS Camera Station Pro, on page 7.*

Install your device

Before installation

- Prepare additional accessories used for installation: monitor, mouse, keyboard and network cable.
- Note that the power cable to the wall is not included in the box.
- Understand the usage of different user accounts.

The following table lists the user accounts that can be used for installation, configuration and operation of your Axis system.

User account	Description	Note
MyAxis	Used to download the latest software, access the license system, Axis Secure Remote Access, and System Health Monitoring.	Registered from <i>my.axis.com</i> .
Windows®		
Windows® administrator	Administrator privileges in Windows®. We recommend you do not use it as AXIS Camera Station Pro administrator.	Created during initial Windows® setup.
Windows® user with AXIS Camera Station Pro administrator privileges	A Windows® user granted with administrator privileges in AXIS Camera Station Pro to be used by system integrator or system administrator for configuration or troubleshooting.	Created in Windows® settings.
Windows® user with AXIS Camera Station Pro operator or viewer privileges	A Windows® user granted with operator or viewer privileges in AXIS Camera Station Pro.	Created in Windows® settings.
Hardware management		
iDRAC	Used to access the iDRAC (Integrated Dell Remote Access Controller) tool.	Username: root Password: Printed on the back of the information tag.
Device		
Device administrator	Used by the administrator to access the camera from the video management system or device webpage.	Created from the device webpage or when you add the device to AXIS Camera Station Pro.

Configure your device

Initial Axis recorder setup

After you have configured Windows®, AXIS Recorder Toolbox is opened automatically and you are guided through the first-time configuration setup assistant. In this setup assistant, you can configure several basic and necessary settings before you manage your device in AXIS Recorder Toolbox.

1. Select **Light** or **Dark** theme and click **Next** (if it's available for your product).
2. Change the computer name if you want and click **Next**.
3. Under **Date and time**, configure the following settings and click **Next**.
 - Select a time zone.
 - To set up an NTP server, select **NTP server** and enter the NTP server address.
 - To set manually, select **Manual** and select a date and time.
4. Under **Network settings**, configure the following settings and click **Next**.
 - **Use automatic IP settings (DHCP)** and **Use automatic DNS settings** are turned on by default.
 - If your device is connected to a network with a DHCP server, the assigned IP address, subnet mask, gateway, and preferred DNS are automatically displayed.
 - If your device is not connected to a network or there is no DHCP server available, enter the IP address, subnet mask, gateway, and preferred DNS manually depending on the network requirements.
5. Click **Finish**. If you have changed the computer name, AXIS Recorder Toolbox will prompt you to restart the device.

Configure AXIS Camera Station Pro

Before you start:

- Configure your network depending on your installation. See *Network configuration*.
- Configure your server ports if needed. See *Server port configuration*.
- Consider security issues. See *Security considerations*.

After necessary configurations, you can start to work with AXIS Camera Station Pro:

1. *Start the video management system*
2. *Add devices*
3. *Configure recording method, on page 8*
4. *View live video, on page 8*
5. *View recordings, on page 8*
6. *Add bookmarks, on page 8*
7. *Export recordings, on page 8*
8. *Play and verify recordings in AXIS File Player, on page 9*

Start the video management system

Double-click the AXIS Camera Station Pro client icon to start the client. When you start the client for the first time, it attempts to log in to the AXIS Camera Station Pro server installed on the same computer as the client.

You can connect to multiple AXIS Camera Station Pro servers in different ways.

Add devices

The first time you start AXIS Camera Station S1232 Rack Recording Server, the **Add devices** page opens and searches the network for devices to add.

1. Select the devices you want to add from the list. If you can't find a device, click **Manual search** or type to filter.
2. Click **Add**.
3. Click **Close** to skip configuration and continue later. To continue with the configuration now:
 - 3.1. Choose **Quick configuration** or **Site Designer configuration**. See for more information.
 - 3.2. Select **Add image overlay for date, time, and text** to add overlays to any Axis cameras that don't already have one.
 - 3.3. Click **Next**.
 - 3.4. Select your **Recording method** preference.
 - 3.5. Click **Next**.
 - 3.6. Choose your **Retention time** and **Recording storage**, and click **Finish** to apply the configuration.

Configure recording method

1. Go to **Configuration > Recording and events > Recording method**.
2. Select a camera.
3. Turn on **Motion detection**, or **Continuous**, or both.
4. Click **Apply**.

View live video

1. Open a **Live view** tab.
2. Select a camera to view its live video.

View recordings

1. Open a **Recordings** tab.
2. Select the camera you want to view recordings from.

Add bookmarks

1. Go to the recording.
2. In the timeline, zoom in and out and move the timeline to put the marker at your desired position.
3. Click .
4. Enter the bookmark name and description. Use keywords to make the bookmark easy to find.
5. Select **Prevent recording deletion** to lock the recording.

Note

To unlock the recording, clear **Prevent recording deletion** or delete the bookmark.

6. Click **OK** to save the bookmark.

Export recordings

1. Open a **Recordings** tab.
2. Select the camera you want to export recordings from.

3. Click  to display the selection markers.
4. Drag the markers to include the recordings that you want to export.
5. Click  to open the **Export** tab.
6. Click **Export...**

Play and verify recordings in AXIS File Player

1. Go to the folder with the exported recordings.
2. Double-click **AXIS File Player**.
3. Click  to show the recording's notes.
4. To verify the digital signature:
 - 4.1. Go to **Tools > Verify digital signature**.
 - 4.2. Select **Validate with password** and enter your password.
 - 4.3. Click **Verify** to see the verification results.

Note

- A digital signature is different from signed video. Signed video lets you trace a recording back to the camera it came from, so you can verify it wasn't tampered with. See *Signed video* and the camera's user manual for more information.
- If stored files don't have any connection with an AXIS Camera Station database (non-indexed files), you need to convert them to make them playable in AXIS File Player. Contact Axis Technical support for help converting your files.

