

## Archive – AXIS OS Release Notes

### About

Welcome to the Archive - AXIS OS Release Notes, a repository for the release notes about features, security and other improvements for old and archived AXIS OS versions. *AXIS OS* is the Linux-based operating system used in most of your Axis network devices. It is purpose-built to live up to the most important criteria(s) for network devices: high standards for cybersecurity, ease of integration, quality, and long-term value.

## AXIS OS 11

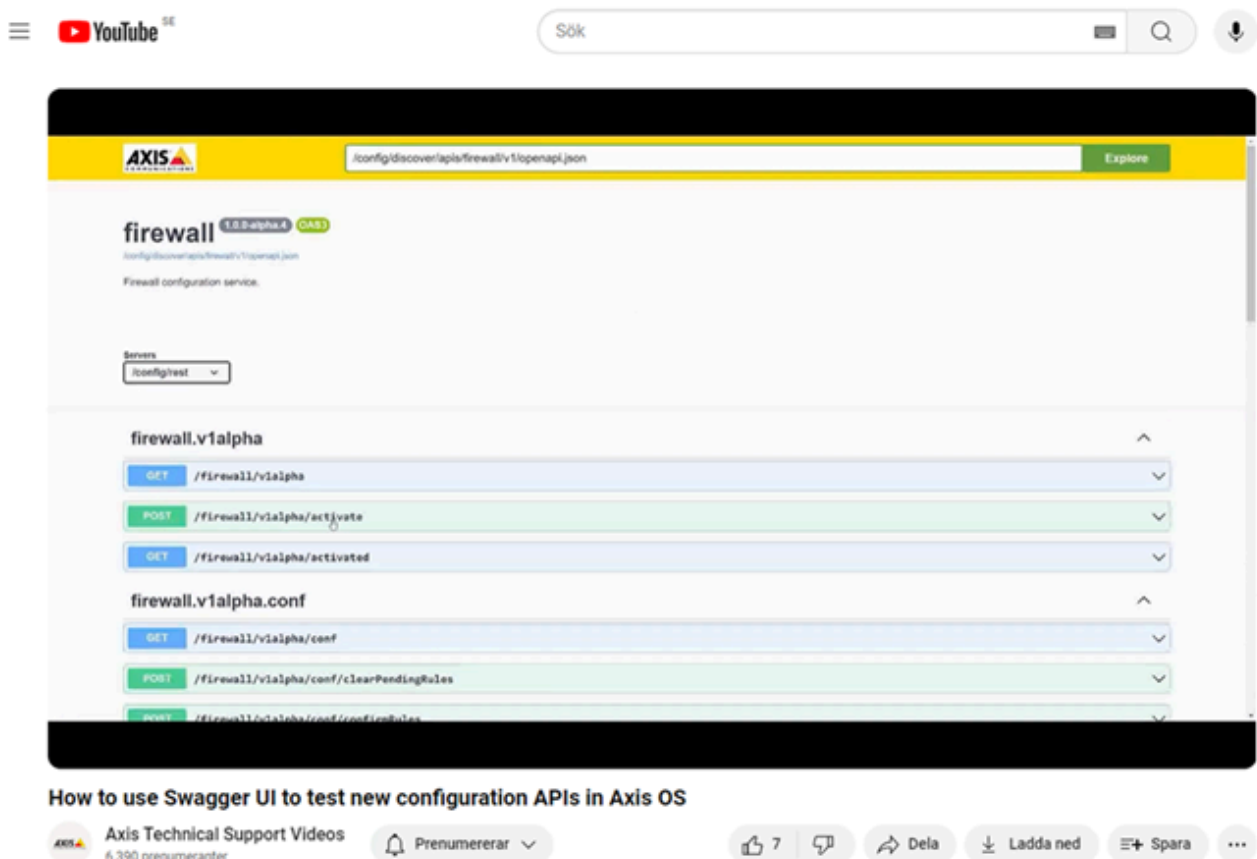
In this section, you can find release notes on the active track prior to AXIS OS 12.0.

### AXIS OS 11.11

Release date: 2024-06-26 - 2024-07-04

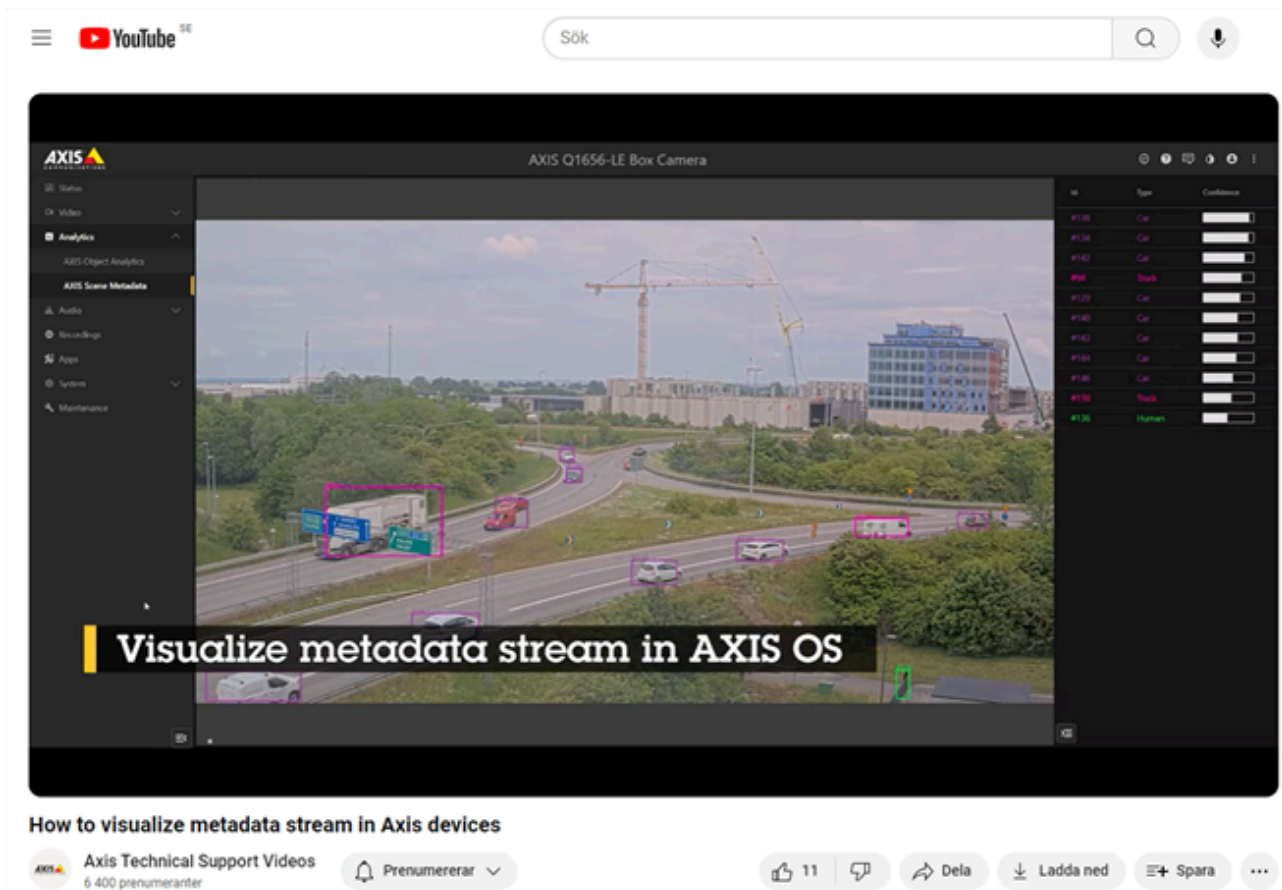
#### Features for all products

- A new API framework for device configuration, control, and monitoring is launched. The Device Configuration APIs are presented as RESTful APIs with OpenAPI specifications and versioning support. Axis will release new APIs via this framework while gradually transitioning existing ones. Notably, Axis devices have a built-in Swagger UI support for direct API interaction.



Watch the *tutorial video* on how to use Swagger UI to test new configuration APIs in AXIS OS.

- Added support in the web interface to install PKCS#12 certificate with and without a password.
- Added information to the web interface that the camera's local time is used when exporting recordings.
- Added the option to select autoplay for the live view player in the web interface.
- Added the possibility to play MJPEG recordings in the web interface.
- Added a new analytics section in the web interface, to preview the metadata stream.



Watch this [video](#) on how to visualize metadata stream.

- Added the information about the Dropped frames, Calculated frame rate, Buffer, and Uptime to the "Client Stream Data".
- Added the possibility to configure storage of recordings on a remote object store.
- Added support for remote object storage, allowing recordings to be stored and configured on platforms such as AWS S3 or Azure Blob Storage.
- Added the possibility to change the NTP minimum and maximum poll intervals.
- Added the possibility to disable PoE warning overlay when housing receives too low PoE class.
- Added DNS cache for O3C client to reduce the DNS lookup.
- Added the possibility to disable both CDP/LLDP Protocol on the AXIS device at once.
- API updates
  - Added support to use a virtual input as an event trigger for a requested amount of time. For more information, visit the [VAPIX Library](#).
  - Added filtering functionality in `systemlog.cgi` and `accesslog.cgi` using a query string, e.g. `text=SearchString`, which will return log entries containing the queried string.

### Cybersecurity updates

- Addressed CVE-2024-0067. For more information, please visit the [Axis vulnerability management portal](#).
- Addressed CVE-2024-6173. For more information, please visit the [Axis vulnerability management portal](#).
- Updated Apache to version 2.4.59 to increase overall cybersecurity level.
- Updated OpenSSL to version 3.0.14 to increase overall cybersecurity level.
- Updated OpenSSL to version 1.1.1y to increase overall cybersecurity level.
- Removed the possibility to select RSA-1024 as key type when creating certificate in order to increase overall cybersecurity level.

- Added support for multiple virtual host authentication interfaces. This allows for hybrid setups where Digest/OAuth 2.0 OpenID Connect authentication schemes are used for centralized Identity Access Management (IAM) in active directory federated services (ADFS) and other identity provider (IDP) solutions. For more information and details, visit the *AXIS OS portal*.
- Updated password complexity recommendations. Confirmation is required if the user wishes to proceed with a password that is deemed weak.
- Improved the design of the 802.1X network access control and 802.1AE MACsec configuration section under Security in the web interface.

### **Analytics updates**

- **AXIS License Plate Verifier 2.11.9**
  - Improved on Germany libraries and country detection.
  - Added the possibility to save maximum ten events on camera memory when the frame selected is "Vehicle Crop", "Frame-downsized 480x270" or "Full frame". License plate crop will store up to 1000 events on cameras memory. SD card will store up to 100,000 events regardless of the frame.
  - Corrected an issue with stability, where full frame saved with an event and send out through Push Events when there are more than six license plates present within one second could have generated a crash on the analytic.
  - Corrected an issue with Push Events, where up on reconnection the buffered and new events were not sent.
  - Corrected an issue with the Direction icon.
  - Corrected an issue with incorrect data for TS<>TS filed on saved events.
  - Corrected an issue with Min and Max symbols for recognition on New Zealand license plates.
  - Corrected an issue where the Longitude and the Minnesota parameters were not saved correctly.
- **AXIS Object Analytics:**
  - Added Class/reason to all alarm scenarios events.
  - Updated Line Crossing for alarms events.
  - Improved detection algorithm for products based on .
  - Added Beta tag to occupancy in Area.

Applies to: AXIS M4308-PLE, AXIS M4317-PLR/-PLVE, AXIS M4318-PLR/-PLVE, AXIS M4327-P and AXIS M4328-P

Note that not all products support AXIS Object Analytics. For more information on compatible products and features, visit the *AXIS Object Analytics*.

### **Product specific features**

- Added support for relative zoom and focus movements in opticscontrol API.

Applies to: Products based on with focus and zoom support

- Added a new SIP Setup assistant that guides users through the entire SIP configuration and usage process, integrating various settings seamlessly. It includes features like reusable configurations and enhanced SIP call testing with logs and status updates.

Applies to: All products with SIP support.

- Added Entry list, which allows to set up the device to let the credential holders use their card or PIN to perform various actions, such as opening a door. Credentials are stored locally on the device. Entry list can be used in combination with an external door controller.

Applies to: AXIS A8207-VE, AXIS A8207-VE Mk II and AXIS I8116-E

- Improved audio quality for voice when using services such as SIP, MediaClip, and transmit.cgi.

Applies to: AXIS C1110-E, AXIS C1111-E, AXIS C1210-E, AXIS C1211-E, AXIS C1410, AXIS C1410 Mk II, AXIS C1510 and AXIS C1511

- Added information about the status of the internal microphone in the server report.

Applies to: AXIS C1110-E, AXIS C1111-E, AXIS C1210-E, AXIS C1211-E, AXIS C1310-E, AXIS C1310-E Mk II, AXIS C1410, AXIS C1410 Mk II, AXIS C1510, AXIS C1511, AXIS C1610-VE and AXIS XC1311

- AXIS Audio Manager Edge:

Renamed paging sources to paging recipients.

Improved the information about the devices in Physical zones with data such as device firmware version and assigned zones.

Applies to: AXIS C1110-E, AXIS C1111-E, AXIS C1210-E, AXIS C1211-E, AXIS C1310-E, AXIS C1310-E Mk II, AXIS C1410, AXIS C1410 Mk II, AXIS C1510, AXIS C1511, AXIS C1610-VE, AXIS C8110 and AXIS C8210

- Enabled two-way audio with echo cancellation. In case that the internal microphone and echo cancellation were enabled prior to the upgrade, the input gain will be reset to 0 because the new solution includes an automatic gain control.

Applies to: AXIS C1410 Mk II

- Added three new layouts i.e. wide, narrow and asymmetric.

Added a new action to be able to play any view in any sequence.

Added the possibility to show the image preview in the web interface during configuration.

Limitations in image preview:

Only for cameras, not for videos or images uploaded to the device.

Only in browsers that support h264.

It might not work with third-party devices.

Applies to: AXIS D1110

- Added support for encrypted file system that protects the confidentiality and integrity of file system stored information against physical information extraction attempts.

Applies to: AXIS D1110, AXIS S3008, AXIS S3008 Mk II and AXIS S3016

- Improved functionality when setting the scale of a map calibration.

Added support for radar signal tampering. The event is triggered when the radar is covered by metallic materials.

Applies to: AXIS D2110-VE, AXIS D2210-VE and AXIS Q1656-DLE

- Added the possibility to configure static IP on wireless network in web interface.

Increased the maximum gain on the microphone signal to 40 dB.

Applies to: AXIS M1075-L

- Improved and optimized streaming cache values.

**Limitation:** If you are upgrading from AXIS OS 11.10 to AXIS OS 11.11 or higher and experiencing upgrade issues, we recommend you to do the following:

1. Temporarily disable the following ACAPs: Video Motion Detection, WebRTC and AXIS Object Analytics.
2. Perform the upgrade.
3. Enable the ACAPs you disabled in step 1.
4. Go to the device web interface and select Plain config -> StreamCache.size. Change the value to 100663296.

If the issue persists, a factory default is recommended during the upgrade.

Applies to: AXIS M1135/-E Mk II and AXIS M1137/-E Mk II

- Added support for metadata fusion.

Applies to: AXIS M5526-E

- Updated the change capture mode dialog in the web interface to allow setting all capture modes on a multichannel with a single selection.

Applies to: AXIS P3735-PLV, AXIS P3737-PLV, AXIS P3738-PLV, AXIS P4705-PLVE, AXIS P4707-PLVE and AXIS P4708-PLVE

- Added support for AXIS TU8003.

Applies to: AXIS P5654/-E Mk II, AXIS P5655-E and AXIS P5676-LE

- Added the limitation to upload more than one PTZ driver. The driver must be reused between channels.

Applies to: AXIS P7304

- Improved suppression of animal detections in Radar-Video Fusion.

Applies to: AXIS Q1656-DLE

- Products with Hardware ID 9FB only supports active track 11.11.73 and later. The hardware ID can be found in Plain config > Properties > System > Hardware ID. Applies to: AXIS Q1805-LE
- Early Fire Detection: Added the possibility to pause the guard tour when the Early Fire Detection ACAP triggers an alarm, allowing the camera to remain in a position where an event of interest occurred.

Added the possibility to detect group deviation i.e. if the temperature of an area deviates from the rest of the group.

Added the possibility to define two or more areas of interest in a scene, to monitor all areas in a group, and to compare their respective statuses.

Applies to: AXIS Q1961-TE/-XTE and AXIS Q2101-TE

- Enabled the new web interface by default. The former web interface is still available as a fallback.

Applies to: AXIS Q6010-E and AXIS Q6100-E

- Added support for AXIS Solo Kit, allowing AXIS Q6100-E to operate without a PTZ camera connected.

Applies to: AXIS Q6100-E

- Added support for host-based firewall.

Applies to: AXIS S3008, AXIS S3008 Mk II and AXIS S3016

## **AXIS OS 11.11.79**

Release date: 2024-08-12

### **Corrections**

- Corrected an issue where audio and video were out of sync in indoor view. Applies to: AXIS A8207-VE, AXIS A8207-VE Mk II, AXIS I8016-LVE and AXIS I8116-E

## **AXIS OS 11.11.78**

Release date: 2024-07-16

### **Corrections**

- General improvements to the platform.