Network configuration

Configure proxy or firewall settings before using AXIS Camera Station S1232 Rack Recording Server if the client, server, and connected network devices are on different networks.

Client proxy settings

If a proxy server is between the client and the server, configure the proxy settings in Windows on the client computer. Contact Axis support for more information.

Server proxy settings

If the proxy server is between the network device and the server, you must configure the proxy settings in Windows on the server. Contact Axis support for more information.

NAT and Firewall

When a NAT or firewall separates the client and the server, configure it to ensure that the HTTP port, TCP port, and streaming port specified in AXIS Camera Station S1232 Rack Recording Server Service Control can pass through. Contact your network administrator for help.

Server port configuration

The AXIS Camera Station S1232 Rack Recording Server server uses ports 55752 (HTTP), 55754 (TCP), 55756 (mobile communication), and 55757 (mobile streaming) for communication between the server and the client. You can change the ports in AXIS Camera Station Service Control if required.

Security considerations

To prevent unauthorized access to cameras and recordings:

- Use strong passwords for all network devices (cameras, video encoders, and auxiliary devices).

- Install the AXIS Camera Station S1232 Rack Recording Server server, cameras, video encoders, and auxiliary devices on a secure network, separate from the office network. You can install the AXIS Camera Station S1232 Rack Recording Server client on a computer on another network, for example, a network with internet access.
- Make sure all users have strong passwords.

License a system online

To use automatic licensing, you must register your system and connect it to an organization.

1. Go to **Configuration > Licenses > Management**.
2. Make sure **Automatic licensing** is on.
3. Click **Register...**
4. Sign in using your My Axis account and follow the onscreen instructions.
5. Click **Go to AXIS License Manager** to manage your licenses. Read the *My Systems user manual on help.axis.com* for more information.

License a system that's offline

To license your system manually:

1. Go to **Configuration > Licenses > Management**.
2. Turn off **Automatic licensing**.
3. Click **Export system file...** and save the file to your computer.

Note

You must have an internet connection to access AXIS License Manager. If your client computer doesn't have internet, copy the system file to a computer that does.

4. Open *AXIS License Manager*.
5. In *AXIS License Manager*:
 - 5.1. Select the correct organization, or create one if you haven't already. Read the *My Systems user manual on help.axis.com* for more information.
 - 5.2. Go to **System setup**.
 - 5.3. Click **Upload system file**.
 - 5.4. Click **Upload system file** and select your system file.
 - 5.5. Click **Upload system file**.
 - 5.6. Click **Download license file**.
6. Go back to the AXIS Camera Station S1232 Rack Recording Server client.
7. Click **Import license file...** and select your license file.
8. Click **Go to AXIS License Manager** to manage your licenses.

Manage local Windows® user accounts

Create a user account

To help keep your personal data and information more secure, we recommend that you add a password for each local account.

Important

Once you create a password for a local account, don't forget it. There's no way to recover a lost password for local accounts.

1. Go to **Settings > Accounts > Other users > Add other user** and click **Add account**.
2. Click **I don't have this person's sign-in information**.
3. Click **Add a user without a Microsoft account**.
4. Enter a user name, password and password hint.
5. Click **Next** and follow the instructions.

Create an administrator account

1. Go to **Settings > Accounts > Other people**.
2. Go to the account you want to change and click **Change account type**.
3. Go to **Account type** and select **Administrator**.
4. Click **OK**.
5. Restart your device and sign in with the new administrator account.

Create a local user group

1. Go to **Computer Management**.
2. Go to **Local Users and Groups > Group**.
3. Right-click **Group** and select **New Group**.
4. Enter a group name and a description.
5. Add group members:
 - 5.1. Click **Add**.
 - 5.2. Click **Advanced**.
 - 5.3. Find the user account(s) you want to add to the group and click **OK**.
 - 5.4. Click **OK** again.
6. Click **Create**.

Delete a user account

Important

When you delete an account you remove the user account from the login screen. You also remove all files, settings and program data stored on the user account.

1. Go to **Settings > Accounts > Other people**.
2. Go to the account you want to remove and click **Remove**.

Change a user account's password

1. Log in with an administrator account.
2. Go to **User Accounts > User Accounts > Manage another account in sequence**.

You'll see a list with all user accounts on the device.

3. Select the user account whose password you would like to change.
4. Click **Change the password**.
5. Enter the new password and click **Change password**.

Create a password reset disk for a user account

We recommend to create a password reset disk on a USB flash drive. With this, you can reset the password. Without a password reset disk, you can't reset the password.

Note

If you're using Windows® 10, or later, you can add security questions to your local account in case you forget your password, so you don't need to create a password reset disk. To do this, go to **Start** and click **Settings > Sign-in options > Update your security questions**.

1. Sign in to your device with a local user account. You can't create a password reset disk for a connected account.
2. Plug an empty USB flash drive into your device.
3. From the Windows® search field, go to **Create a password reset disk**.
4. In the **Forgotten Password** setup assistant, click **Next**.
5. Select your USB flash drive and click **Next**.
6. Type your current password and click **Next**.
7. Follow the onscreen instructions.
8. Remove the USB flash drive and keep it in a safe place. You don't have to create a new disk when you change your password even if you change it several times.

Manage AXIS Camera Station Pro user accounts

User permissions

Go to **Configuration > Security > User permissions** to see the users and groups in AXIS Camera Station S1232 Rack Recording Server.

Note

Administrators of the computer that runs the AXIS Camera Station S1232 Rack Recording Server server are automatically granted administrator privileges in AXIS Camera Station S1232 Rack Recording Server. You can't change or remove the Administrators group's privileges.

Before you can add a user or group, make sure they're registered on the local computer or have a Windows® Active Directory user account. To add users or groups, see *Add users or groups*.

When a user belongs to a group, they receive the highest role permission assigned to them individually or to the group. For example, a user with access to camera X who also belongs to a group with access to cameras Y and Z has access to all three cameras.

	Indicates the entry is a single user.
	Indicates the entry is a group.
Name	Username as it appears in the local computer or Active Directory.
Domain	The domain that the user or group belongs to.
Role	The access role assigned to the user or group. Possible values: Administrator, Operator, and Viewer.
Details	Detailed user information as it appears on the local computer or in Active Directory.
Server	The server that the user or group belongs to.

Add users or groups

Microsoft Windows® and Active Directory users and groups can access AXIS Camera Station S1232 Rack Recording Server. To add a user to AXIS Camera Station S1232 Rack Recording Server, you must add users or a group to Windows®.

To add a user in Windows® 10 and 11:

- Press the Windows key + X and select **Computer Management**.
- In the **Computer Management** window, navigate to **Local Users and Groups > Users**.
- Right-click **Users** and select **New User**.
- In the popup dialog, enter the new user's details and clear **User must change password at next login**.
- Click **Create**.

If you use an Active Directory domain, consult your network administrator.

Add users or groups

1. Go to **Configuration > Security > User permissions**.
2. Click **Add**. The available users and groups appear in the list.
3. Under **Scope**, select where to search for users and groups.
4. Under **Show**, select to show users or groups. The search results may not appear if there are too many users or groups. Use the filter to narrow the results.

5. Select the users or groups and click **Add**.

Scope	
Server	Select to search for users or groups on the local computer.
Domain	Select to search for Active Directory users or groups.
Selected server	When connected to multiple AXIS Camera Station S1232 Rack Recording Server servers, select a server to search for users or groups on that server.

Configure a user or group

1. Select a user or group in the list.
2. Under **Role**, select **Administrator**, **Operator**, or **Viewer**.
3. If you selected **Operator** or **Viewer**, you can configure the user or group privileges. See *User or group privileges*.
4. Click **Save**.

Remove a user or group

1. Select the user or group.
2. Click **Remove**.
3. In the pop-up dialog, click **OK** to remove the user or group.

User or group privileges

There are three roles you can assign to a user or group. For how to define the role for a user or group, see *Add users or groups*.

Administrator – Full access to the entire system, including access to live and recorded video of all cameras, all I/O ports, and views. This role is required to access system configuration.

Operator – Select cameras, views, and I/O ports to get access to live and recorded video. An operator has full access to all functionality of AXIS Camera Station S1232 Rack Recording Server except system configuration.

Viewer – Access to live video of selected cameras, I/O ports, and views. A viewer doesn't have access to recorded video or system configuration.

Cameras

The following access privileges are available for users or groups with the **Operator** or **Viewer** role.

Access	Allow access to the camera and all camera features.
Video	Allow access to live video from the camera.
Audio listen	Allow access to listen from the camera.
Audio speak	Allow access to speak to the camera.
Manual Recording	Allow starting and stopping recordings manually.

Mechanical PTZ	Allow access to mechanical PTZ controls. Available only for cameras with mechanical PTZ.
PTZ priority	Set the PTZ priority. A lower number means a higher priority. No assigned priority is set to 0. An administrator has the highest priority. When a role with higher priority operates a PTZ camera, others can't operate the same camera for 10 seconds by default. Available only for cameras with mechanical PTZ that have Mechanical PTZ selected.

Views

The following access privileges are available for users or groups with the **Operator** or **Viewer** role. You can select multiple views and set the access privileges.

Access	Allow access to the views in AXIS Camera Station S1232 Rack Recording Server.
Edit	Allows editing of views in AXIS Camera Station S1232 Rack Recording Server.

I/O

The following access privileges are available for users or groups with the **Operator** or **Viewer** role.

Access	Allow full access to the I/O port.
Read	Allows viewing the state of the I/O port without changing it.
Write	Allows changing the state of the I/O port.

System

You can't configure grayed-out access privileges in the list. A check mark means the user or group has this privilege by default.

The following access privileges are available for users or groups with the **Operator** role. **Take snapshots** is also available for the **Viewer** role.

Take snapshots	Allows taking snapshots in live view and recording mode.
Export recordings	Allow exporting recordings.
Generate incident report	Allow generating incident reports.
Prevent access to recordings older than	Prevent access to recordings older than the specified number of minutes. Users can't find these recordings when they search.
Access alarms, tasks, and logs	Get alarm notifications and allow access to the Alarms and tasks bar and Logs tab.
Access data search	Allow searching for data to track what happened at the time of an event.

Add categories to events	Allow adding categories to events in the Recordings tab.
Remove categories from event	Allow removing categories from events in the Recordings tab.

Access control

The following access privileges are available for users or groups with the **Operator** role. **Access Management** is also available for the **Viewer** role.

Access control configuration	Allow configuration of doors and zones, identification profiles, card formats, and PIN, encrypted communication, and multi-server.
Access management	Allow access management and access to the Active Directory settings.

The following access privileges are available for users or groups with the **Viewer** role.

System health monitoring

The following access privileges are available for users or groups with the **Operator** role. **Access to system health monitoring** is also available for the **Viewer** role.

Configuration of system health monitoring	Allows configuration of system health monitoring.
Access to system health monitoring	Allows access to system health monitoring.

Manage your device

Update Secure Boot certificates

Microsoft is retiring the 2011 Secure Boot certificates in June 2026 and replacing them with new 2023 certificates. To keep your recorder safe, install the 2023 certificates before then.