## **AXIS OS 11.11.75**

Release date: 2024-07-04

### **New products**

- AXIS Q1809-LE 150 mm

## **AXIS OS 11.11.73**

Release date: 2024-06-26 — 2024-07-04

### **New products**

- AXIS C6110
- AXIS I7010-VE

### **Corrections**

- Improved memory usage by not starting ACAP containerd by default.
- Improved reliability when upgrading an ACAP i.e. it is now more resilient to interruptions (e.g., power losses or installation problems) during an upgrade. A backup of application data is taken before the upgrade is started and is kept if the operation was aborted. This data will be restored during the next upgrade attempt.
- Corrected an issue with the time input component for "set export range".
- Corrected an issue where the user of an ACAP application could lose their UID after a device software or application upgrade.
- Corrected an issue with MQTT Overlays, where indices of MQTT text modifiers with multiple digits were not working correctly.
- Corrected an issue where the cache size used for the image pre-buffer was incorrect after a device restart.
- Corrected an issue where it sometimes was not possible to change encryption password after reset and format of the edge storage.
- Corrected an issue where too many pre-buffer images were sent with the event system.
- Corrected an issue where wrong stream resolution was shown on several web GUI pages.
- Corrected an issue where EXIF data was missing when uploading the image via events.
- Corrected an issue where the Day and Night filter could get stuck.
- Corrected an issue with MQTT subscription topics with a space in the name that was disappearing after a restart.



- Corrected an issue to make passwords longer than 700 characters work properly.
- Corrected an issue where image upload via events was not working correctly.
- Corrected memory problems for products utilizing AXIS Q3C Dispatcher service.
- Corrected an issue with default ONVIF profiles that were not possible to remove or edit.
- Corrected an issue where the + character in the SIP source was not supported in the web interface.

Applies to: All products with SIP support.

- Corrected an issue where the call button, keypad, and reader were unresponsive.

Applies to: AXIS A8207-VE, AXIS A8207-VE Mk II and AXIS I8016-LVE

- Corrected an issue in HTTP headers that caused error responses when sending API POST requests.

Applies to: AXIS C1210-E, AXIS C1211-E, AXIS C1510, AXIS C1511 and AXIS C8210

- Corrected an issue where certain resolution and aspect ratio combinations were not displayed.

Corrected an issue where video stopped playing after the monitor was turned off and on again.

Applies to: AXIS D1110

- Corrected an issue where it was not possible to mute both microphones.

Applies to: AXIS M3077-PLVE

- Corrected an issue where movements with Sensormatic Ultra VII was not working correctly.

Applies to: AXIS M7104, AXIS M7116, AXIS P7304 and AXIS P7316

- Corrected an issue where 802.1x reauthentication was initiated by the encoder periodically.

Applies to: AXIS M7116

- Corrected an issue where wrong field of view was reported by the camera.

Applies to: AXIS P5676-LE, AXIS Q6225-LE, AXIS Q6315-LE and AXIS Q6318-LE

- Corrected the confidence level for Vehicle objects in Analytics Scene Description.

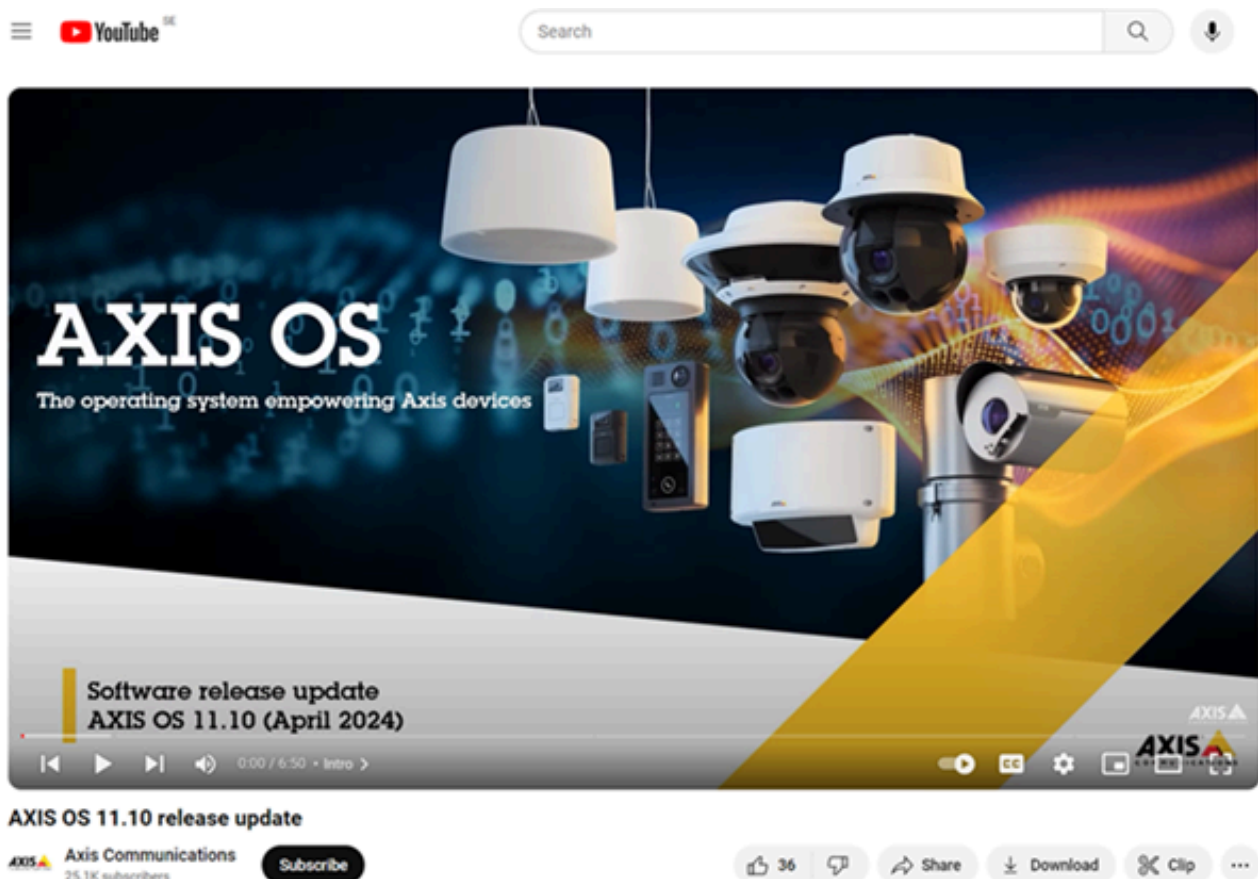
Applies to: AXIS Q1656-DLE

- Corrected an issue where video motion detection did not work properly, resulting in intermittent detection.

Applies to: AXIS Q3819-PVE

## **AXIS OS 11.10**

Release date: 2024-04-16 – 2024-06-03



The AXIS OS 11.10 release is out. Watch the *release update video* that summarizes the highlights, or read through the complete list of changes below.

#### Features for all products

- Added support for running applications that use container functionality without root privileges.
- Added support for the "Erase Configuration" action in the event system for all Axis products. Previously, it was supported only by Axis intercom products. Erase Configuration will factory default the device when the action rule is triggered.
- Added support for Control Board and Joystick.
- Added the possibility to "send video clip through HTTP/HTTPS" with MJPEG.
- Added an information note to "set export range" header which states that it is the camera's time/time-zone that applies when trying to export.
- Added error messages when installing certificate files concatenate multiple certs. This is not currently supported.
- Removed legacy overlay image CGIs i.e. create\_overlay, overlay\_set, overlay\_del, overlay\_image\_formats, overlay\_list.
- Made preview mode visible for all cameras.
- Set ownership of ACAP manifest files to root user and permissions to read-only.

#### Cybersecurity updates

- Addressed CVE-2024-0066. For more information, please visit the *Axis vulnerability management portal*.
- Updated OpenSSL to version 1.1.1x to increase overall cybersecurity level.
- Updated *OpenSSL to version 3.0.13* to increase overall cybersecurity level.
- Updated *cURL to version 8.7.1* to increase overall cybersecurity level.
- Updated runc-opencontainers to version 1.1.12 to increase overall cybersecurity level.

## Analytics updates

- Corrected an issue where IR light setting was not preserved after camera upgrades. Applies to: All products with IR Illumination support
- Axis object analytics has been added to the analytics menu in the web interface.
- Updated Video Motion Detection to version 4.5.8.
- Updated AXIS License Plate Verifier to version 2.10.13. Applies to: AXIS P1445-LE-3, AXIS P1455-LE-3, AXIS P1465-LE-3, AXIS P3245-LE-3 and AXIS P3265-LE-3
- Enabled video-based features i.e. Time In Area, Crossline Counting, Occupancy in Area and Scene Autocalibration in Axis Object Analytics. Applies to: AXIS Q1656-DLE
- AXIS Object Analytics:
  - General improvement of AOA performance.

Note that not all products support AXIS Object Analytics. For more information on compatible products and features, visit the *AXIS Object Analytics*.

## Product specific features

- Added support for Network radar pairing (Edge-to-edge technology). Either the radar or video stream can be streamed at a time, when pairing is enabled. Limitation: Rotating the camera video stream 180 degrees might lead to displaying the radar stream on top of the video stream. Applies to: AXIS Q1700-LE
- Added support for Power Meter. Applies to: AXIS M3215-LVE and AXIS M3216-LVE
- Added support for Barrel Distortion Correction (BDC). Applies to: AXIS P4705-PLVE, AXIS P4707-PLVE and AXIS P4708-PLVE
- Added the possibility to set audio output delay in the web interface, to sync audio with video. Applies to: AXIS D1110
- Added the possibility to create an event per modbus sensor in Axis Sensor Metrics Dashboard. Applies to: AXIS F9111, AXIS F9114 and AXIS F9114-B
- Added new video channel called pinned view. Applies to: AXIS F9114 Main Unit and AXIS F9114-B Main Unit
- Enabled SIP support. Applies to: AXIS M4215-LV, AXIS M4215-V, AXIS M4216-LV, AXIS M4216-V, AXIS M4218-LV and AXIS M4218-V
- Improved day/night switching stability. Applies to: AXIS P3735-PLE, AXIS P3737-PLE, AXIS P3738-PLE, AXIS P4705-PLVE and AXIS P4707-PLVE
- Migrated HDMI/SDI page from ACA to ADA. It is now possible to see which connection is active. Applies to: AXIS V5925 and AXIS V5938
- Enabled two-way audio with echo cancellation. In the case of having internal microphone and echo cancellation enabled before upgrading, the input gain will be reset to 0 as the new solution includes automatic gain control. Applies to: AXIS C1210-E
- Lowered latency to enable faster audio playback on stand-alone speakers that are not used in AXIS audio manager systems. Applies to: AXIS C1110-E, AXIS C1111-E, AXIS C1310-E, AXIS C1410, AXIS C1610-VE, AXIS C8110 and AXIS C8210
- AXIS Audio Manager Edge: Added the possibility to have an RTP stream as paging source. Applies to: AXIS C1110-E, AXIS C1111-E, AXIS C1310-E, AXIS C1410, AXIS C1610-VE, AXIS C8110 and AXIS C8210
- Added support for dynamic power saving mode in the web interface. Applies to: AXIS Q3626-VE and AXIS Q3628-VE
- Performed minor fusion improvements. Applies to: AXIS Q1656-DLE
- Beta page: added the possibility for having editable map calibration in ADA. Beta page has ability to zoom the radar image. Applies to: AXIS D2110-VE, AXIS D2210-VE and AXIS Q1656-DLE
- Added option to allow objects to be passed through exclude zones. Applies to: AXIS D2110-VE, AXIS D2210-VE and AXIS Q1656-DLE

- Improved the classification of vehicles. Applies to: AXIS Q1656-DLE and AXIS D2210-VE
- Early Fire Detection: Improved logic for better filtering of moving objects by a new overlay indicating the point of interest when an alarm is triggered. Applies to: AXIS Q1961-TE/-XTE and AXIS Q2101-TE
- Added the possibility to add thermal related data sources when setting up widgets in the web interface. Applies to: AXIS Q1961-TE/-XTE and AXIS Q2101-TE

## **AXIS OS 11.10.83**

Release date: 2024-06-03

### **New products**

- AXIS P1245 Mk II
- AXIS P1265 Mk II
- AXIS P1275 Mk II

### **Corrections**

- Corrected an issue where the SIP page could not be loaded. Applies to: All products with SIP support.
- Corrected an issue regarding the device software upgrade. Applies to: AXIS M3905-R/-MkIII, AXIS M4215/-LV/-V, AXIS M4218/-LV/-V, AXIS Q2101-TE, AXIS Q2111-E, AXIS Q3626-VE, and AXIS Q3628-VE
- General improvements regarding the memory usage. Applies to: AXIS M1075-L, AXIS M2035-LE, AXIS M3085-V, and AXIS M4215/-LV/-V

## **AXIS OS 11.10.64**

Release date: 2024-04-25

### **New products**

- AXIS XC1311

### **Corrections**

- General improvements in the Elevator door state detector ACAP. Applies to: AXIS P9117-PV

## **AXIS OS 11.10.61**

Release date: 2024-04-23

### **New products**

- AXIS P1385/-B/-BE/-E
- AXIS P1387/-B/-BE/-LE
- AXIS P1388/-B/-BE/-LE
- AXIS P4708-PLVE
- AXIS P9117-PV

### **Corrections**

- Corrected an issue with Video Motion Detection regarding log prints.
- Corrected an issue where emails sent by the device were missing message-id http header.
- Corrected an issue where Client Stream Data showed wrong FPS as viewer. Limitation: FPS restriction is removed when adaptive stream is enabled for viewers.
- Corrected an issue with masking in cameras when requesting a JPEG image.

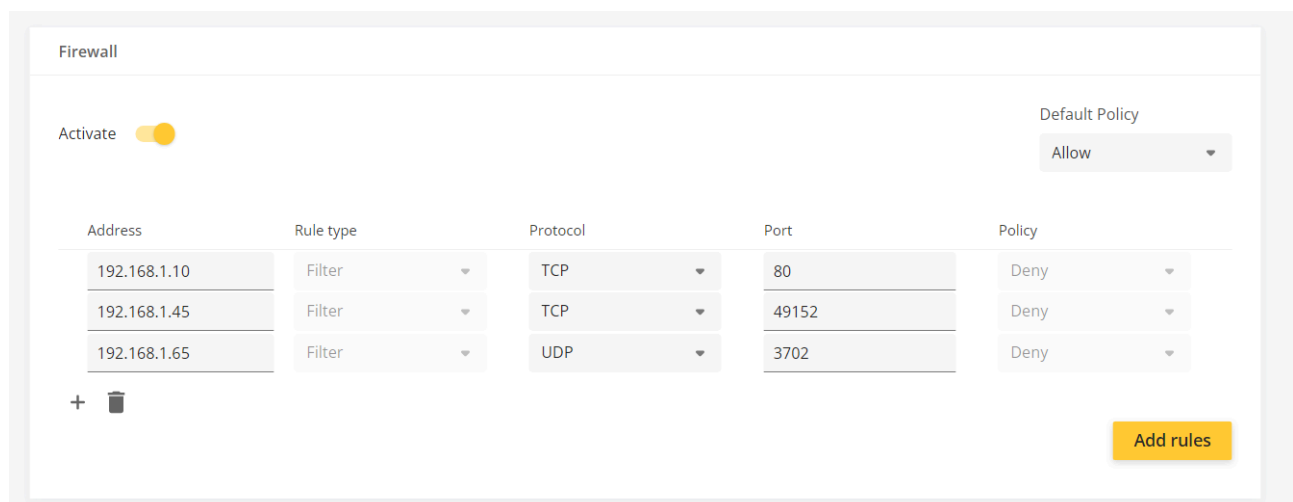
- Corrected an issue in AXIS Motion Guard regarding log prints. Applies to: All products with *AXIS Motion Guard* support
- Corrected an issue in AXIS Fence Guard regarding log prints. Applies to: All products with *AXIS Fence Guard* support
- Corrected an issue with AXIS Loitering Guard regarding log prints. Applies to: All products with *AXIS Loitering Guard* support
- Extended the number of preset positions for the built-in Pelco driver from 32 to 100. Additionally, introduced a new config option in plain configuration (UserAdv parameter). Applies to: All products with Pelco driver support
- Corrected an issue where the time and date in Edge were different from the device settings which led to announcements being triggered at wrong times. Applies to: AXIS C1310-E
- Corrected an issue where network paired radar did not remove object inside exclude zone. Applies to: AXIS P1465-LE-3 and AXIS P3265-LVE-3
- Corrected an issue where the stream stopped when selecting certain regions in ALPV under settings. Applies to: AXIS P1445-LE-3, AXIS P1455-LE-3, AXIS P1465-LE-3, AXIS P3245-LE-3 and AXIS P3265-LE-3
- Corrected an issue where front LED not turning off. Applies to: AXIS A8207-VE-MKII
- Corrected an issue where call button, keypad and reader became unresponsive. Applies to: AXIS A8207-VE, AXIS A8207-VE Mk II and AXIS I8016-LVE

## AXIS OS 11.9

Release date: 2024-02-26 – 2024-03-21

### Features for all products

- Added language as URL option. By adding "?language" to the URL, you are able to open the new web interface with different languages. Example: <http://DeviceIP/?language=sv-SE>
- Added the possibility in the installation page to configure individual channels when group view is selected.
- Improved behavior of the video pre-buffer when using multiple streams, so frames per seconds are more evenly distributed.
- Improved reaction time for overlays such as FPS and bit rate.
- Provided the ability to configure the host-based Firewall to the web-interface.



- AXIS Audio Manager Edge: Added the possibility to add both single events and intervals in one schedule, for both Advertisements and Announcements schedules.
- API updates

- Updated user-management API. In version 1.2, it is possible to retrieve information from the device if it supports admin users named anything else than "root".
- Added a new VAPIX REST API to be able to write a custom message into the system log of the device.