Installing the 2023 certificates requires Windows 10 LTSC (Long-Term Servicing Channel) or Windows 11 LTSC. If your device is within warranty but is running Windows 10 SAC (Semi-Annual Channel) instead of an LTSC version, contact Axis Technical Support. They can tell you if you can upgrade to an LTSC version before you update the BIOS or change any certificates.

Note

After June 2026, devices without the 2023 certificates will keep working as normal, but won't receive new security protections for the early boot process, including Windows Boot Manager updates and revocation lists for new vulnerabilities.

Check your certificate status

To verify that the 2023 certificates are installed and that the Windows bootloader has been updated, use one of the following methods:

Method 1:

1. Open Registry Editor.
2. Go to HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\SecureBoot\Servicing.
3. Check the UEFICA2023Status value. If the value says **Updated**, the 2023 certificate is installed.

 (Default)	REG_SZ	(value not set)
 BucketHash	REG_SZ	5a3041a8e6c7476f988f369de06e65e224df7d53cf7f9...
 ConfidenceLevel	REG_SZ	No Data Observed - Action Required
 ConfidenceUpdateType	REG_DWORD	0x00000000 (0)
 LastParsedBucketDataVersion	REG_DWORD	0x0000000c (12)
 UEFICA2023Status	REG_SZ	Updated
 WindowsUEFICA2023Capable	REG_DWORD	0x00000002 (2)

Method 2:

1. Open Windows Security.
2. Go to Device security.
3. Under Secure boot, check the status message. If the certificate is up to date, the card shows: "Secure Boot is on and all required certificate updates have been applied. No further certificate changes are needed."

Secure boot

Secure Boot is on and all required certificate updates have been applied.
No further certificate changes are needed.

Note

Windows Security only shows certificate status if your device has the April 14, 2026 cumulative update or later installed. If you don't see a certificate status message, install the latest Windows update or use Method 1 instead.

Recommended actions

A BIOS update stores the 2023 certificates permanently in the firmware. This is the most reliable method, and we recommend it even if you've already installed the certificates through Windows Update.

Important

If you only install the certificates through Windows Update and then reset the BIOS Secure Boot keys to factory defaults, the certificates will be lost and the device won't start with Secure Boot turned on. Update the BIOS to make the certificates permanent before you reset Secure Boot keys.

Update certificate through the BIOS

For AXIS S12 and S93 series, get the BIOS update from Dell instead of Axis.com. See *Update the BIOS*, on page 18.

More information:

- *Dell: Microsoft 2011 Secure Boot Certificate Expiration.*
- *Dell: PowerEdge Server BIOS Update Guidelines for Secure Boot.*

Update certificate through Windows Update

If a BIOS update isn't available yet for your model, you can get the 2023 certificates through Windows Update instead.

Important

Certificates installed this way are stored in the current Secure Boot database, not in the firmware. If you reset the BIOS Secure Boot keys to factory defaults, you'll lose the certificates and the device may not be able to start with Secure Boot turned on. Install a BIOS update as soon as one is available for your model, even if you've already used this method.

To use this path:

1. Make sure your device runs Windows 10 LTSC or Windows 11 LTSC.
2. Install all Windows updates released April 14, 2026 or later.
3. Go to **Windows Security > Device security > Secure Boot** to check your certificate status.
4. If the certificate doesn't update after installing the latest updates, check the **UEFICA2023Status** registry value. If your device remains ineligible for the automatic update, update the BIOS or contact Axis Technical Support.

Important

Don't manually revoke the 2011 certificate until you've confirmed that all recovery media, boot environments, and drivers in your environment are signed with the 2023 certificate. Revoking the 2011 certificate too early will leave your device unable to start with Secure Boot turned on.

Check the current BIOS version

To check the current BIOS:

1. Power on the device and repeatedly press F2 until the Axis logo appears.
2. The version number is shown as first entry under **Overview**.

Update the BIOS

1. Go to *Dell support*.
2. In the **Service tag** field, enter the last 7 characters of your device's serial number. For example, HW030ABC1234.
3. Go to **Drivers & Downloads** and search for "BIOS".

4. If no newer version appears for your OEM product name (for example, "OEMR XL R760xs"), search again using the generic Dell platform name instead of the serial number (for example, "R760xs").
5. Download and install the latest BIOS version released after April 2026.

Update Windows®

Windows® periodically checks for updates. When an update is available, your device automatically downloads the update but you've to install it manually.

Note

Recording will be interrupted during a scheduled system restart.

To manually check for updates:

1. Go to **Settings > Windows Update**.
2. Click **Check for updates**.

Configure Windows® update settings

It is possible to change how and when Windows® do its updates to suit your needs.

Note

All ongoing recordings stop during a scheduled system restart.

1. Open the Run app.
 - Go to **Windows System > Run**, or
2. Type `gpedit.msc` and click **OK**. The Local Group Policy Editor opens.
3. Go to **Computer Configuration > Administrative Templates > Windows Components > Windows Update**.
4. Configure the settings as required, see example.

Example:

To automatically download and install updates without any user interaction and have the device restart, if necessary, at out of office hours, use the following configuration:

1. Open **Always automatically restart at the scheduled time** and select:
 - 1.1. **Enabled**
 - 1.2. **The restart timer will give users this much time to save their work (minutes): 15.**
 - 1.3. Click **OK**.
2. Open **Configure Automatic Updates** and select:
 - 2.1. **Enabled**
 - 2.2. **Configure Automatic updates: Auto download and schedule the install**
 - 2.3. **Schedule Install day: Every Sunday**
 - 2.4. **Schedule Install time: 00:00**
 - 2.5. Click **OK**.
3. Open **Allow Automatic Updates immediate installation** and select:
 - 3.1. **Enabled**
 - 3.2. Click **OK**.