### Cybersecurity updates

- Addressed CVE-2024-0054. For more information, please visit the *Axis vulnerability management portal*.
- Addressed CVE-2024-0055. For more information, please visit the *Axis vulnerability management portal*.
- Updated *cURL to version 8.5.0* to increase overall cybersecurity level.
- Updated OpenSSH to version 9.6p1 to increase overall cybersecurity level.
- Trusted Execution Environment (TEE) Applies to: Products on , , and
  - The Trusted Execution Environment (TEE) is selectable as a secure keystore, providing higher performance and lower latency compared to the high-security and certified TPM 2.0 and Secure Element. More information and guidance can be found *here*.
  - Added a new certificate option in the web interface to be able to select Secure keystore = Trusted Execution Environment (SoC TEE).

### Analytics updates

- Improved object detection and added support for new object classes; HumanFace, LicensePlate, and vehicle sub-classes Bus, Car and Truck. These classes have been added to the RTSP video analytics metadata stream. More information is provided *here*. Applies to: AXIS P3727-PLETo see which classes are supported on your device, use `getSupportedMetadata` which is documented in the *The Analytics Metadata Producer Configuration API*. More information is provided in the *AXIS Developer Community* and the *AXIS OS Knowledge base*.
- AXIS Audio Analytics:
  - Adaptive audio detection: Detects sudden increases in the sound level.
  - Audio classification: The ability to detect scream and shout.
  - Added support to AXIS M3086-V Mic, AXIS P3267-LVE Mic and AXIS P9117-PV Corner Camera
- AXIS Object Analytics:
  - Added "Time in Area" scenario for panoramic camera and multi directional camera.
  - Presented motion setting as two separate scenarios: "Motion in area" and "Motion line crossing".
  - Increased max number of vertices from 10 to 20 for include areas.
  - Improved handling of animal false alarms.
  - Added the possibility to reuse include and exclude area from previous scenarios.
  - Improved detection algorithm for products.
  - Updated detection model for 360° products to ensure faster and more confident detections, especially in the periphery.
  - Improved vehicle tracking on and products.

Note that not all products support AXIS Object Analytics. For more information on compatible products and features, visit the *AXIS Object Analytics*.

### Software Bill Of Materials (SBOM) updates

Added:

- AXIS Fence Guard
- AXIS Motion Guard
- AXIS Loitering Guard
- Video Motion Detection (VMD)

- AXIS Object Analytics

#### Product specific features

- Enabled Radar and Camera Autocalibration for automatically learning scene elevation. Applies to: AXIS Q1656-DLE
- Added support for Network radar pairing (Edge-to-edge technology). The radar view will use the second view area to show the radar view when pairing is enabled. Applies to: AXIS P1465-LE-3 and AXIS P3265-LVE-3
- Beta version: New filter to decrease false alarms from ventilation systems, fans or other stationary rotating objects. Applies to: AXIS D2110-VE
- Added SIP support. Applies to: AXIS M3085-V, AXIS M3086-V and AXIS M3088-V
- Moved the button that toggles Echo cancellation on/off in the web interface to Audio > Device settings. Applies to: AXIS A8207-VE, AXIS A8207-VE Mk II, AXIS C1310-E, AXIS C1410, AXIS C1610-VE, AXIS C8110, AXIS C8210 and AXIS I8016-LVE
- Added "Traffic camera installation assistance" to the web interface. Applies to: AXIS Q1656/-B/-BE/-BLE/-DLE/-LE
- Improved Video Motion Detection (VMD) accuracy. Applies to: AXIS P3727-PLE
- Improved robustness of radar-video fusion analytics in shaky conditions, for example in strong wind. Applies to: AXIS Q1656-DLE
- Improved focus when fully zoomed in. Applies to: AXIS Q6225-LE

### AXIS OS 11.9.72

Release date: 2024-03-21

#### New products

- AXIS Q1805-LE
- AXIS Q1806-LE

#### Corrections

- Corrected an issue with audio noise that could potentially be experienced on some units. Applies to: AXIS Q1805-LE and AXIS Q1806-LE

### AXIS OS 11.9.71

Release date: 2024-03-20

#### New products

- AXIS D2210-VE

#### Corrections

- Corrected an issue causing zoom to stop working. Applies to: AXIS P5676-LE
- Corrected an issue causing objects to be tracked inside exclude zones. Applies to: AXIS D2110-VE, AXIS D2210-VE and AXIS Q1656-DLE
- Corrected an issue causing SmokeAlert to stop working. Applies to: AXIS P1468-XLE, AXIS XFQ1656 and AXIS XPQ1785

### AXIS OS 11.9.67

Release date: 2024-03-11

#### Corrections



- Improved audio quality on SIP calls. Applies to: All products with SIP support.
- Improved system stability. Applies to: AXIS A8207-VE and AXIS A8207-VE Mk II
- Products with Hardware ID 9F2 only supports active track 11.9. and later. The hardware ID can be found in Plain config > Properties > System > Hardware ID. Read more about hardware changes in *AXIS OS Knowledge base*. Applies to: AXIS S3016

### AXIS OS 11.9.63

Release date: 2024-03-04 – 2024-03-06

#### New products

- AXIS C1110-E
- AXIS C1111-E
- AXIS C1310-E Mk II
- AXIS C1410 Mk II

#### Corrections

- General improvements to the platform.

#### Limitations

- Lowered the current to 50 mA on the blue LED on certain speaker products. This is done to extend life expectancy of the blue LED. Applies to: AXIS C1110-E, AXIS C1111-E, AXIS C1410 and AXIS C1610-VE

### AXIS OS 11.9.60

Release date: 2024-02-26 – 2024-03-06

#### New products

- AXIS M3086-V Mic
- AXIS P3267-LVE Mic
- AXIS Q1961-XTE
- AXIS Q9307-LV

#### Corrections

- Corrected an issue where night mode was not switched off in some cases, when gain and exposure time was changed. Applies to: AXIS P1465-LE
- Corrected an issue with editing privacy masks, where the web interface was not responding correctly in some rare cases.
- Corrected an issue that made parameters inaccessible, when upgrading an ACAP application from a version using "root" user to a version with dynamic user.
- Corrected an issue with action rules, where the name of the preset was not added to the file name when exporting the image to FTP.
- Prevented ACAP application parameters from being read by a viewer account or by applications with a different primary group.
- Corrected an issue where the camera did not return to the start position after being physically forced to pan.
- Corrected an issue where the MQTT event rule stopped working after some time.
- Corrected an issue where parameters were not fetched correctly after an ACAP application upgrade.
- Corrected an issue where # in network sharing passwords was not supported.



- Corrected an issue where ACAPs that acquires VAPIX credentials via D-Bus API was not working correctly.

### Limitations

- **ACAP Computer Vision SDK delay**In AXIS OS 11.9, ACAP Computer Vision SDK applications built with ACAP Computer Vision SDK 1.12 or earlier that have a direct or indirect dependency on the library `libvdostream.so`, as instructed in various *acap-computer-vision-sdk-examples*, will encounter a runtime error. This occurs despite their successful execution on AXIS OS 11.8 and earlier versions. An update of such applications will be necessary to be compatible with 11.9 and future versions. An updated ACAP Computer Vision SDK is currently under development, more information will come.
- Corrected an issue with editing privacy masks, where the web interface was not responding correctly in some rare cases.
- *Old web interface* was removed due to limited flash memory space. *The new web interface* will be displayed after upgrade. Applies to: AXIS Q1659

## AXIS OS 11.8

Release date: 2024-01-08 – 2024-02-05

### Features for all products

- Added support for EventBroker MQTT capability in ONVIF profile M.
- Added the possibility to configure a proxy when setting up MQTT client in the web interface.
- Added support for DHCP option 121. Read more about the different options at HPE Aruba's *techhub*.
- Added automatic time zone configuration through DHCPv4 option 100/101 and DHCPv6 option 40/41. Manual timezone configuration will override the DHCP time zone configuration.
- Added support for listing and removing already uploaded custom-firmware certificates (CFC) in the security section in addition to just uploading CFCs.
- Moved configurations from the paging zone to the paging source in the AXIS Audio Manager Edge.
- Added support in ACAP SDK for accessibility of static HTML files for operators and viewers, in the new manifest schema.
- Added support for Reverse Proxy configuration in the ACAP manifest/installation framework.
- Added the possibility for ACAPs using the `axaudio` lib to be able to get raw (pcm) audio streams even if the input is disabled.
- Added information in the old web interface about its discontinuation after 2024 LTS.
- Added support for host-based firewall to improve network security. Not applicable for AXIS S30 series.
- The legacy "IP-Filtering"-service is deprecated and will be removed after AXIS OS 2024 LTS.
- API updates
  - Added a new Log API via the device config framework. A way to see if a device supports Log API is by running `http://{device}/config/discover/apis/log/v1`.
  - Added a new VAPIX REST API for saving/clearing all severity logs in one single persistent file.

### Cybersecurity updates

- Addressed CVE-2023-5800. For more information, please visit the *Axis vulnerability management portal*.
- Added support for IEEE 802.1AE MAC Security (MACsec) with Static CAK/Pre-Shared Key (PSK) and Dynamic CAK/EAP-TLS. Dynamic CAK/EAP-TLS is enabled by default. MACsec can be configured from the security tab in the web-interface and allows for complete layer-2 network encryption between the Axis device and network switch. Read more in the *AXIS OS Knowledge base*.
- Disabled the root-privileged access through the SSH-interface in the factory defaulted state. To allow root-privileged access through SSH, it must be enabled in Settings > Accounts > SSH accounts. Upgrade

without factory default will not affect the setting. For more information see *AXIS OS root ACAP signing* in Developer community and *Changes in AXIS OS 11* in AXIS OS portal.

- Disabled the root-privilege installation of ACAPs in the factory defaulted state. To allow the installation of root-privilege ACAPs, it must be enabled in Settings > Apps > Allow root-privileges apps. Upgrade without factory default will not affect the setting. For more information see *AXIS OS root ACAP signing* in Developer community and *Changes in AXIS OS 11* in AXIS OS portal.
- Added support for host-based firewall to improve network security. The legacy "IP-Filtering"-service is deprecated and will be removed after AXIS OS 2024 LTS.

### Analytics updates

- AXIS License Plate Verifier updated to 2.9.19. Read more what's included [here](#).
  - Added Diplomatic license templates for Switzerland.
  - Added to the metadata streaming when using ALPV.AllPlates the license plate crop as base64 format.
  - Added new data sets to the license plate detected, vehicle type and colour (tagged as beta).

### Product specific features

- Moved information in the device configuration web from the Audio/Overview page to Status page and created a new page for AXIS Audio Manager Edge. Applies to: AXIS C1210-E, AXIS C1211-E, AXIS C1310-E, AXIS C1410, AXIS C1510, AXIS C1511, AXIS C1610-VE, AXIS C8110 and AXIS C8210
- Corrected an issue where some web streams with OGG/VORBIS had periods of silence. Applies to: AXIS C1210-E, AXIS C1211-E, AXIS C1310-E, AXIS C1410, AXIS C1510, AXIS C1511, AXIS C1610-VE, AXIS C8110 and AXIS C8210
- Corrected an issue where some web streams with OGG/VORBIS had periods of silence. Added support for digital input to be used with AXIS T8355 Digital Microphone. Applies to: AXIS C8110
- Improve the classifier. Applies to: AXIS D2110-VE
- Enabled reclassifications to improve the accuracy of the classifications. Applies to: AXIS D2110-VE and AXIS Q1656-DLE
- Axis Sensor Metrics Dashboard is pre-installed. Applies to: AXIS F9111, AXIS F9114 and AXIS F9114-B
- Added support for WLAN country code. Applies to: AXIS M1075-L
- Added the possibility to configure scene annotations in the new web interface. Applies to: AXIS M5000-G and AXIS M5075-G
- Enabled the new web interface by default. The former web interface is still available as a fallback. Applies to: AXIS M5000, AXIS M5000-G and AXIS M5075-G
- Added the possibility to manually set the white balance. Applies to: Products based on
- Added MQTT Graph overlays. Applies to: Products based on except AXIS P3827-PVE, AXIS M4317-PLR, AXIS M4317-PLVE, AXIS M4318-PLR, AXIS M4318-PLVE, AXIS M4327-P and AXIS M4328-P



- Added support for AXIS T6101 Mk II to get features such as I/O to Axis cameras, two-way audio, one stream for audio and video, Voice Enhancer, etc. Applies to: AXIS P3245-LV/-LVE/-V/-VE, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE and AXIS Q6225-LE
- Added support for containers via ACAP SDK. The purpose of embedded containers is to provide a standardized and portable runtime environment for applications running on embedded systems, enabling faster and more efficient development and deployment of software. For more information visit [Axis github](https://github.com/axis-ai). Applies to: AXIS P4705-PLVE and AXIS P4707-PLVE
- Improved radar-video fusion for traffic. Applies to: AXIS Q1656-DLE
- Added a new VAPIX REST API to thermography-cgi. Applies to: AXIS Q1951-E, AXIS Q1952-E, AXIS Q1961-TE and AXIS Q8752-E
- Added support for RAID 6 RAID level. Applies to: AXIS S3016
- Added support for power demotion, to handle products with higher POE classes than supported. Applies to: AXIS S3008, AXIS S3008 Mk II and AXIS S3016

## AXIS OS 11.8.74

Release date: 2024-01-31 – 2024-02-05

### New products

- AXIS M5526-E
- AXIS Q1808-LE

### Limitations

- AXIS Audio Manager Edge requires AXIS OS version 11.8.74 or higher, alternatively LTS 2022 10.12.221.1 or higher, on all devices in the site. Other combinations of higher and lower AXIS OS versions will result in sound playing out of sync. Applies to: AXIS C1210-E, AXIS C1211-E, AXIS C1310-E, AXIS C1410, AXIS C1510, AXIS C1511, AXIS C1610-VE, AXIS C8110 and AXIS C8210

### Corrections

- Corrected a web interface issue where the SIP account was not displayed correctly on the DTMF page. Applies to: AXIS A8207-VE, AXIS A8207-VE Mk II, AXIS C1210-E, AXIS C1211-E, AXIS C1310-E, AXIS C1410, AXIS C1510, AXIS C1511, AXIS C1610-VE, AXIS C8110, AXIS C8210, AXIS I8016-LVE and AXIS I8116-E

- Corrected an issue where some web streams with OGG/VORBIS had periods of silence. Applies to: AXIS C1210-E, AXIS C1211-E, AXIS C1310-E, AXIS C1410, AXIS C1510, AXIS C1511, AXIS C1610-VE, AXIS C8110 and AXIS C8210
- Corrected an issue where credentials was unnecessary requested by AXIS License Plate Verifier after upgrade. Applies to: AXIS P1445-LE-3, AXIS P1455-LE-3, AXIS P1465-LE-3, AXIS P3245-LVE-3 and AXIS P3265-LVE-3
- Corrected an issue for user access right when using manifest.json and requiring specific HTML file access for different users. Applies to: AXIS P1445-LE-3, AXIS P1455-LE-3, AXIS P1465-LE-3, AXIS P3245-LVE-3 and AXIS P3265-LVE-3

### AXIS OS 11.8.61

Release date: 2024-01-08

#### New products

- AXIS S3008 Mk II
- AXIS S3016

#### Corrections

- Corrected an issue where bottom part of bounding boxes in motion guard were missing in the RTSP stream.
- Corrected an issue where it was not possible to add license if the ACAP uses semantic versioning.
- Corrected an issue with control queue time not working correctly.
- Corrected an issue with overlay not shown correctly in snapshots.
- Corrected an issue where overlays were missing in snapshots.
- Corrected an issue with MQTT overlay.
- Corrected an issue where TCP notification messages would spam if the message was empty.
- Corrected an issue with AXIS License Plate Verifier application, since there is no dedicated root user in factory defaulted state.
- Corrected an issue with Night mode not possible to activate when WDR was disabled. Applies to: AXIS M1055-L, AXIS M1075-L, AXIS M3085-V, AXIS M3086-V and AXIS M3088-V
- Corrected an issue causing slight waves/vibrations in the image. Applies to: AXIS Q6225-LE
- Corrected an issue with audio sources when using AXIS T6101. Applies to: AXIS P3255-LVE
- Improved system stability. Applies to: AXIS P3265-LV

### AXIS OS 11.7

Release date: 2023-11-13 – 2023-11-23

#### Features for all products

- Added support for configuring OAuth 2.0 RFC6749 OpenID Authorisation Code Flow in the account section of the web interface. For more information, visit the *Axis Device Configuration*.
- Added a new parameter "bootid" to Systemready.cgi to help determine if the devices have been restarted.
- Added support for creating ECC key pairs and certificates, in the web interface.
- Added Zipstream storage profile support for edge storage. Note that it is not applicable for AXIS S3008.
- Improved DTMF functionality and usability.
  - Added more flexibility to configure DTMF via the web interface, by allowing multiple SIP accounts to trigger a DTMF event and seamlessly create multiple DTMF events.

- Moved the DTMF configuration from the SIP account settings to a separate configuration tab that collects and displays all DTMF settings.
- Added support for selecting manually 1000 Mbit/s duplex or half-duplex speeds in the web-interface for troubleshooting purposes. Note that this selection is only available for products that support this network speed.

#### Cybersecurity updates

- Updated *Apache* to version 2.4.58 to increase overall cybersecurity level.
- Updated *cURL* to version 8.4.0 to increase overall cybersecurity level.
- Updated OpenSSL to version 1.1.1w to increase overall cybersecurity level.
- Updated *OpenSSL* to version 3.0.12 to increase overall cybersecurity level.
- Addressed CVE-2023-21416. For more information, please visit the *Axis vulnerability management portal*.
- Addressed CVE-2023-21417. For more information, please visit the *Axis vulnerability management portal*.
- Addressed CVE-2023-21418. For more information, please visit the *Axis vulnerability management portal*.
- Addressed CVE-2023-5553. Note that downgrading the product to an older AXIS OS version other than the latest supported 10.12 LTS track release is not possible. For more information, please visit the *Axis vulnerability management portal*. Applies to: Products based on

#### Analytics updates

- The bounding box associated to the human face class is now extended to the head. Applies to: Products based on and that support metadata
- Improved tracking of humans in situations where frequent object overlapping and occlusions can occur. Applies to: Products based on and that support metadata
- AXIS Object Analytics:
  - Removed beta tag for Occupancy in area and Crossline Counting.
  - Added CSV export function for Occupancy in area and Crossline Counting.

Note that not all products support AXIS Object Analytics. For more information on compatible products and features, visit the *AXIS Object Analytics*.

#### Product specific features

- Added support for road monitoring profile. Applies to: AXIS Q1656-DLE
- Added a beta version of small filter, to reduce false alarms from animals and small objects. Applies to: AXIS D2110-VE
- Added the ability to do PTZ pairing and radar autotracking, in the new web interface. Applies to: AXIS D2110-VE and AXIS Q1656-DLE
- Added the possibility to configure pencil filter in plain config. Settings > Plain Config > Search for "pencil". Applies to: AXIS Q1656 and AXIS Q1656-B
- Added support for T6101 Mk II to get features such as I/O to Axis cameras, two-way audio, one stream for audio and video, Voice Enhancer, etc. Applies to: AXIS Q6315-LE, AXIS P3807-PVE, AXIS P3715-PLVE, AXIS Q6215-LE and AXIS P3717-PLE
- Added missing sensors to vipd-sensor-conf for F91-series modular cameras. Applies to: AXIS F9104, AXIS F9111 and AXIS F9114
- Added support for both 16:9 and 4:3 aspect ratios, in AXIS Live Privacy Shield. Applies to: Products based on

## AXIS OS 11.7.65

Release date: 2023-11-28

### Corrections

- Corrected an issue with false alarms in AXIS Object Analytics. Applies to: AXIS Q1656-DLE

## AXIS OS 11.7.61

Release date: 2023-11-21

### New products

- AXIS P3268-SLVE
- AXIS P3735-PLE
- AXIS P3737-PLE
- AXIS P3738-PLE

### Cybersecurity updates

- Updated *Apache* to version 2.4.58 to increase overall cybersecurity level.

### Corrections

- Corrected an issue where event rules using pulse schedules, stopped working after network interruption.
- Corrected an issue where sending email without subject or message, was not possible.
- Corrected an issue where FTP upload event stopped working.

## AXIS OS 11.7.57

Release date: 2023-11-13

### Corrections

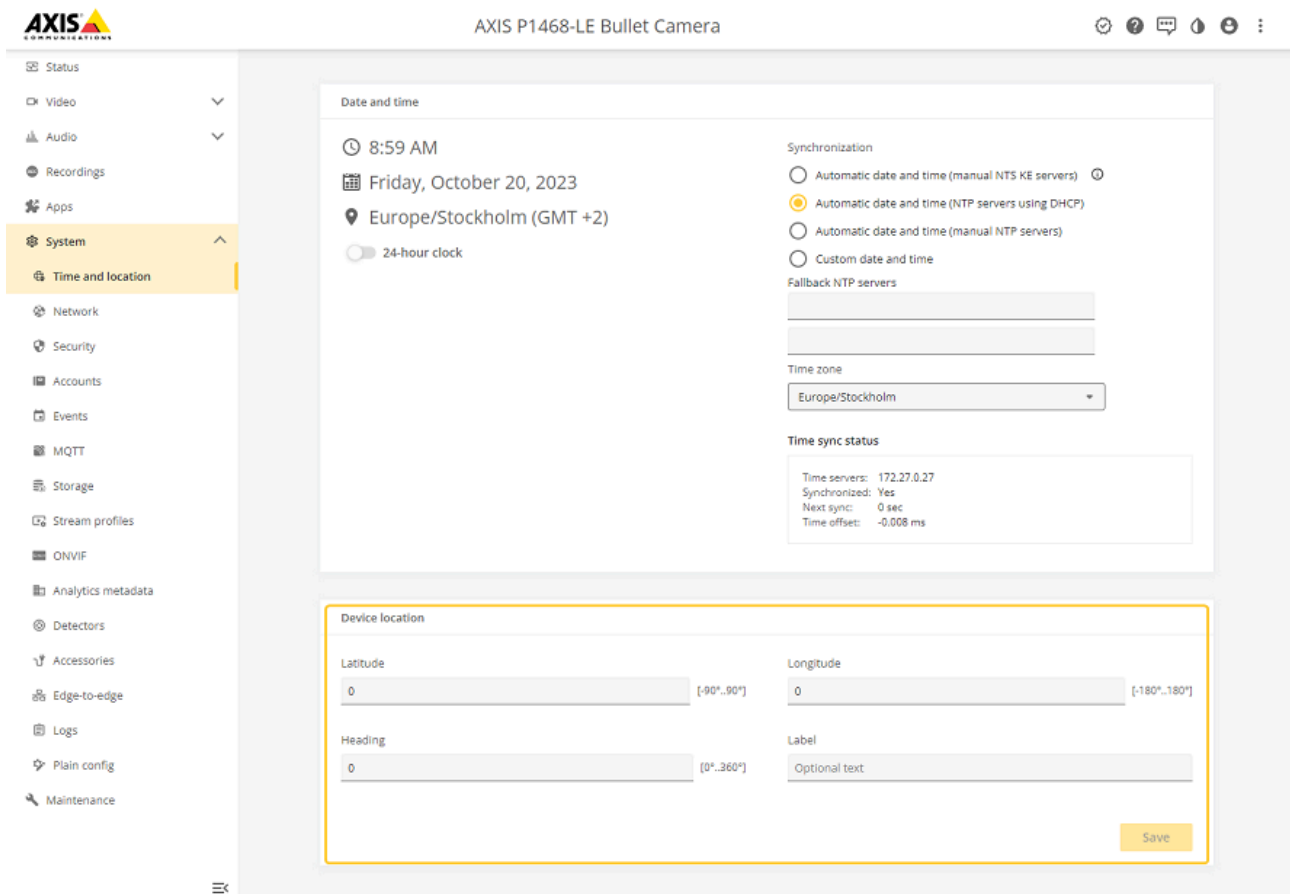
- Corrected an issue with events related to DTMF.
- Corrected an issue where network share recipient hostname with '-' character, was not working correctly.
- Corrected an issue with LED stripe. Applies to: AXIS A8207-VE and AXIS A8207-VE Mk II
- Corrected an issue where day-night mode was missing in Event rules. Applies to: AXIS M1135/-E Mk II, AXIS M1137/-E Mk II, AXIS M3085-V, AXIS M3086-V and AXIS M3088-V and AXIS M5075-G
- Corrected an issue for user access right when using manifest.json and requiring specific HTML file access for different users. Applies to: AXIS P1445-LE-3, AXIS P1455-LE-3, AXIS P1465-LE-3, AXIS P3245-LVE-3 and AXIS P3265-LVE-3
- Corrected an issue that made the group view non retrievable when using the rotation option when fetching a stream. Applies to: AXIS P3727-PLE, AXIS P4705-PLVE and AXIS P4707-PLVE
- Corrected an issue where "Thermographic analysis is not ready yet" was not shown after restart. Applies to: AXIS Q2101-TE
- Corrected an issue with multicast that caused similar but different stream to be interpreted as the same. Applies to: AXIS Q6010-E

## AXIS OS 11.6

Release date: 2023-09-18 – 2023-10-02

### Features for all products

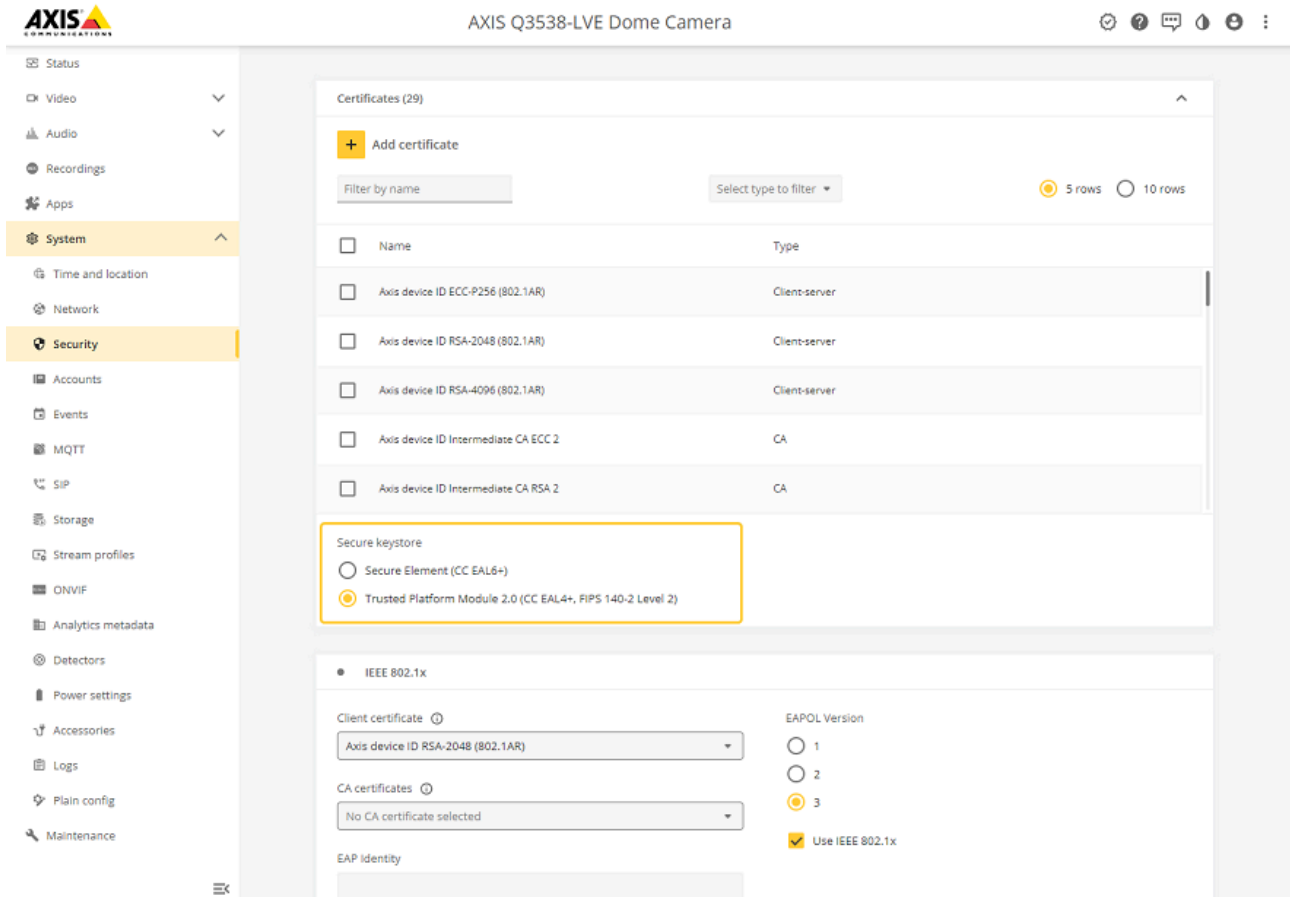
- Changed behavior of the pre-buffer to be prioritized over the frames per second (FPS). The device might lower the configured FPS dynamically to achieve the set pre-buffer.
- A new VAPIX REST API for certificate management has been added. For more information, please visit the *VAPIX Library*.
  - Improved certificate signing request (CSR) installation flow.
  - Added the possibility for CSR-generation of ECC-cryptography..
  - Added the possibility for CSR-generation of RSA-cryptography higher than 2048-bit.
  - Added the possibility to select Secure Keystore (TPM, Secure Element).
  - Added the possibility to add subject alternative name (SAN).
- Added support for OAuth 2.0/OpenID Connect that provides centralized Identity Access Management (IAM) through active directory federated services (ADFS) and identity provider (IDP) solutions. For more information please visit the *OAuth 2.0 OpenID Connect* in AXIS OS Portal.
- Updated the terminology of "user accounts" in the web interface and renamed to "Accounts" to align with IT-industry standard terminology. Web interface URL changed from `/index.html#/system/users` to `/index.html#/system/accounts`.
- Added the possibility for feature flag toggling of restrictRootAccess. Detailed information is provided [here](#).
- Added support for more than seven identical streams. The maximum identical streams is equal to the MaxViewers parameter value.
- Changed name of Date & Time to Time & Location, after adding geolocation. Web interface URL changed from `/index.html#/system/dateTime` to `/index.html#/system/timeLocation`.
- Added the possibility to set geolocation, via **System > Time and Location**.



- Added support for ACAPs to get VAPIX access without storing local credentials. Please go to the *ACAP Developer Guide* for more information.



- Added the possibility to select the default Secure Keystore prior to uploading private keys in the security tab in the web interface.



- Possible to create custom named initial VAPIX user instead of "root".
- Added new proprietary "Axis" format to the Remote Syslog Format.
- Improved SNMP Monitoring by adding support for the ipAddressTable OID.
- Added an HTTP proxy setting to the MQTT client configuration.

## Cybersecurity updates

- Updated *cURL* to version 8.2.0 to increase overall cybersecurity level.
- Updated OpenSSL to version 1.1.1v to increase overall cybersecurity level.
- Added platform support for *OpenSSL* 3.0, starting with version 3.0.10 to increase overall cybersecurity level. OpenSSL 1.1.1 on the AXIS OS Active track is now deprecated and will be removed in AXIS OS 12 during Q3 2024. Please visit the *Open Source Library Support* for more information.
- Updated TPM (Trusted Platform Module) to version 4.0.0 to increase overall cybersecurity. Applies to: All products with Secure Keystore support.
- Added support for EAP-PEAP/MSCHAPv2 in IEEE 802.1X network access control authentication.
- Addressed CVE-2023-21413. For more information, please visit the *Axis vulnerability management portal*.
- Addressed CVE-2023-21414. Note that downgrading the product to an older AXIS OS version other than the latest supported 10.12 LTS track release is not possible except for Q3527-LVE that has support for 9.80 LTS. For more information, please visit the *Axis vulnerability management portal*. Applies to: AXIS A8207-VE Mk II, AXIS Q3527-LVE and all products based on
- Addressed CVE-2023-21415. For more information, please visit the *Axis vulnerability management portal*.

## Analytics updates



- **AXIS Object Analytics:**  
Applies to: Products based on and
  - Improved the alarm logic when objects leave the "include" area.
  - Added an occupancy threshold feature to the alarm logic that triggers actions based on the desired amount of objects in the area of interest.

Note that not all products support AXIS Object Analytics. For more information on compatible products and features, visit the *AXIS Object Analytics*.

### Product specific features

- Added option to inverted byte order for secure card data. Removed the possibility to submit PIN only in Configuration check, workaround for sending PIN only is to send the PIN and then press the # on the product image. Applies to: AXIS A8207-VE and AXIS A8207-VE Mk II
- Removed the "Make calls in the video management system (VMS)" toggle and VMS recipient can now be created and added under recipients. When upgrading from previous firmware the VMS toggle will be converted and shown under "Recipients from call information" VMS call will behave the same way as before the upgrade. Applies to: AXIS A8207-VE, AXIS A8207-VE Mk II and AXIS I8016-LVE
- Added the possibility to add multiple sources to a scheduled event when scheduling music in AXIS Audio Manager Edge. Applies to: AXIS C1210-E, AXIS C1211-E, AXIS C1310-E, AXIS C1410, AXIS C1510, AXIS C1511, AXIS C1610-VE, AXIS C8110 and AXIS C8210
- Added possibility to use the front LED via Siren & Light service, configurable via ADA Light menu and with added pre-installed action rules for turning on green LED when microphone is active (feature seen in other speakers with front LED). Applies to: AXIS C1310-E
- Improved dewarp of the custom view. Custom view is renamed "Custom view (4:3)" and optimized for 4:3 ratio with the new improved dewarping. A new Custom view named "Custom view (16:9)" is added optimized for 16:9 ratio with new improved dewarping. Applies to: AXIS I8016-LVE
- Added the possibility to create pencil video filters, in the web interface and via VAPIX. Applies to: AXIS M1055-L and AXIS M1075-L
- Added the possibility to improve latency for single stream by using video codec H.264 and no Zipstream. Applies to: AXIS M3905-R and AXIS P3905-R Mk III
- Added support for power settings. Applies to: AXIS P1375-E, AXIS P1377-LE and AXIS P1378-LE
- Added ring-power 12V for microphone line in. Applies to: P3265-LV/-LVE/-V, AXIS P3267-LV/-LVE, AXIS P3268-LV/-LVE, AXIS P7304 and AXIS P7316
- Changed the new web interface to be enabled by default. The former web interface is still available as a fallback. Applies to: AXIS Q1700-LE, AXIS Q1715, AXIS Q1785-LE, AXIS Q1786-LE, AXIS Q8752-E and AXIS Q1798-LE
- Added support for PoE3. Added support for presets in web interface. Applies to: AXIS Q3626-VE and AXIS Q3628-VE
- Improved radar-video fusion of vehicles. Applies to: AXIS Q1656-DLE
- Added the possibility to be able to configure the radar line crossing scenario to require an object to cross two lines before triggering an event. Applies to: AXIS Q1656-DLE and AXIS D2110-VE

### AXIS OS 11.6.105

Release date: 2023-10-30

#### Corrections

- Corrected an issue where the control queue and the user limit settings, were missing in the web interface. Applies to: All products with digital and mechanical PTZ support.
- Corrected an issue where connection between AXIS Q6100-E or AXIS Q6010-E and the attached PTZ was not possible. Applies to: All products supported by AXIS Q6100-E and AXIS Q6010-E.