Add a hard drive

The demand for storage can differ. Retention time of stored data or for storing high-resolution recordings often leads to the same: the need for installing more storage. This section explains how to expand your AXIS S12 series with more hard drives and how to add them to your RAID 5 configuration.

Note

The following instructions are to be used when adding additional storage to certain AXIS S12 series. These instructions are as is, and Axis Communications AB takes no responsibility for loss of data and/or misconfiguration during these steps. The standard precautions should be taken to backup data that is business critical. The following procedure of expanding storage will not be supported by Axis Technical Support.

Note

To avoid electrostatic discharge, it is recommended that you always use a static mat and static strap while working on components in the interior of the system.

Warranty

Detailed information about warranty is available at: www.axis.com/support/warranty.

Workflow

1. *Install a hot-swap hard drive, on page 20*
 - 1.1. *Remove the bezel, on page 20*
 - 1.2. *Remove the hard disk blank, on page 20*
 - 1.3. *Install the hard drive, on page 20*
2. *Create a new RAID array, on page 21*
 - 2.1. *Enter the Dell PERC 11 Configuration Utility, on page 21*
 - 2.2. *Create a RAID storage array, on page 21*
 - 2.3. *Reconfigure a RAID storage array, on page 22*
- 3.

Install a hot-swap hard drive

Remove the bezel

1. Locate the bezel key.
2. Unlock the bezel by using the key.
3. Slide the release latch up and pull the left end of the bezel.
4. Unhook the right end and remove the bezel.

Remove the hard disk blank

- Press the release button on the front of the blank and slide it out of the hard drive slot.

Install the hard drive

▲ CAUTION

- Use only hard drives that have been tested and approved for use with AXIS S12 series.
 - When installing a hard drive, ensure that the adjacent drives are fully installed. Inserting a hard drive carrier and attempting to lock its handle next to a partially installed carrier can damage the partially installed carrier's shield spring and make it unusable.
 - Combining SAS and SATA hard drives in the same RAID volume is not supported.
1. If a hard drive blank is installed in the hard drive slot, remove it.
 2. Install a hard drive in the hard drive carrier.
 3. Press the release button on the front of the hard drive carrier and open the hard drive carrier handle.
 4. Insert the hard drive carrier into the hard drive slot until the carrier connects with the backplane.

5. Close the hard drive carrier handle to lock the hard drive in place.

Change the RAID

⚠ CAUTION

Changing the RAID deletes all data from your disks.

1. Boot Lifecycle Controller:
 - 1.1. Power on your device.
 - 1.2. When you see the AXIS splash screen, press F10.
2. In the Lifecycle Controller, go to **Hardware Configuration > Configuration Wizards** and select **RAID Configuration**.
3. Select the **RAID Controller** on which you want to have the RAID created. Details of any virtual disk(s) available on the selected controller will be shown in the table displayed on the page below the controller list. Foreign Configuration will be displayed if there are any foreign or uninitialized HDD(s) available on the server.

Note

- Clear foreign configuration clears all the foreign HDDs available on the RAID controller selected.
 - Ignore foreign Configuration ignores the foreign HDDs available on the RAID controller while creating the RAID.
4. Clear or ignore foreign HDDs and uninitialized HDDs.
If you want, you can initialize the uninitialized disks:
 - 4.1. In the list of all non-RAID (uninitialized) HDDs, select the HDDs you want to convert to RAID capable (initialize) and click **Next** to initialize them.
 - 4.2. Select the corresponding option on the Configuration Wizards: RAID Configuration page.
 5. Select a RAID level.
 6. Select the physical disks from the table and click **Next**.
If the you've selected **Ignore foreign configuration**, the foreign HDDs are not displayed in the table.
 7. Enter the virtual disk attributes.
 8. Click **Next**.
 9. Review the settings and click **Finish**.
 10. Lifecycle Controller displays a message to indicate that all the current data about the virtual disks available on the controller will be lost. Click **OK** to continue.
 11. Click **OK** and **Finish**.
 12. Exit the wizard and reboot the system.

Create a new RAID array

The Human Interface Infrastructure (HII) configuration utility is a storage management application integrated into the System BIOS. It is used to configure and manage the controllers, virtual disks, and physical disks. This utility is independent of the operating system.

Enter the Dell PERC 11 Configuration Utility

1. Turn on the system.
2. While the system startup, press F2 to enter System Setup.
3. Click **Device Settings** to view all the RAID controllers in the system.

Create a RAID storage array

1. *Enter the Dell PERC 11 Configuration Utility, on page 21.*

2. Click **Main Menu > Configuration Management > Create Virtual Disk** and define the following virtual disk parameters.
 - **Select RAID Level:** Choose the RAID level.
 - **Select Physical Disks:** Select the physical disks from which the virtual disks are being created. This option is displayed if you select **Unconfigured Capacity** as your physical disk capacity.
 - **Configure Virtual Disk:** Configure the following virtual disk parameters.
 - **Virtual Disk Name:** Enter the name for the virtual disk. Allowed characters are A-Z, a-z, 0-9, underscore (_), and hyphen (-) only.
 - **Virtual Disk Size:** Set the capacity for the virtual disk.
3. Click **Create Virtual Disk**.

⚠ CAUTION

There are more parameters available for modification. However, Axis Communications AB does not take responsibility for any misconfigurations that may happen when modifying those parameters. Always exercise caution when modifying parameters.

Reconfigure a RAID storage array

An online virtual disk can be reconfigured in ways that expands its capacity and changes its RAID level.