## AXIS OS 11.6.104

Release date: 2023-10-16

### Corrections

- Improved system stability when connected to VMS.Applies to: AXIS M3077-PLVE
- Corrected an issue where pulling many multiple streams were not working correctly after upgrade to AXIS OS 11.5.Applies to: AXIS P3719-PLE
- Corrected an issue where the control queue and the user limit settings, were missing in the web interface.Applies to: AXIS Q8752-E

## AXIS OS 11.6.94

Release date: 2023-09-28

### New products

- AXIS D1110 Video Decoder 4K

### Features

- Added support for T6101 Mk II to get features such as I/O to Axis cameras, two-way audio, one stream for audio and video, Voice Enhancer, etc.Applies to: AXIS P3265-LV/-LVE/-V, AXIS P3267-LV/-LVE, AXIS P3268-LV/-LVE

### Corrections

- Corrected an issue with streaming when using AXIS Companion mobile app and updating the audio parameter via the web interface.
- Corrected an issue where "Full recipient URL" displayed an incorrect URL in the web interface for action rules.
- Corrected an issue where mounting network share with "space" character in the name, was not working correctly.
- Resolved an issue with incorrect namespace prefixes in ONVIF XML Analytics Scene Description metadata.
- Corrected an issue with displaying frame rate with decimals.
- Solved an issue with images in the overlay, where an image with a transparent background was displayed completely transparent.Applies to: Products based on
- Corrected an issue where PTZ movement was not working correctly, when using AXIS T8311.Applies to: All products with PTZ support
- Corrected an issue with invalid output.Corrected an issue with model output that was incorrect.Applies to: Products based on
- Corrected an issue with IR LED intensity adjustment.Applies to: AXIS F9114 Main unit and AXIS F9114-B Main Unit
- AXIS Object Analytics: Corrected an issue regarding metadata overlay being drawn in incorrect resolution.Applies to: AXIS M1137/-E, AXIS P3727-PLE and AXIS Q3819-PVE
- Corrected an issue where the GetPreset ONVIF command was not working correctly.Applies to: AXIS M5000/-G
- Corrected an issue where low resolution could not be shown correctly in the AXIS Companion mobile app using Google Pixel 5.Applies to: AXIS P3719-PLE, AXIS Q6010-E, AXIS Q6100-E and AXIS Q9216-SLV
- Corrected the focal length limits when using a CS-mount lens with DC-iris.Applies to: AXIS Q1645/-LE, AXIS Q1647/-LE and ExCam XF Q1645

- Corrected an issue where manual focus was not working correctly via ONVIF command, if using third-party driver. Applies to: AXIS Q1656/-B
- Added small object filter to decrease false alarms from animals and small objects. Improved the radar track classifier. Improved fusion using radar and video classifications. Applies to: AXIS Q1656-DLE
- The minimum trigger duration time can be configured for each scenario individually. A short trigger duration time can be used for object counting, and a long trigger duration time can be used to throttle the frequency of triggers. Applies to: AXIS Q1656-DLE and AXIS D2110-VE
- Resolved an issue with warning in logs about too high temperature. Applies to: AXIS Q3536-LVE and AXIS Q3538-LVE
- Corrected an issue with Orientation Aid ACAP to be able to move the compass bar correctly via ONVIF commands. Applies to: AXIS Q6135-LE and AXIS Q6315-LE
- Corrected an issue where the overlay cut off lower part of the images. Applies to: AXIS Q6215-LE
- Corrected an issue where wiper was not possible to run through ONVIF command. Applies to: AXIS Q8615-E and AXIS Q8752-E

#### Limitations

- Export recording includes up to but excludes the stoptime parameter.

## AXIS OS 11.5

Release date: 2023-06-12 – 2023-07-03

#### Features for all products


- Added detailed health information from SD cards to the server report, including power cycle statistics and flash wear rates. This improvement allows for a better monitoring of the system's health that can prevent downtime or data loss.
- Added the ability to hide the navigation sidebar and header by adding '?header=0&navigationsidebar=0' to the URL. For better integration when in embedded in applications.
- Overlay modification through parameter.cgi is now deprecated.
- Changed to using MP4 streaming in the web interface, which will give better support for iPad and streaming in Safari.
- Updated time zone database version to 2023c.
- Enhanced SNMP Monitoring: Resolved a missing TCP sub-tree OID issue in NET-SNMP by adding support for the SNMP TCP MIB object .1.3.6.1.2.1.6. This improvement ensures a smooth and uninterrupted SNMP monitoring experience.
- Improved UPnP compliance by updating the SSDP (Simple Service Discovery Protocol) SERVER header in the standard "OS/version UPnP/1.0 product/version" format. This enhances consistency and compatibility.

#### Cybersecurity updates

- Added a VAPIX parameter to allow/prevent the installation of root-privileges requiring ACAP applications. The parameter was added for testing purposes and can be adjusted from the Apps tab in the web-interface. For more information please read more at *Additional security in AXIS OS and ACAP applications* and *Upcoming breaking changes*.
- Added HTTP(S) Content-Security Policy and Referrer Policy header to increase overall minimum cybersecurity level. More information can be found at *Default HTTP(S) Headers*. The custom HTTP header VAPIX API can be used to configure HTTP headers. For more information, visit the *VAPIX library*.
- Added SSH User VAPIX API, which provides an interface to create, modify, and delete SSH users. SSH users can be configured via *VAPIX API* or using the web-interface user section. More information can be read here *SSH access*.

Users

+ Add user

Role	Username
 Administrator	root

Anonymous users

Allow anonymous viewing ☐

Allow anonymous PTZ operating ☐

SSH users

+ Add SSH user

Username	Comment
andre	
peter	

- Improved overall cybersecurity and system robustness by separating VAPIX users from AXIS OS system users. The initial user 'root' is now a standard administrator-privileged user account instead.
- Brute Force Delay Protection is now enabled by default. For more information, go to *Brute force delay protection*.
- Updated *Apache* to version 2.4.57 to increase the overall cybersecurity level.
- Updated OpenSSL to version 1.1.1u to increase overall cybersecurity level.
- Addressed CVE-2023-21405. For more information, please visit the *Axis vulnerability management portal*. Applies to: AXIS A8207-VE and AXIS A8207-VE Mk II

### Analytics updates

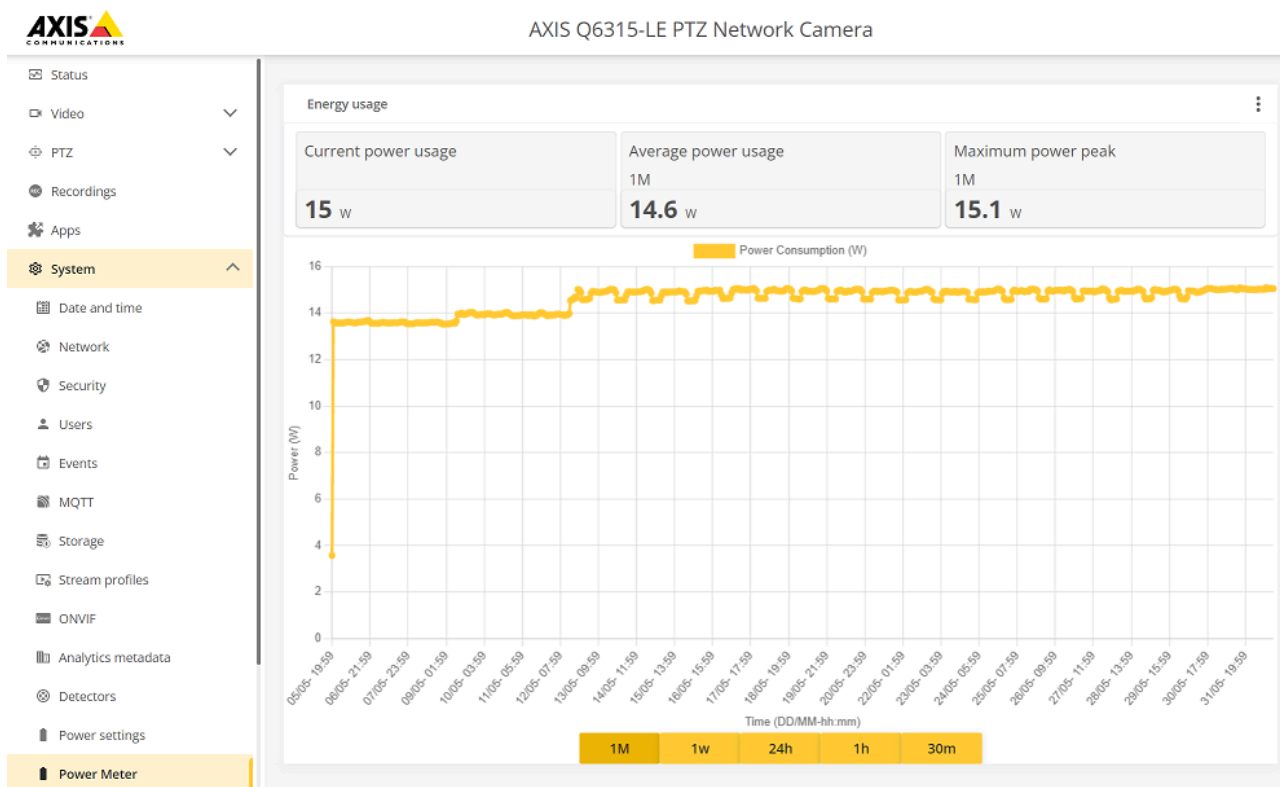
- AXIS Object Analytics:
  - Improved tracking of humans in situations where frequent object overlapping and occlusions can occur, leading to overall performance improvements for Time in area functionality. Applies to: Products based on and .
  - Added Occupancy in area (BETA) scenario which counts objects present within a defined area. Applies to: Products based on and .
  - Added new template system to assist with configuration of new scenarios. Applies to: Products based on and .
  - Limitations: Occupancy in area (BETA) data table in metadata overlay not available. Applies to: Products based on .

Note that not all products support AXIS Object Analytics. For more information on compatible products and features, see *AXIS Object Analytics*.

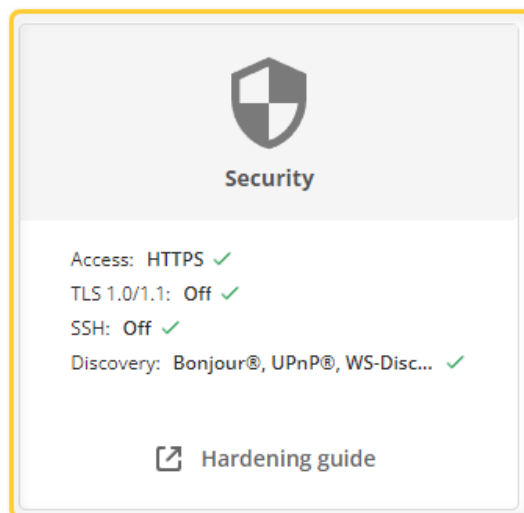
- Added support for human body clothing color in the AnalyticsSceneDescription metadata over ONVIF RTSP stream. Added support for upper/lower clothing color as an attribute to the human object class in the ONVIF RTSP stream. Applies to: Products based on and that supports metadata.

### Product specific features

- Added support for T6101 Mk II to get features such as I/O to Axis cameras, two-way audio, one stream for audio and video, Voice Enhancer, etc. Applies to: AXIS M2035-LE, AXIS M2036-LE, AXIS M3067-P, AXIS M3068-P, AXIS M4317-PLR/-PLVE, AXIS M4318-PLR/-PLVE, AXIS P3727-PLVE, AXIS P4705-PLVE, AXIS P4707-PLVE and AXIS Q6135-LE
- Added the ability to use custom ringtones, ringback tones and change their sound volumes. Added that the call button on the Configuration check page also will trigger the Events system. Applies to: AXIS A8207-VE, AXIS A8207-VE Mk II and AXIS I8016-LVE
- Added support for AXIS Live Privacy Shield. Applies to: AXIS M4216-LV/-V
- Objects' speed and distance are available in AXIS Object Analytics metadata overlay. Radar-video fusion algorithm takes light conditions into account for increased classification robustness. Improved radar video fusion performance in Axis Object Analytics when the optics are zoomed in. Improved image quality at low light conditions to resolved noise in the image that could occur in edges and corners. Enable radar-video fusion by default in analytics metadata stream. Applies to: AXIS Q1656-DLE,
- Improved low light performance by increased maximum gain from 51 dB to 57 dB. Improved image quality at low light conditions to resolved noise in the image that could occur in edges and corners when enabling Barrel distortion correction. Applies to: AXIS Q1656-B/-BE/-BLE/-LE
- Added the possibility to see power consumption in PTZ cameras. Go to **System > Power Meter** to see or download current and average power usage, as well as maximum power peak. Applies to: AXIS P5676-LE, AXIS Q6135-LE, AXIS Q6215-LE, AXIS Q6225-LE, AXIS Q6315-LE and AXIS Q6318-LE



- Added support for Network speaker pairing (Edge-to-edge technology), enabling synchronization of audio playback. More information is found in *Edge-to-edge technology*. Applies to: AXIS Q6225-LE
- Improved performance for the Orientation aid application. Applies to: AXIS Q6078-E and AXIS Q6318-LE
- Improved the ability to see security related statuses in the web interface. Applies to: AXIS S3008



- Added support for containers via ACAP SDK. The purpose of embedded containers is to provide a standardized and portable runtime environment for applications running on embedded systems, enabling faster and more efficient development and deployment of software. For more information: <https://github.com/AxisCommunications/docker-acap> Applies to: AXIS S3008

## AXIS OS 11.5.81

Release date: 2023-08-30

### Corrections

- Corrected IR-functionality on sensor 3 and sensor 4. Applies to: AXIS Q6010-LVE and AXIS Q6100-E

## AXIS OS 11.5.77

Release date: 2023-08-10

### Corrections

- Corrected an issue that could bring the camera in an out of focus state. To activate the correction on the affected units, an additional restart is required after the upgrade. Applies to: AXIS Q3536-LVE, AXIS Q3538-LVE and AXIS Q3538-SLVE

## AXIS OS 11.5.75

Release date: 2023-07-27

### Features

- Updated the Beta version of Early Fire Detection. Applies to: AXIS Q1961-TE and AXIS Q2101-TE

### Corrections

- Corrected an issue, which in combination with sound detection ACAPs, caused audio to fail. Applies to: AXIS M3077-PLVE, AXIS M4308-PLE, AXIS V5925 and AXIS V5938

## AXIS OS 11.5.72

Release date: 2023-07-13

### New products

- AXIS Q3626-VE
- AXIS Q3628-VE

## **AXIS OS 11.5.70**

Release date: 2023-07-04

### **Corrections**

- Added support for AXIS TU8003.Applies to: AXIS Q6225-LE
- Improved system stability.Applies to: AXIS Q1656-DLE

## **AXIS OS 11.5.64**

Release date: 2023-06-19

### **New products**

- AXIS I8116-E
- AXIS P3827-PVE
- AXIS M4317-PLVE
- AXIS M4318-PLVE
- AXIS P5654-E Mk II

### **Corrections**

- Corrected a network sharing issue where connection via SMB1 and SMB2 was not possible.
- Corrected an issue where available scenarios are not displayed correctly in AXIS Object Analytics: Calibrate perspective.Applies to: AXIS P4705-PLVE and AXIS P4707-PLVE
- Corrected an issue in AXIS Object Analytics: Calibrate perspective, where the wrong camera's video stream was displayed.Applies to: AXIS P3727-PLVE

## **AXIS OS 11.5.54**

Release date: 2023-06-12

### **New products**

- AXIS P1468-XLE
- AXIS Q2101-TE
- AXIS XEQ1656

### **Corrections**

- Corrected an issue with OAK (owner authentication key). It now only produces warnings in the log instead of errors if the device is not able to connect to the internet.
- Corrected an issue in VDO Api, related to orientation when rotation has been changed.
- Corrected an issue where sequence ID modifiers #s and #S were not displaying the expected values.
- Corrected an issue with opening Edge over remote URL in AXIS Audio Manager Center.Applies to: AXIS C1410 and AXIS C8210
- Corrected an issue that could cause faulty speaker calibrations. When the calibrations is invalidated and the device will show as "Not calibrated" in the device configuration web. The device should then be calibrated.Applies to: AXIS C1310-E, AXIS C1410 and AXIS 1610-VE
- Corrected an issue with displaying incorrect bouncing boxes in AXIS Face Detector.Applies to: AXIS FA51/-B
- Corrected an issue where multicast was not working correctly for quad stream.Applies to: AXIS F9104-B, AXIS F9114/-B, AXIS FA54, AXIS M7104, AXIS M7116, AXIS P3717-PLVE, AXIS P3719-PLVE, AXIS P7304 and AXIS P7316

- Corrected an issue in the metadata sample fram for AnalyticsSceneDescription. The filed "VehicleInfo" was missing and the class type "bike" incorrectly part of the class info when it should be part of the VehicleInfo with the name "Bicycle". Applies to: AXIS M1135/-E Mk II, AXIS M1137/-E Mk II, AXIS P3727-PLV and AXIS Q3819-PVE
- Corrected an issue with manual heating control that was not working properly.Applies to: AXIS Q1951-E and AXIS Q1952-E
- Corrected an issue with autofocus not working correctly when zooming if WDR is enabled.Applies to: AXIS Q6318-LE

### Limitations

- To be able to create action rules events for view areas, the option PTZ for the view area must be enabled.
- Automatic gain control doesn't work correctly together with Voice Enhancer in some environments. Applies to: AXIS M2035-LE, AXIS M2036-LE, AXIS M3067-P, AXIS M3068-P, AXIS M4317-PLR/-PLVE, AXIS M4318-PLR/-PLVE, AXIS P3727-PLV, AXIS P4705-PLVE, AXIS P4707-PLVE and AXIS Q6135-LE

## AXIS OS 11.4

Release date: 2023-04-12 — 2023-04-24

### Features for all products

- Added support for showing MQTT subscription data as text overlay. See below video for more information.