⚠ CAUTION

- Spanned virtual disks such as RAID 50 and 60 can't be reconfigured.
 - Reconfiguring virtual disks typically impacts disk performance until the reconfiguration operation is complete. Completion time can vary greatly up to several days. It is highly recommended to do the procedure during a maintenance window.
 - Always create a validated backup of your data before starting any action.
1. *Enter the Dell PERC 11 Configuration Utility, on page 21.*
 2. Click **Main Menu > Virtual Disk Management**. All the virtual disks associated with the RAID controller are displayed.
 3. To view the properties, click the virtual disk.
 4. In the **Operations** drop-down, select **Reconfigure Virtual Disks** and press **GO**.
 5. Select the **RAID Level** and press **Choose the Operation**.
 6. Select the disks to be added to the virtual disk and press **Apply Changes**.
 7. Confirm the operation and click **YES**.
 8. Click **Start Operation**.
 9. Click **OK**.

In the Virtual Disk Management page, you can see the status of the reconstruction on the modified Virtual Disk.

After the reconstruction starts, the system can be left in the Dell PERC 11 Configuration Utility until complete or the system can be rebooted into the operating system.

If the system is rebooted into the operating system, the system performance will be affected until the rebuild has completed.

You can also NOT extend the disk in Windows® until the rebuild is complete.

⚠ CAUTION

The rebuilding time will vary between systems and can take up to several days.

Configure Microsoft Windows®

To configure a new volume:

1. Right-click the Start menu and select **Disk Management**.
2. Right-click an unallocated region on your hard disk, and select **New Simple Volume**.
3. In the **New Simple Volume Wizard**, click **Next**.
4. Enter the size of the volume you want to create in megabytes (MB) or accept the maximum default size, and click **Next**.
5. Accept the default drive letter or choose a different drive letter to identify the partition, and click **Next**.
6. In the **Format Partition** dialog:
 - If you don't want to format the volume right now, select **Do not format this volume**, and click **Next**.
 - To format the volume with the default settings, click **Next**.
7. Review your choices, and click **Finish**.
Disk Management now shows the new volume. You can now close Disk Management and your system is ready to use the new volume.

To configure an existing volume:

1. Right-click the Start menu and select **Disk Management**.
2. Right-click the volume, and select **Extend Volume**.
3. In the **Extend Volume Wizard**, click **Next**.
4. Select the disk that has unused space and click **Next**. Normally this is selected by default.
5. Review your choices, and click **Finish**.
Disk Management now shows the extended volume. You can now close Disk Management and your system is ready to use the new volume.

Configure iDRAC

The Integrated Dell Remote Access Controller 9 (iDRAC9) with Lifecycle Controller is designed to make system administrators more productive and improve the overall availability of Dell systems. iDRAC alerts administrators to system issues, help them perform remote system management and reduces the need for physical access to the system. You must configure the initial network settings based on your network infrastructure to enable the communication to and from iDRAC.

1. Press F10 during Power-on Self-test (POST).

Note

The Lifecycle Controller Initial Setup Wizard will be displayed only for the first time. Use the Initial Setup Wizard to select the language and keyboard, configure network settings, iDRAC network settings, credential configuration, and view the summary of the settings. To make configuration changes later, select **Settings** from the Lifecycle Controller home page.

2. Configure the language and keyboard, and click **Next**.
3. Check the product overview and click **Next**.
4. Configure Lifecycle Controller network settings:
 - 4.1. From the **NIC Card** drop-down list, select the NIC port to configure.
 - 4.2. From the **IPV4 Network Settings > IP Address Source** drop-down list, select one of the following options:
 - **DHCP**: indicates that the NIC must be configured by using an IP address from a DHCP server. DHCP is the default option and the DHCP IP address is displayed on the Network Settings page.
 - **Static IP** : indicates that the NIC must be configured by using a static IP. Type the IP address properties including **IP Address**, **Subnet Mask**, **Default Gateway**, and **DNS Address**. If you do not have this information, contact your network administrator.
 - **No Configuration**: indicates that the NIC must not be configured.

- 4.1. If VLAN is used, click **Enabled** and type the **VLAN ID** and **Priority** under **Lifecycle Controller VLAN Settings** to configure the VLAN settings of a NIC.
- 4.2. Click **Next**. If Lifecycle Controller settings are not correctly configured, an error message is displayed.
5. Configure iDRAC network and credentials:
 - 5.1. Go to **IPV4 Configuration > IP Address Source** and select one of the following options:
 - **Static**: indicates that the network must be configured by using a static IP. Type the IP address properties including **IP Address**, **Subnet Mask**, **Default Gateway**, **DNS Address Source** and **DNS Address**. If you do not have this information, contact your network administrator.
 - **DHCP**: indicates that the NIC must be configured by using an IP address from a DHCP server. DHCP is the default option and the DHCP IP address is displayed on the **Network Settings** page.
 - 5.1. Under **Credentials**, enter **Account Username** and **Password** to access iDRAC network.
 - 5.2. Click **Next**.
6. Verify the summary of the Lifecycle Controller and iDRAC network configuration and click **Finish**.

Cybersecurity

For product-specific information about cybersecurity, see the product's datasheet at axis.com.

For in-depth information about cybersecurity in AXIS OS, read the *AXIS OS Hardening guide*.

Secure boot

Secure boot is a feature that prevents malware and unsecure software to run on your system. The feature runs during start-up of your system and uses the digital signatures to verify the certificates of the software and OS. Only trusted software and OS can run on the system.

Trusted Platform Module (TPM)

The TPM is a component that provides cryptographic features to protect information from unauthorized access. It's active by default and we don't recommend that you turn this off.

Axis security notification service

Axis provides a notification service with information about vulnerability and other security related matters for Axis devices. To receive notifications, you can subscribe at axis.com/security-notification-service.

Vulnerability management

To minimize customers' risk of exposure, Axis, as a **Common Vulnerability and Exposures (CVE) numbering authority (CNA)**, follows industry standards to manage and respond to discovered vulnerabilities in our devices, software, and services. For more information about Axis vulnerability management policy, how to report vulnerabilities, already disclosed vulnerabilities, and corresponding security advisories, see axis.com/vulnerability-management.

Secure operation of Axis devices

Axis devices with factory default settings are pre-configured with secure default protection mechanisms. We recommend using more security configuration when installing the device. To learn more about Axis' approach to cybersecurity, including best practices, resources, and guidelines for securing your devices, go to axis.com/about-axis/cybersecurity.

To learn more about the cybersecurity features in Axis devices, go to axis.com/learning/white-papers and search for cybersecurity.

Troubleshooting

Run diagnostics

Running diagnostics help you to identify the cause for a system issue. The diagnostics test your system hardware without requiring additional equipment or risking data loss.

1. While the system is booting, press F10 to enter Lifecycle Controller.
2. Go to **Hardware Diagnostics** and click **Run Hardware Diagnostics**.
3. Note the error code and contact Axis technical support.

Perform a system recovery

Internal recovery

If the device has had a system failure, perform an internal recovery to restore the system.

1. Open **Windows Settings**.
2. Select **System**.
3. In the menu, select **Recovery**.
4. Under **Recovery options** select **Reset this PC**.
5. Select **Keep my files** or **Remove everything**.
 - **Keep my files** will keep all your personal files and user data, as well as all Axis installed software.
 - **Remove everything** will remove all your personal files and user data, but will keep all Axis installed software (factory default).
6. Follow the onscreen instructions.

Note

Before selecting **Reset**, you can view a list of apps that will be removed in the process. Axis apps will be restored after the recovery, but if you've installed other apps, they won't be restored.

Important

After a successful recovery, it's important that you log in to Windows with an Administrator account to finalize the recovery process.

External recovery

If the device has had a complete system failure, you must use a recovery image to recreate the Windows® system. To download the AXIS Network Video Recovery Kit, contact *AXIS Technical Support* and supply the serial number of your device.

Note

The AXIS Network Video Recorder Recovery Kit comes in two variants:

- **sb11** – for devices still using the 2011 certificate.
- **sb23** – for devices that have moved to the 2023 certificate.

Check your certificate status before you download the Recovery Kit, and select the matching variant. If you select the wrong variant, the installation won't produce a bootable result, and you'll need to start over with the correct image. This won't damage your device.

If your device already has the 2023 certificate installed, the sb11 variant is still safe to use, as long as the 2011 certificate hasn't been manually revoked. Once it's revoked, only sb23 will work.

1. Download the AXIS Network Video Recovery Kit and an ISO to USB writing tool of your choice.
2. Insert a USB drive into your computer.
 - Use a USB drive with a minimum of 16 GB.

- The USB drive will be formatted, and all existing data will be erased.
- 3. Run the ISO to USB writing tool and follow the onscreen instructions.
 - Writing data to the USB drive takes approximately 10 to 15 minutes. Don't remove the USB drive until the process is complete.
- 4. After the ISO to USB tool is complete, remove the USB drive from your computer and plug it into your device.
- 5. Start your device. When you see the Axis splash screen, press **F12** to open the boot menu.
- 6. Select your USB drive and press **Enter**. The system boots into the AXIS Network Video Recorder Recovery Kit.
- 7. Click **Start** and follow the onscreen instructions.
 - The recovery takes roughly 10 to 15 minutes to complete.

Export a SupportAssist collection

You can export the SupportAssist collection to a USB drive or a network share (CIFS/NFS). The collection includes the following data:

- Hardware
- RAID controller logs

To export the SupportAssist collection:

1. During Power-on-self-test (POST), press **F10** to start Lifecycle Controller.
2. Go to **Hardware Diagnostics > Export SupportAssist collection**.
3. Read the terms and conditions and click **Next**.
You must accept the terms and conditions to allow technical support to use the SupportAssist collection data.
4. Select the data options which you want to include in the SupportAssist collection and click **Next**.
5. Enter the required export settings information and click **Next**.
 - To export to a USB drive: select the USB drive option and then select the name of the USB Drive and enter the file path details to where the collection is to export.
 - To export to NFS: select the NFS option and enter the required information.
 - To export to CIFS: select the CIFS option and enter the required information.
Click **Test Network Connection** to verify if the Lifecycle Controller can connect to the IP address that is provided. By default, it pings the Gateway IP, DNS Server IP, host IP and Proxy IP.
6. Verify your selection and click **Finish**.
Lifecycle Controller retrieves the selected collection data and exports to the specified location. This can take a few minutes.

Troubleshoot the power supply unit

Note

After installing a power supply unit, allow several seconds for the system to recognize the power supply unit and determine if it the power supply works properly.

1. Ensure that no loose connections exist. For example, loose power cables.
2. Ensure that the power supply handle LED indicates that the power supply is working properly.
3. Check the status of the power indicator on the power supply unit. See *Specifications, on page 28*.
4. If you have a redundant power supply configuration, ensure that both power supply units are of the same type and wattage.
5. Ensure that you use only power supply units with the Extended Power Performance (EPP) label on the back.