- New Bonjour services have been implemented to simplify the discovery of the product. For more information, go to *AXIS Bonjour implementation*.
- Added support for low latency streaming of live video, with and without audio. Supported media codecs are H.264/H.265 and AAC and supported containers are mp4 and matroska.
- Added a link to AXIS OS Release notes portal in the device web interface.

### Cybersecurity updates

- Updated *Apache* to version 2.4.56 to increase the overall cybersecurity level.
- Updated *cURL* to version 8.0.1 to increase overall cybersecurity level.
- Added a security card to the Status page in the new web interface showing the security-related device status.





## AXIS Q6315-LE PTZ Network Camera

The screenshot shows the 'Status' page of the AXIS Q6315-LE PTZ Network Camera. The left sidebar contains navigation links: Status (selected), Video, PTZ, Recordings, Apps, System, and Maintenance. The main content area displays several status cards:

- Device info:** Date and time: 6/1/2023 07:19:06, IP address: 172.27.62.181, Serial number: B8A44F1BAB7E, Firmware version: 11.6.15. Includes an 'Upgrade firmware' button.
- Time sync status:** Synchronized: Yes, Next sync: 00:00:32, Time offset: 0.001 ms, NTP servers: 172.27.0.27. Includes an 'NTP settings' button.
- Security (highlighted):** Access: HTTPS ✓, TLS 1.0/1.1: Off ✓, SSH: Off ✓, Discovery: Bonjour®, UPnP®, WS-Disc... ✓. Includes a 'Hardening guide' link.
- PTZ:** Pan: OK, Tilt: OK, Camera: OK, Last test date: 6/1/2023 5:42:19 AM. Includes a 'Test' button.
- Connected clients:** Connections: 5, Connected clients: 2. Includes a 'View details' button.
- Ongoing recordings:** No recordings in progress. Includes a 'Recordings' button.

- Addressed CVE-2023-21404. For more information, please visit the [Axis vulnerability management portal](#).

## Analytics updates

- Updated AXIS License Plate Verifier to version 2.7.1. Applies to: AXIS P1445-LE-3, AXIS P1455-LE-3 and AXIS P3245-LVE-3
- Updated AXIS Object Analytics to version 1.7.25. Applies to: Products based on , and Note that not all products support AXIS Object Analytics. For more information on compatible products and features, see [AXIS Object Analytics](#)

## Product specific updates

- Added the possibility to create an unlimited number of radar scenarios and exclude zones. Applies to: AXIS D2110-VE and AXIS Q1656-DLE
- Added product specific onscreen controls. Applies to: AXIS XPQ1785
- Added support for T61 Mk II series. Applies to: AXIS M3085-V, AXIS M3086-V, AXIS M3088-V and AXIS M4216-LV/-V
- Products with Hardware ID 971 only supports active track 11.4.52 and later. The hardware ID can be found in **Plain config > Properties > System > Hardware ID**. Applies to: AXIS M5075-G
- Added support for encrypted file system that protects the confidentiality and integrity of file system stored information against physical information extraction attempts. Applies to: AXIS M1055-L, AXIS M1075-L, AXIS M2035-LE, AXIS M2036-LE, AXIS M3085-V, AXIS M3086-V, AXIS M3088-V, AXIS M3215-LVE, AXIS M3216-LVE, AXIS M4216-LV/-V, AXIS P1465-LE, AXIS P1467-LE, AXIS P1468-LE, AXIS P3265-LV/-LVE/-V, AXIS P3267-LV/-LVE, AXIS P3268-LV/-LVE, AXIS P4705-PLVE, AXIS P4707-PLVE, AXIS Q1656/-B/-BE/-BLE/-DLE/-LE, AXIS Q1961-TE, AXIS Q3536-LVE and AXIS Q3538-LVE/-SLVE
- The new web interface is enabled per default. The former web interface is still available as a fallback. Applies to: AXIS D2110-VE, AXIS P1377, AXIS P1378, AXIS Q1615/-LE Mk II, AXIS Q1645/-LE, AXIS Q1647/-LE, AXIS Q1659, AXIS XPQ1785, ExCam XF P1377, ExCam XF Q1645 and F101-A XF P1377

## **AXIS OS 11.4.74**

Release date: 2023-05-17

### **Corrections**

- Corrected an issue where AXIS P5676-LE does not get enough power from IEEE 802.3bt-midspan when combined with the Q6100-E. Applies to: AXIS P5676-LE

## **AXIS OS 11.4.69**

Release date: 2023-05-09

### **Corrections**

- Improved day/night switching stability. Applies to: AXIS P4707-PLVE

## **AXIS OS 11.4.63**

Release date: 2023-04-24

### **New products**

- AXIS M3905-R
- AXIS P3905-R Mk III
- AXIS Q3626-VE
- AXIS Q3628-VE
- AXIS M4215-LV/-V
- AXIS M4218-LV/-V
- AXIS M4327-P
- AXIS M4328-P

### **Corrections**

- Corrected an issue that caused stitching errors. Applies to: AXIS Q3819-PVE
- Corrected an issue with Smoke alert where status wasn't shown as text overlay in the image. Applies to: AXIS XPQ1785

## **AXIS OS 11.4.52**

Release date: 2023-04-12

### **Corrections**

- Corrected ONVIF reply for MaximumRetentionTime.
- Corrected an issue where the frame rate in ONVIF media profile were not correctly displayed in the web interface.
- Corrected an issue with send notification through HTTP/HTTPS in action rules/events where preview URL was showing wrong amounts of '?'.  
Applies to: All products
- Corrected an issue with action rules/events, where upload of images was not working correctly.
- Corrected an issue where corrupted certificate prevented AXIS OS upgrade.
- Corrected an issue with metadata color when likelihood is set to 0.
- Added fallback mode for network hardware that is limited to 10BASE-T and 100BASE-TX transmission.  
Applies to: All products

- Corrected an issue where the device in some cases get unreachable if the SD card is broken. Applies to: All products with SD card support
- Corrected an issue with rotation and HDMI output. Applies to: AXIS FA54
- Improved rain suppression when both rain detector and swaying object filter are enabled. Latest radar classifier is enabled by default. No factory default is required anymore. Applies to: AXIS D2110-VE and AXIS Q1656-DLE
- Improved stability of color presentation for isothermal palettes. Recommended to use either isothermal palettes or normal palettes otherwise the image quality will be affected. Applies to: AXIS Q1961-TE
- Corrected an issue with Autopilot application not working correctly. Applies to: AXIS Q6010-E and AXIS Q6100-E
- Corrected an issue where artifacts could occur when WDR is enabled and panning and tilting between different lighting conditions. Applies to: AXIS Q6315-LE

### Limitations

- The temperature measurements displayed in the overlay of live view contains one decimal which is always .0. Applies to: AXIS Q1961-TE
- Due to unexpected behavior, disabling network ports is no longer available. This will be resolved in a future version. A temporary button has been added to re-enable previously disabled ports. Applies to: AXIS S3008

## AXIS OS 11.3

Release date: 2023-02-21

### Features for all products

- Added **Optimize for storage** as an option for Zipstream. Make sure your VMS, applications and other clients are compatible before enabling this. See below video for more information.



To watch this video, go to the web version of this document.

### Cybersecurity updates

- Updated *Apache* to version 2.4.55 to increase the overall cybersecurity level.
- Updated OpenSSL to version 1.1.1t to increase overall cybersecurity level.
- Updated *cURL* to version 7.87.0 to increase overall cybersecurity level.
- Receiving ICMP secure redirects from other network hosts are now disabled to increase overall minimum cyber security level.
- The Security level for 'AutoRepair', 'FileSystem' and 'RequiredFileSystem' parameters has been lowered.
- Improved the manager client certificates and added support for installing multiple trust certificates and requesting/installing a second client certificate.

### Analytics updates

- Updated Video Motion Detection to version 4.5.4.
- Updated AXIS License Plate Verifier to version 2.7.1. Applies to: AXIS P1445-LE-3, AXIS P1455-LE-3 and AXIS P3245-LVE-3
- AXIS Object Analytics:
  - Added option to keep Time in area (BETA) event state high as long as the alarming object is tracked.

- Added Crossline counting (BETA) scenario which counts objects that cross a virtual tripwire in a defined direction.
- Limitations:— Accumulated counts in Crossline counting (BETA) are reset if the camera or application is restarted.— Crossline counting (BETA) data table in metadata overlay not available.Applies to: Products based on and — Crossline counting (BETA) data table in visual confirmation not available.Applies to: Products based on .

Note that not all products support AXIS Object Analytics. For more information on compatible products and features, see *AXIS Object Analytics*.

### Product specific features

- Added support for ONVIF profile T.Applies to: AXIS P3715-PLVE, AXIS V5925 and AXIS V5938
- Added additional audio configuration options.Applies to: AXIS M1075-L
- Added setting in web-interface for configuring HTTP/HTTPS.Applies to: AXIS S3008
- Added the possibility to set power configuration to PoE class 3.Applies to: AXIS Q3536-LVE and AXIS Q3538-LVE
- Improved API validation and web feedback for reader functionality.Applies to: AXIS A8207-VE and AXIS A8207-VE Mk II
- Increased number of supported D2110-VE devices in the same coexistence area from 3 to 6. Applies to: AXIS D2110-VE
- Added reference map calibration in the new web interface.Applies to: AXIS D2110-VE and AXIS Q1656-DLE
- Improved alignment between radar and camera. Improved filtering of false tracks caused by rain.Applies to: AXIS Q1656-DLE
- Added support for YUV streams on thermal channels.Applies to: AXIS Q1951-E, AXIS Q1952-E and AXIS Q1961-TE
- AXIS Audio Manager Edge: Added possibility to change name on site.Applies to: AXIS C1210-E, AXIS C1211-E, AXIS C1310-E, AXIS C1410, AXIS C1510, AXIS C1511, AXIS C1610-VE, AXIS C8110, and AXIS C8210
- Added support for a 10 band graphic audio equalizer which is configurable in the new web interface **Audio > Audio Mixer > Ten band graphic equalizer**. Applies to: AXIS C1210-E, AXIS C1211-E, AXIS C1310-E, AXIS C1410, AXIS C1510, AXIS C1511, AXIS C1610-VE, AXIS C8110, and AXIS C8210
- Added support for a 10 band graphic audio equalizer which is configurable in the new web interface **Audio > Audio Mixer > Ten band graphic equalizer**. Axis products using audio via portcast over T6101 are currently not supported.Applies to: AXIS M3077-PLVE

### AXIS OS 11.3.74

Release date: 2023-04-04

#### Corrections

- Corrected an issue that disturbed production. Breaks downgrading of the camera beyond this version. Applies to: AXIS XPQ1785

### AXIS OS 11.3.71

Release date: 2023-03-23

#### Corrections

- Corrected an issue where I/O may end up in the wrong state.Applies to: AXIS D3110

## AXIS OS 11.3.70

Release date: 2023-03-21

### Application updates

- Updated Video Motion Detection to version 4.5.4.
- Updated AXIS Object Analytics to version 1.6.28. Applies to: Products based on , and Note that not all products support AXIS Object Analytics. For more information on compatible products and features, see *AXIS Object Analytics*

### Corrections

- Corrected an issue with storage using IPv6, which was not working correctly. Applies to: AXIS M1075-L
- Corrected an issue with domain name (DNS SRV record) for SIP. Applies to: All products with SIP support.
- Added fallback mode for network hardware that is limited to 10BASE-T and 100BASE-TX transmission. Applies to: AXIS P1375/-E, AXIS P1377/-LE and AXIS P1378/-LE
- Corrected an issue that caused some noise on the image in low light. Applies to: P1465-LE

## AXIS OS 11.3.57

Release date: 2023-02-21

### Corrections

- Corrected an issue where it was not possible to install an application using manifest.json if an older application using package.conf was already installed.
- Corrected an issue where it was not possible to save images using compression set to 10 or below to a network share when SMB 3.1.1 was used.
- Corrected an issue where it was not possible to save to folders containing Japanese characters.
- Corrected an issue with events using IPv6 recipient.
- Corrected an issue where a connected USB device was not detected. Applies to: AXIS D3110
- Corrected an issue with simultaneous PTZ Onvif requests. Applies to: All products with PTZ support.
- Corrected an issue where there was no live view using Low Latency Mode. Applies to: AXIS M5075-G
- Corrected an issue where the IR led was turned off during the download of the server report. Applies to: AXIS Q6135-LE
- Corrected an IR-LED issue causing temperatures and image degradation in high ambient temperatures above 35°C, when IR light is activated at full power. Applies to: AXIS Q6318-LE

### Limitations

- Logout from the web interface is currently not supported in non chromium browsers, such as Firefox and Safari.
- A reset to factory default settings is required when upgrading to AXIS OS 11.3 from versions 11.1 or 11.2. Applies to: AXIS Q1961-TE

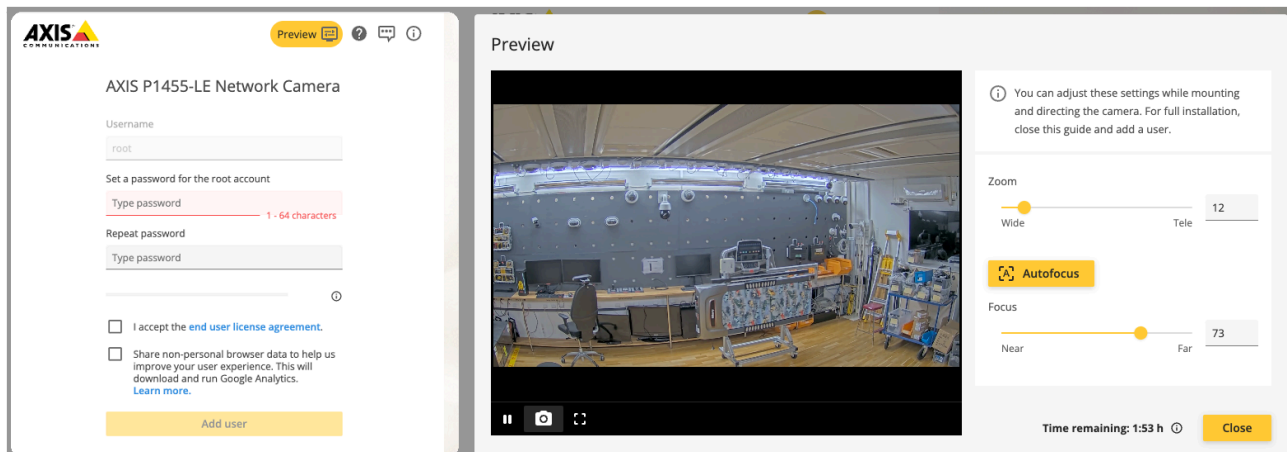
## AXIS OS 11.2

Release date: 2023-01-09

### Features for all products

- A Software Bill of Materials (SBOM) will be delivered with all AXIS OS releases on active track from now on. For more information, see *Software Bill of Materials*.

- A Preview mode is added to the new web interface. Preview mode will be available 2 hours after restart and is disabled when password is set. Possibility to see video stream, take image snapshot, set focus and if supported also set zoom level.



- The new web interface has been changed to a yellow theme.
- Server report now includes the device current time zone/UTC offset.
- Added functionality for displaying recording database statistics in the server report.
- Added option to only allow signed applications. For more information, see *ACAP Service Portal for administrators*.

### Cybersecurity updates

- Updated *cURL* to version 7.86.0 to increase overall cybersecurity level.

### Breaking changes

- Removed the built in motion detection, also known as VMD1.

### Analytics updates

- Updated AXIS Object Analytics to version 1.5.22.

Note that not all products support AXIS Object Analytics. For more information on compatible products and features, see *AXIS Object Analytics*.

### Product specific features

- Added live video streaming indicator. Applies to: AXIS P3727-PLE
- Added the possibility to increase font size to 60 in text overlay. Applies to: AXIS Q9216-SLV
- Added support for AXIS T99A12 Positioning Unit. Applies to: AXIS P1375-E, AXIS P1377-LE and AXIS P1378-LE
- Added power profiles under **System > Power settings** in the new web interface. Applies to: AXIS Q1798-LE and AXIS Q6318-LE
- Extended Sony Visca protocol to support Cisco Webex Controllers. Applies to: AXIS V5925 and AXIS V5938
- Added the ability to disable network traffic on switch ports in the web interface and VAPIX using `network-settings.cgi`. Applies to: AXIS S3008
- AXIS Audio Manager Edge: Adjustments and improvements to the user experience when configuring schedules. Applies to: AXIS C1210-E, AXIS C1211-E, AXIS C1310-E, AXIS C1410, AXIS C1510, AXIS C1511, AXIS C1610-VE, AXIS C8110 and AXIS C8210
- Added the possibility to use an AccessList that is based on incoming Caller ID or Sip server IP address. To only allow incoming calls from the specified Caller ID or SIP Server IP address. Applies to: All products with SIP support.
- New font for overlays - Noto Sans. Added support for new language scripts: Arabic, Hebrew, Thai, Gurmukhi, Georgian, Javanese, Gujarati, Bengali, Telugu, Tamil, Malayalam, Oriya, Lao, Kannada,

Myanmar, Sundanese, Mongolian, Gujarati, Devanagari, Hindi. Applies to: AXIS M2035-LE, AXIS M2036-LE, AXIS M3085-V, AXIS M3086-V, AXIS M3088-V, AXIS M4216-LV and AXIS M4216-V

- Products with Hardware ID 9A1 only supports version 11.2.53. Products with hardware ID 756 supports all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > Hardware ID..** Applies to: AXIS Q6215-LE
- Products with Hardware 9A0.1, 9A0.2 and 9A0.3 only support active track version 11.2.53. Products with hardware ID 796, 7C3.1 and 7C3.2 support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > Hardware ID.** For more information, read the related *FAQ*. Applies to: AXIS P1375-E, AXIS P1377-LE and AXIS P1378-LE
- New rain suppression algorithm to filter false alarms caused by rain. Improved radar object classification, radar swaying object filter and radar detection performance. New on-screen controls: Radar augmented overlay. Radar bounding boxes. Radar Picture In Picture. Applies to: AXIS Q1656-DLE

## **AXIS OS 11.2.71**

Release date: 2023-02-07

- Corrected an issue where audio input in some rare occasions did not work. Applies to: AXIS Q1656/-B/-BE/-BLE/-DLE/-LE, AXIS Q3536-LVE and AXIS Q3538-LVE

## **AXIS OS 11.2.68**

Release date: 2023-02-06

### **Corrections**

- Corrected an issue where audio was not working correctly in the Companion and AXIS Camera Station iOS apps. Correction was also needed in the iOS apps, therefore iOS Companion version 7.11.14 or later and iOS AXIS Camera Station 4.6.12 or later, are required. Applies to: All products with audio out.
- Corrected an issue that caused Directional Audio Detection to not work. Applies to: AXIS Q6100-E
- Corrected an issue where Automatic Gain Control did not work correctly. Applies to: AXIS D3110

## **AXIS OS 11.2.66**

Release date: 2023-01-26

### **Corrections**

- Corrected an issue with ONVIF conformance. Applies to: AXISQ3819-PVE

## **AXIS OS 11.2.64**

Release date: 2023-01-23

### **New products**

- AXIS P5676-LE

### **Corrections**

- Corrected an IR-LED issue causing temperatures and image degradation in high ambient temperatures above 35°C, when IR light is activated at full power. Applies to: AXIS Q6318-LE

## **AXIS OS 11.2.61**

Release date: 2023-01-17

- Software Bill of Materials (SBOM) – First release. For more information, see *Software Bill of Materials*.

### **New products**

- AXIS F9104-B Main Unit
- AXIS F9111 Main Unit
- AXIS F9114 Main Unit
- AXIS F9114-B Main Unit
- AXIS Q1961-TE

### Corrections

- Improved QuickZoom functionality to switch only during longer continuous zoom movements, ensuring smoother zoom experience with the mouse scroll wheel. Applies to: AXIS Q6135-LE and AXIS Q6318-LE

## AXIS OS 11.2.53

Release date: 2023-01-09

### New products

- AXIS C1210-E
- AXIS C1211-E
- AXIS C1310-E
- AXIS C1410
- AXIS C1510
- AXIS C1511
- AXIS C8110
- AXIS C8210
- AXIS M1055-L
- AXIS M1075-L
- AXIS Q1656-DLE

### Corrections

- Corrected an issue with certificates, where the certificate name was used as the identity.
- Corrected an issue that could cause Action Rules to be deleted after a system restart.
- Most UTF-8 characters are now allowed in ONVIF user names.
- Improved analytics performance. Applies to: AXIS Q1656/-B/-BE/-BLE/-DLE/-LE
- Corrected an issue with day/night mode. Applies to: AXIS P1375, AXIS P1377, AXIS P1378, ExCam XF P1377 and F101-A XF P1377
- AXIS OS 11.2.53 requires Audio Manager Pro 4.2.1 or later. Applies to: AXIS C1210-E, AXIS C1211-E, AXIS C1310-E, AXIS C1410, AXIS C1510, AXIS C1511, AXIS C8110 and AXIS C8210
- Corrected an issue with video streaming when using dynamic fps in Zipstream. Applies to: AXIS Q9216-SLV
- Corrected an issue which could cause audio clips not to play to completion. Applies to: AXIS C1410, AXIS P1375, AXIS P1377, AXIS P1378, ExCam XF P1377 and F101-A XF P1377
- Corrected an issue where the Iris value was not shown when using Auto Iris. Applies to: AXIS V5925

### Limitations

- Radar information like speed and distance are not burnt-in Axis Object Analytics metadata overlay neither the stream live view or recording, the radar information are only available in the Axis Object Analytics Scenario setup. Applies to: AXIS Q1656-DLE



- Audio not working correctly for iOS Companion. A correction will be available in coming release and an upgrade is recommended. The release notes will include the correction once solved. Applies to: All products with audio out.

## AXIS OS 11.1

Release date: 2022-11-08

### Features for all products

- Added support for Network Time Security (NTS), which provides cryptographic security for the client-server mode of the Network Time Protocol (NTP). This allows users to obtain time in an authenticated manner. Read more about NTS [here](#).
- Added support for vehicle color in the ONVIF RTSP stream and introduced a likelihood attribute to the color representation.
- Added support for multiple dynamic text overlays. Previously, only one dynamic text overlay was supported through the modifier #D, but now modifiers #D1 through #D16 are supported. Note: #D0 is identical to the old #D. Currently only available via VAPIX.
- Updated time zone database version from 2022a to 2022d. In version 2022b some common time zones, such as Europe/Amsterdam, Europe/Copenhagen, Europe/Oslo, Europe/Stockholm, and more, are removed from the recommended list of time zones.
- Added the possibility for API Discovery CGI to access anonymously for simpler device capability identification.
- Added product full name to metadata when exporting recordings.
- Updated End User License Agreement.
- Video Object Detection will for certain capture modes produce detections under privacy masks. As a result of this recipients that use Video Object Detection and that do not want to use detections under privacy masks need to filter out these.

### Cybersecurity updates

- Updated OpenSSL to version 1.1.1s to increase the overall cybersecurity level.

### Breaking changes

- Removed the possibility to access the device via the FTP protocol, to increase overall minimum cybersecurity level. For troubleshooting purposes it is recommended to use secure SSH access. Note that upload from the device to an FTP server is still possible. For more information, visit [SSH access](#) in the AXIS OS portal.
- The edit.cgi has been removed. For more information, visit the [VAPIX library](#).
- The libvidcap has been removed. Use Video capture API instead. For more information, visit the [ACAP developer guide](#).

### Analytics updates

- Updated AXIS License Plate Verifier to version 2.5.0. Applies to: AXIS P1445-LE-3, AXIS P1455-LE-3 and AXIS P3245-LVE-3
- AXIS Object Analytics:
  - Added possibility to select whether bounding boxes should be displayed in metadata overlay.
  - Adjustments performed to tracking engine parameters, improving general object tracking behavior.

Note that not all products support AXIS Object Analytics. For more information on compatible products and features, see [AXIS Object Analytics](#).

### Product specific features

- Added a new tab for occupancy statistics and export. Applies to: AXIS P8815-2

- Added possibility to manually activate heaters in the web interface. Added an optional power mode where the heaters are always deactivated. Applies to: AXIS Q6215-LE
- Added support for 15 fps with resolution 1080p for MJPEG and single stream. Applies to: AXIS M2035-LE, AXIS M2036-LE, AXIS M3085-V, AXIS M3086-V and AXIS M4216-LV/-V

## **AXIS OS 11.1.72**

Release date: 2022-12-14

### **New products**

- AXIS M3088-V
- AXIS M3215
- AXIS M3216
- AXIS P4705-PLVE
- AXIS P4707-PLVE

### **Corrections**

- Corrected and improved the rollback feature
- Corrected an issue where video was not streaming over HTTPS. Applies to: AXIS P8815
- Improved DRAM performance. Applies to: AXIS M3215-LVE, AXIS M3216-LVE, AXIS P1467-LE, AXIS P1468-LE, AXIS P3265-V/-LV/-LVE, AXIS P3267-LV/-LVE, AXIS P3268-LV/-LVE, AXIS P4705-PLVE, AXIS P4707-PLVE, AXIS Q1656/-B/-BE/-BLE/-DLE/-LE, AXIS Q3536-LVE and AXIS Q3538-LVE
- Corrected an issue with focus being lost over time. Applies to: AXIS M3215-LVE, AXIS M3216-LVE, AXIS P1467-LE, AXIS P1468-LE, AXIS P3265-V/-LV/-LVE, AXIS P3267-LV/-LVE, AXIS P3268-LV/-LVE, AXIS P4705-PLVE, AXIS P4707-PLVE, AXIS Q1656/-B/-BE/-BLE/-DLE/-LE, AXIS Q3536-LVE and AXIS Q3538-LVE
- Corrected an issue where autofocus needed to be re-applied when the ambient temperature changed. Applies to: AXIS P3265-V/-LV/-LVE, AXIS P3267-LV/-LVE, AXIS P3268-LV/-LVE, AXIS Q3536-LVE and AXIS Q3538-LVE

## **AXIS OS 11.1.65**

Release date: 2022-11-28

### **New products**

- AXIS Q6318-LE
- AXIS Q8615-E

### **Corrections**

- Corrected an issue where rotated image perspective is invalid in AXIS Object Analytics, after upgrade.
- Corrected an issue where SIP was not working correctly. Applies to: AXIS D3110 and AXIS D4100-E
- Corrected an issue where power profiles setting was lost after upgrade. Applies to: AXIS Q6215-LE

## **AXIS OS 11.1.61**

Release date: 2022-11-21

### **Corrections**

- Corrected an issue with loss of focus in wide infinity, that could occur after upgrading from 10.9. Applies to: AXIS P1448-LE
- Corrected an issue where the camera was not getting enough power when using certain POE switches. Applies to: AXIS Q6075 and ExCam XPT Q6075

- Improved system stability.

## AXIS OS 11.1.55

Release date: 2022-11-08

### Corrections

- Corrected an issue where ACAP application parameters was faulty reset after AXIS OS upgrade.
- The vdo\_stream\_get\_info capture API now returns the resulting channel.
- Improved classification time for fast vehicles. Applies to: AXIS D2110-VE
- Removed the limitation of disabling more than 4 views. Applies to: AXIS M3067-P and AXIS M3068-P
- Corrected an issue where operator user was not able to open door through On-screen Controls. Applies to: AXIS A8207-VE and AXIS A8207-VE MK II
- Corrected an issue with the privacy masks being moved when using pan and tilt. Applies to: AXIS Q6215-LE
- Corrected microphone power type when the product is used in combination with AXIS T6101 audio module. Removed duplicate input and output gain values when using the product in combination with AXIS T6101 audio module. Applies to: AXIS P3255-LVE
- Corrected an issue where the camera was not getting enough power when using certain POE switches. Applies to: AXIS Q6075 and ExCam XPT Q6075

## AXIS OS 11.0

Release date: 2022-09-26

### Features for all products

- Added list of ongoing recordings to the Status page in the web interface.
- When UserDataEnabled is enabled for edge storage recordings, the embedded SEI message has previously been stored in its own SimpleBlock inside a mkv file. It is now stored in the same block as the access unit instead

### Cybersecurity updates

- Updated *cURL to version 7.85.0* to increase overall cybersecurity level.
- Changed SNMPv3 default authentication mode from SHA-1 to SHA-256 to increase overall minimum cybersecurity level. For more information, see *SNMPv3 access*.
- To increase the overall cyber security level, it is no longer allowed to set both System.HTTPAuthRTSPOverHTTP and RTSP.AuthenticateRTSPOverHTTP to "no" at the same time.

### Breaking changes

- The date.cgi has been removed and replaced by time.cgi. For more information, visit the *VAPIX library*.
- Support to request an image in BMP file format has been removed. For more information, visit the *VAPIX library*.
- Support to record a mediaclip using the Mediclip API has been removed. For more information, visit the *VAPIX library*.
- Updated PTZ VAPIX version to 2. For more information, visit the *VAPIX library*.
- Changed access for a number of parameters in the root.PTZ parameter group.
- Support for proxy SOCKS version 4 and 5 has been removed.
- The installable audio decoder for AAC has been removed and is no longer downloadable.
- The installable decoder for H.264 has been removed and is no longer downloadable.

### Product specific updates

- New font for overlays – Noto Sans. Added support for new language scripts: Arabic, Hebrew, Thai, Gurmukhi, Georgian, Javanese, Gujarati, Bengali, Telugu, Tamil, Malayalam, Oriya, Lao, Kannada, Myanmar, Sundanese, Mongolian, Gujarati, Devanagari, Hindi. Applies to: All products based on and .

Additional languages added from FW 11.0:

వర్ణమాల, எழுத்துக்கள், aksara, अक्षर, അക്ഷരമാല, ႁၢ်ဃၢ်လၢ, ႁၢ်ဃၢ်လၢ, ବର୍ଣ୍ଣମାଳା, اَبجدية, ཀླུ་ལྷན་, အမည်ရင်း, Цараан, толгой, वर्णमाला, ഹിറാဂന, ལྷན་ལྷན་, ವರ್ಣಮಾಲೆ, အက္ခရာ, အို



- All relevant PTZ drivers are built into the AXIS OS. Support for uploading and removing PTZ-drivers has been removed. Applies to: AXIS M7104, AXIS M7116, AXIS P1375/-E, AXIS P1377/-LE, AXIS P1378/-LE, AXIS P7304, AXIS P7316, AXIS Q1615/-LE Mk II, AXIS Q1645/-LE, AXIS Q1647/-LE, AXIS Q1656/-LE/-B/-BE/-BLE, AXIS Q1659 and AXIS Q1715.
- Added support for Signed video in Edge storage. The cryptographic signature is included in exported recordings from SD card and network shares. Applies to: AXIS M2035-LE, AXIS M2036-LE, AXIS M4216-V/-LV, AXIS M4308-PL, AXIS M5000/-G, AXIS P1467-LE, AXIS P1468-LE, AXIS P3265-V/-LV/-LVE, AXIS P3267-LV/-LVE, AXIS P3268-LV/-LVE, AXIS P3727-PL, AXIS P3727-LE/-B/-BE/-BLE, AXIS Q1715, AXIS Q3536-LVE, AXIS Q3538-LVE and AXIS Q6078-E.
- Added support for ONVIF profile M. Applies to: AXIS A8207-VE, AXIS A8207-VE MK II, AXIS FA54, AXIS M5000/-G, AXIS M7104, AXIS M7116, AXIS P3715-PLVE, AXIS P3717-PL, AXIS P3719-PL, AXIS P3727-PL, AXIS P7304, AXIS P7316, AXIS Q6010-E, AXIS Q6100-E and AXIS Q8752-E.
- Added support for 8bit BMP transparency. Applies to: AXIS M2035-LE, AXIS M2036-LE, AXIS M4216-V/-LV and AXIS Q9216-SLV.
- Added support for ONVIF Profile M and ONVIF Profile T. Applies to: AXIS A8207-VE and AXIS A8207-VE MK II.
- Added support for a 10 band graphic audio equalizer which is configurable in the new web interface **Audio > Audio Mixer > Ten band graphic equalizer**. Axis products using audio via portcast over T6101 are currently not supported. Applies to: AXIS M4308-PL and AXIS V5925.
- Increased the number of Audio Clip files to 50 instead of 10. Applies to: AXIS P5655-E.

#### Analytics updates

- The structure of the sample frame for metadata analytics producer named AnalyticsSceneDescription has changed. One object per class/subclass in the frame. The sample frame is provided by the "getSupportedMetadata" API using both VAPIX and ONVIF. Added list of ongoing recordings to the Status page.
- The metadata analytics stream named objectsanalytics is renamed to AnalyticsSceneDescription which provides identical content.
- AXIS Live Privacy Shield 2.2 is required from AXIS OS 11.0 and later.
- Added support for AXIS Live Privacy Shield. Applies to: AXIS P1467-LE and AXIS P1468-LE.
- Updated AXIS Object Analytics to version 1.0.44. Applies to: AXIS P3727-PL and AXIS Q3819-PVE.
- Updated AXIS Object Analytics to version 1.3.12. Applies to: AXIS M4216-V/-LV, AXIS P3255-LVE, AXIS P3265-V/-LV/-LVE, AXIS P3267-LV/-LVE, AXIS P3268-LV/-LVE, AXIS Q1615/-LE Mk III, AXIS Q1656/-LE/-B/-BE/-BLE, AXIS Q1715, AXIS Q3536-LVE and AXIS Q3538-LVE.

#### AXIS OS 11.0.108

Release date: 2022-10-28

#### Corrections

- Corrected an issue where upgrade from 10.9.4 to 11.0 was not possible. Applies to: AXIS P3265-LVE 22mm, AXIS P3267-LV/-LVE and AXIS P3268-LV/-LVE.
- Corrected an issue that in rare occasions could prevent the device from starting up during upgrade. Applies to: AXIS P3265-V/-LV/-LVE, AXIS P3267-LV/-LVE, AXIS P3268-LV/-LVE, AXIS Q1656/-B/-BE/-BLE/-LE, AXIS Q3536-LVE and AXIS Q3538-LVE

## Limitations

- When upgrading AXIS OS from versions below 10.10.69 and metadata producers are used, the metadata producers must be enabled manually via **System > Analytics metadata**.