6. Reset the power supply unit.
7. If the problem persists, contact Axis technical support.

Troubleshoot memory errors

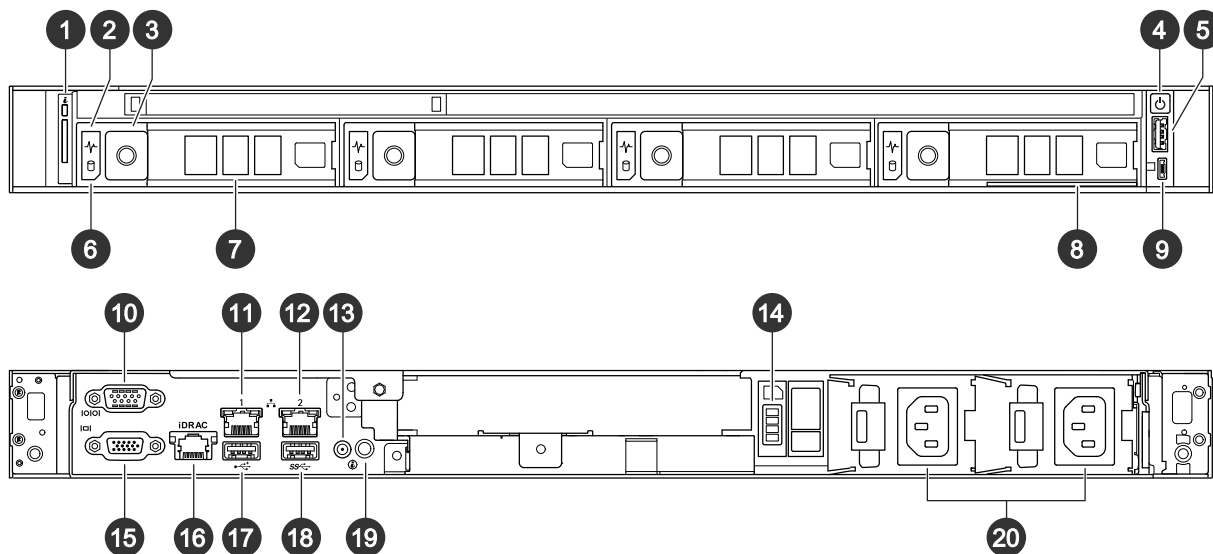
1. Upgrade the BIOS to the latest version.
2. If the errors persist, contact Axis technical support.

Troubleshoot AXIS Camera Station Pro

For information about how to troubleshoot AXIS Camera Station Pro, go to the *AXIS Camera Station Pro user manual*.

Product overview

Front and rear sides



- 1 System identification button and indicator
- 2 Hard drive status LED
- 3 Hard drive tray release button
- 4 Power button/power LED
- 5 USB 2.0 port
- 6 Hard drive activity LED
- 7 Hard drive tray
- 8 Information tag
- 9 iDRAC direct port
- 10 Serial port
- 11 1 GbE Ethernet port 1
- 12 1 GbE Ethernet port 2
- 13 System status indicator cable port
- 14 Solid state drive tray
- 15 VGA port
- 16 iDRAC dedicated Ethernet port
- 17 USB 2.0 port
- 18 USB 3.2 Gen 1 port
- 19 System identification button and indicator
- 20 Power supply units

Specifications

System health and ID indicators

LED	Description	Action
Solid blue	The system is powered on, is healthy, and system ID mode is not active.	Press the system health and system ID button to switch to system ID mode.
Blinking blue	The system ID mode is active.	Press the system health and system ID button to switch to system health mode.

Solid amber	The system is in fail-safe mode.	
Blinking amber	The system is experiencing a fault.	Check the system event log for the specific error message.

iDRAC direct LED indicators

LED	Description
Solid green for two seconds	The laptop or tablet is connected.
Blinking green (on for two seconds and off for two seconds)	The laptop or tablet connected is recognized.
Off	The laptop or tablet is unplugged.

NIC indicators

LED	Description
Link and activity indicators are off	The NIC is not connected to the network.
Link indicator is green and activity indicator is blinking green	The NIC is connected to a valid network at its maximum port speed and data is being sent or received.
Link indicator is amber and activity indicator is blinking green	The NIC is connected to a valid network at less than its maximum port speed and data is being sent or received.
Link indicator is green and activity indicator is off	The NIC is connected to a valid network at its maximum port speed and data is not being sent or received.
Link indicator is amber and activity indicator is off	The NIC is connected to a valid network at less than its maximum port speed and data is not being sent or received.

Power supply unit (PSU) indicators

LED	Description
Green	A valid power source is connected to the PSU and the PSU is operational.
Blinking amber	There is a problem with the PSU.
Not powered on	Power is not connected to the PSU.

Blinking green	The firmware of the PSU is being updated. ⚠ CAUTION Do not disconnect the power cord or unplug the PSU when updating firmware. If firmware update is interrupted, the PSUs will not function.
Blinking green and powers off	When hot-plugging a PSU, it blinks green five times at a rate of 4 Hz and powers off. This indicates a PSU mismatch due to efficiency, feature set, health status, or supported voltage. ⚠ CAUTION • If two PSUs are installed, both the PSUs must have the same type of label. For example, Extended Power Performance (EPP) label. Mixing PSUs from previous generations of PowerEdge servers is not supported, even if the PSUs have the same power rating. This results in a PSU mismatch condition or failure to power on the system. • If two PSUs are used, they must be of the same type and have the same maximum output power. • When correcting a PSU mismatch, replace the PSU with the blinking indicator. Swapping the PSU to make a matched pair can result in an error condition and an unexpected system shutdown. To change from a high output configuration to a low output configuration or vice versa, you must power off the system.

Drive indicators

LED	Description
Blinks green twice per second	The drive is being identified or preparing for removal.
Off	The drive is ready for removal. Note The drive status indicator remains off until all drives are initialized after the system is powered on. Drives are not ready for removal during this time.
Blinks green, amber, and then powers off	There is an unexpected drive failure.
Blinks amber four times per second	The drive has failed.
Blinks green slowly	The drive is rebuilding.
Solid green	The drive is online.
Blinks green for three seconds, amber for three seconds, and then powers off after six seconds	The rebuild has stopped.

Need more help?

Useful links

- *AXIS Camera Station Pro user manual*
- *Sign in to AXIS Secure Remote Access*
- *Sign in to AXIS Secure Remote Access v2*
- *What to include in an Antivirus allow list for AXIS Camera Station*

Contact support

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

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