## AXIS OS 11.0.104

Release date: 2022-10-24

### New products

- AXIS P1465-LE

### Corrections

- Corrected an issue with privacy masks, where the option mosaic color (pixilated pattern) was not working correctly. Applies to: AXIS P1467-LE and AXIS P1468-LE

## AXIS OS 11.0.103

Release date: 2022-10-24

### Corrections

- Corrected an issue where the PTZ motor was not getting enough power. Applies to: AXIS Q6315-LE

## AXIS OS 11.0.99

Release date: 2022-10-17

### New products

- AXIS XPQ1785

## AXIS OS 11.0.95

Release date: 2022-10-11

### Corrections

- Corrected an issue with broken image that could happen after start up. Applies to: AXIS M2035-LE

## AXIS OS 11.0.93

Release date: 2022-10-03

### New products

- AXIS D3110

### Corrections

- General improvements to the platform.
- Improved the IR cut filter switching. Applies to: All products with IR cut filter.

## AXIS OS 11.0.89

Release date: 2022-09-26

### Corrections

- Corrected an issue where 802.1X would not trust the intermediate certificate authority (CA).
- Corrected an issue to make it possible to create certificates with Common Name up to 64 characters

- Increased motion detection sensitivity when large illumination changes are detected, improving general behavior for applications that make use of this engine and data.
- Improved streaming behavior when using always multicast with auto rotation enabled.
- Corrected an issue with data export when a non-latin device name is used. Applies to: AXIS P8815-2
- Corrected an issue with auto focus not working correctly. Applies to: AXIS M5074, AXIS M5075, AXIS P3245-LV/-LVE, AXIS P3247-LV/-LVE and AXIS P3248-LV/-LVE, AXIS P3255-LVE, AXIS P5654-E, AXIS P5655-E, AXIS Q1700-LE, AXIS Q1715, AXIS Q1785-LE, AXIS Q1786-LE, AXIS Q1798-LE, AXIS Q3515-LV/-LVE, AXIS Q3517-LV/-LVE/-SLVE, AXIS Q3518-LVE, AXIS Q3527-LVE, AXIS Q6135-LE, AXIS Q8752-E, XP40-Q1785, F101-A XF Q1785, XF40-Q1785 and ExCam XF Q1785.

## AXIS OS 10

In this section, you can find release notes on the active track prior to AXIS OS 11.0

### AXIS OS 10.12.91

Release date: 2022-08-17

#### Features

- Added support for ECDSA host keys for SSH connections.
- Products with hardware ID 99B.1 and 99B.2 only support active track 10.12.91 and later. Products with hardware ID 903.1 and 903.2 support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > HardwareID**. More information can be found in <https://www.axis.com/support/faq/FAQ116592>. Applies to: AXIS M5074, AXIS M5075
- Products with hardware ID 971.1, 971.2, 971.3, 99C.1, 99C.2 and 99C.3 only support active track 10.12.91 and later. Products with hardware ID 923.1, 923.2 and 923.3 support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > HardwareID**. More information can be found in <https://www.axis.com/support/faq/FAQ116592>. Applies to: AXIS M5075-G.
- Added support for a new audio solutions. Products with Hardware ID 968.22, 968.23, 968.32 and 968.33 only support active track 10.12.91. Products with hardware ID 937.22, 937.23, 937.32, 937.33, 959.22, 959.23, 959.32 and 959.33 support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > HardwareID**. Applies to: AXIS P3265-V/-LV/-LVE, AXIS P3267-LV/-LVE and AXIS P3268-LV/-LVE.

#### Corrections

- Corrected an issue with Network share when using SMB version 1 and 2.
- Corrected an issue related to parsing the resolution parameter in a mjpeg stream URL.
- Corrected an issue where z-wave profile settings were defaulted after upgrade. Applies to: AXIS M5000-G and AXIS M5075-G.
- Corrected an issue causing privacy masks with rare shapes to disappear when zooming in and then out again. Applies to: AXIS P5655-E and AXIS Q6135-LE.
- Improved focus behavior after upgrade. When upgrade is finished, perform also calibration **Video > Image > Optics > Calibrate zoom** and autofocus **Video > Installation > Autofocus**. Applies to: AXIS M5000/-G, AXIS M5074, AXIS M5075/-G, AXIS P1445-LE, AXIS P1447-LE, AXIS P1448-LE, AXIS P1455-LE, AXIS P1455-LE-3, AXIS P1467-LE, AXIS P1468-LE, AXIS P3245-V/-VE/-LV/-LVE, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3265-V/-LV/-LVE, AXIS P3267-LV/-LVE, AXIS P3268-LV/-LV, AXIS P5654-E, AXIS P5655-E, AXIS Q1700-LE, AXIS Q1715, AXIS Q1785-LE, AXIS Q3515-LV/-LVE, AXIS Q3517-LV/-LVE, AXIS Q3518-LVE, AXIS Q3527-LVE, AXIS Q3536-LVE , AXIS Q3538-LVE, AXIS Q6135-LE and AXIS Q8752-E.

### AXIS OS 10.12.73

Release date: 2022-07-18

#### Features

- Updated OpenSSL to version 1.1.1q to increase overall cybersecurity level.
- Updated Apache to version 2.4.54 to increase overall cybersecurity level.
- Added support for ONVIF profile M Applies to: AXIS D2110-VE
- A new radar classifier is enabled by default for better and quicker radar objects classification. A new generation of swaying object filter to eliminate the false triggers from swaying objects has been added. Factory default or at least factory restore is needed to enable the new updates. Applies to: AXIS D2110-VE
- Added support for network speaker pairing. Applies to: AXIS Q1656/-LE/-B/-BE/-BLE



- Products with hardware ID 972 only support active track 10.12.73 and later. Products with hardware ID 7EA support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > HardwareID**. Applies to: AXIS M4216-V/-LV
- Products with hardware ID 97B.1 and 97B.2 only support AXIS OS 10.12.73 and later. Products with hardware ID 773.1 and 773.2 support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > HardwareID**. Applies to: AXIS Q6100-E
- Added support for changed hardware configuration. Products with hardware ID 97A.1 and 97A.2 only support 10.12.73 and later as well as LTS 2020 version 9.80.3.14. Products with hardware ID 7CF.1 and 7CF.2 support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > HardwareID**. Applies to: AXIS Q6010-E
- Added support for a new audio solution. Products with Hardware ID 968.22, 968.23, 968.32 and 968.33 only support active track 10.12.73 and later. Products with hardware ID 937.22, 937.23, 937.32, 937.33, 959.22, 959.23, 959.32 and 959.33 support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > HardwareID**. Applies to: AXIS P3267-LV/-LVE and AXIS P3268-LV/-LVE

#### Corrections

- Corrected an issue with disconnects when devices were used in AXIS Camera Station.
- Corrected an issue where it was not possible to use autofocus together on the i-CS lense when Wide Dynamic Range was turned off. Applies to: AXIS M1135/-E Mk II and AXIS M1137/-E Mk II

### AXIS OS 10.12.70

Release date: 2022-07-12

#### Features

- The new web interface is enabled per default. The former web interface is still available as a fallback. Applies to: AXIS A8207-VE and AXIS A8207-VE Mk II
- Products with hardware ID 976 only support 10.12.70 and later. Products with hardware ID 7E6 support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > HardwareID**. Applies to: AXIS A8207-VE Mk II

### AXIS OS 10.12.65

Release date: 2022-07-06

#### New Products

- AXIS P1467-LE
- AXIS P1468-LE

#### Features

- Updated OpenSSL to version 1.1.1p to increase the overall cybersecurity level.
- Products with hardware ID 98F only support active track 10.12.65 and later. Products with hardware ID 7D2 support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > HardwareID**. More information can be found in <https://www.axis.com/support/faq/FAQ116585>. Applies to: AXIS Q1615/-LE Mk III
- Products with hardware ID 98E.1, 98E.2, 98E.3, 98D.1, 98D.2 and 98D.3 only support active track 10.12.65 and later, as well as LTS track 9.80.3.13 and later. Products with hardware ID 795, 796, 7C2.1, 7C2.2, 7C3.1 and 7C3.2 support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > HardwareID**. More information can be found in <https://www.axis.com/support/FAQ116586>. Applies to: AXIS P1375/-E, AXIS P1377/-LE, AXIS P1378/-LE, F101-A XF P1377 and ExCam XF P1377
- Products with hardware ID 990 only support active track 10.12.65 and later, as well as LTS track 9.80.3.13 and later. Products with hardware ID 7AF support all AXIS OS versions. The hardware ID can be



found in **Plain config > Properties > System > HardwareID** More information can be found in <https://www.axis.com/support/faq/FAQ116587>. Applies to: AXIS Q1798-LE

#### Corrections

- Reverted upgraded Apache 2.4.54 to version 2.4.53 due to audio issues.
- Corrected an issue with white balance. Applies to: AXIS P3719-PLE

### AXIS OS 10.12.59

Release date: 2022-06-27

#### Features and corrections

- Updated Apache to version 2.4.54 to increase overall cybersecurity level.
- Added the possibility to select speed range limit by slider. Added the possibility to chose to trigger on values within or outside the speed limit range. Added the possibility to trigger the zone with Test alarm for event validation. Applies to: AXIS D2050-VE and AXIS D2110-VE.
- Corrected an issue with cropped background map and calibration. Applies to: AXIS D2050-VE and AXIS D2110-VE.
- Corrected an issue where privacy masks flicker in recordings after restart when HDMI is in use. Applies to: AXIS Q9216-SLV.
- Improved system stability. Applies to: AXIS M1134, AXIS M1135/-E, AXIS M7104, AXIS P3727-PLE, AXIS P3925-LRE, AXIS P3925-R and AXIS P7304.

### AXIS OS 10.12.55

Release date: 2022-06-20 (to be rolled out within three weeks of release date)

#### New products

- AXIS M2035-LE
- AXIS M2036-LE

#### Features

- Updated Curl to version 7.83.1 to increase overall cybersecurity level.
- Added the possibility to select which web interface should be default when accessing the device.
- Added support for single and double quotes in conditions when configuring action rules.
- Added the possibility to change the default video view in **Plain config > Layout > LiveViewVideo**.
- Added help buttons and information to **Add certificate** in the web interface.
- Added network speaker pairing in the new web interface.
- Added tooltip information in the 802.1x certificate configuration page.
- Added the possibility to display and edit the settings associated with an application.
- Added a logout button in the new web interface.
- Extended event support for PTZ Autotracker.
- All PTZ drivers are built into AXIS OS. It is not possible to upload a PTZ driver that already exists in AXIS OS. Applies to: AXIS M7104, AXIS M7116, AXIS P1375/-E, AXIS P1377/-LE, AXIS P1378/-LE, AXIS P7304, AXIS P7316, AXIS Q1615/-LE Mk II, AXIS Q1645/-LE, AXIS Q1647/-LE, AXIS Q1656/-LE/-B/-BE/-BLE, AXIS Q1659 and AXIS Q1715
- Added the possibility to control the front window heater. Applies to: AXIS Q6215-LE
- Products with hardware ID 962 only support AXIS OS 10.12 and later. Products with hardware ID 7E8 support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > HardwareID**. Applies to: AXIS Q1715

- Added support for multiple external audio devices where a product can be connected with an Axis portcast device or paired with an Axis network speaker. Currently it's not possible to connect multiple external devices simultaneously (will be solved in next release). Applies to: AXIS P3265-V/-LV/-LVE, AXIS P3267-LV/-LVE, AXIS P3268-LV/-LVE and AXIS Q6315-LE
- The new web interface is enabled per default. The former web interface is still available as a fallback. Applies to: AXIS A8207-VE, AXIS A8207-VE Mk II, AXIS M7104 and AXIS P7304
- Updated *AXIS Object Analytics* to version 1.0.43. Applies to: AXIS M1137/-E and AXIS P3727-PL
- Updated *AXIS Object Analytics* to version 1.1.5. Applies to: AXIS M4216-V/-LV, AXIS P3255-LVE, AXIS P3265-V/-LV/-LVE, AXIS P3267-LV/-LVE, AXIS P3268-LV/-LVE, AXIS Q1656/-LE/-B/-BE/-BLE, AXIS Q1715, AXIS Q3536-LVE and AXIS Q3538-LVE
  - Added Support for Time in area (BETA) condition within Object in area scenario.
  - Added support for trajectories for alarming objects in metadata overlay.

#### Corrections

- Corrected an issue with ONVIF recordings. These will now resume automatically after interruption.
- Corrected an issue where the time tooltip was not displaying correct date after passing midnight. Also the date in the recordings list and the export was sometimes one day off.
- Corrected an issue with action rules, where it was not possible to edit in the previous web interface.
- Corrected an issue with uploading audio clips containing spaces in the file name.
- Corrected an issue in VAPIX API, where croppos and cropsize were not working for H.264.
- Corrected an issue where the SD card status was not updated correctly.
- Corrected an issue with priority in control queue for autotracking.
- Corrected *CVE-2018-25032*.
- Corrected the LLDP max power value. Applies to: AXIS M4216-V/-LV
- Updated *AXIS License Plate Verifier* to version 2.4.0. Applies to: AXIS P1445-LE-3, AXIS P1455-LE-3 and AXIS P3245-LVE-3
- Corrected an issue where it was not possible to upgrade the AXIS OS without the cover top. Applies to: AXIS M3057-PLVE, AXIS M3057-PLVE Mk II, AXIS M3058-PLVE and AXIS M3077-PLVE
- Corrected an issue that prevented users to assign Fully Qualified Domain Name (FQDN) containing the character ".". Applies to: AXIS P8815-2

## AXIS OS 10.11.87

Release date: 2022-06-20

#### Features and corrections

- General platform improvements for Axis Edge Vault introducing non-backward compatible changes. It is recommended to first upgrade through AXIS OS 10.10 and then to newer AXIS OS versions. Please be advised that downgrading to a version lower than AXIS OS 10.10 after the device has been running on AXIS OS version 10.11 or higher will cause Axis Edge Vault and underlying security features to become non-operational. Read more [here](#). Applies to: AXIS D4100-E, AXIS FA51/-B, AXIS I8016-LVE, AXIS M2035-LE, AXIS M2036-LE, AXIS M3057-PLVE Mk II, AXIS M3077-PLVE, AXIS M4216-V/-LV, AXIS M4308-PL, AXIS M5000/-G, AXIS M7116, AXIS P1455-LE, AXIS P1455-LE-3, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3255-LVE, AXIS P3265-V/-LV/-LVE, AXIS P3267-LV/-LVE, AXIS P3268-LV/-LVE, AXIS P3727-PL, AXIS P7316, AXIS Q1656/-LE/-B/-BE/-BLE, AXIS Q1715, AXIS Q1951-E, AXIS Q1952-E, AXIS Q3536-LVE, AXIS Q3538-LVE, AXIS Q6078-E and AXIS S3008
- Improved AXIS OS support for additional hardware configurations. Applies to: AXIS M7116, AXIS P7316, AXIS Q6078-E and AXIS Q6315-LE
- Products with hardware ID 991 and 992 only support active track 10.11.87 and later, as well as LTS track 9.80.3.13 and later. Products with hardware ID 7BD and 7C0 support all AXIS OS versions. The

hardware ID can be found in **Plain config > Properties > System > Hardware ID**. For more information, see <https://www.axis.com/support/faq/FAQ116588> Applies to: AXIS M3067-P and AXIS M3068-P

- Products with hardware ID 987.1, 987.2, 988.1, 988.2, 989.1, 989.2, 98A.1, 98A.2, 98B.1 and 98B.2 only support active track 10.11.87 and later, as well as LTS track 9.80.3.13 and later. Products with hardware ID 917.1, 917.2, 918.1, 918.2, 914.1, 914.2, 915.1, 915.2, 916.1 and 916.2 support version 10.6.5 and later, as well as LTS track 9.80.3.4 and later. Products with hardware ID 7D9.1, 7D9.2, 7DA.1, 7DA.2, 7B0, 7B1, 7FA.1 and 7FA.2 support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > Hardware ID**. For more information, see <https://www.axis.com/support/faq/FAQ116555>. Applies to: AXIS Q6074/-E and AXIS Q6075/-E/-S/-SE
- Corrected an issue with I/O port configurations. Applies to: AXIS Q9216-SLV

## AXIS OS 10.11.85

Release date: 2022-06-20

### Features and corrections

- General platform improvements for Axis Edge Vault introducing non-backward compatible changes. It is recommended to first upgrade through AXIS OS 10.10 and then to newer AXIS OS versions. Please be advised that downgrading to a version lower than AXIS OS 10.10 after the device has been running on AXIS OS version 10.11 or higher will cause Axis Edge Vault and underlying security features to become non-operational. Read more [here](#). Applies to: AXIS D4100-E, AXIS FA51/-B, AXIS I8016-LVE, AXIS M2035-LE, AXIS M2036-LE, AXIS M3057-PLVE Mk II, AXIS M3077-PLVE, AXIS M4216-V/-LV, AXIS M4308-PL, AXIS M5000/-G, AXIS M7116, AXIS P1455-LE, AXIS P1455-LE-3, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3255-LVE, AXIS P3265-V/-LV/-LVE, AXIS P3267-LV/-LVE, AXIS P3268-LV/-LVE, AXIS P3727-PL, AXIS P7316, AXIS Q1656/-LE/-B/-BE/-BLE, AXIS Q1715, AXIS Q1951-E, AXIS Q1952-E, AXIS Q3536-LVE, AXIS Q3538-LVE, AXIS Q6078-E and AXIS S3008
- Products with hardware ID 98C only support active track 10.11.85 and later. Products with hardware ID 7CE support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > Hardware ID**. Applies to: AXIS Q3819-PVE
- Products with hardware ID 981 and 982 only support active track version 10.11.85 and later, as well as LTS track 9.80.3.13 and later. Products with hardware ID 7BB and 7BC support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > Hardware ID**. For more information, see <https://www.axis.com/support/faq/FAQ116589>. Applies to: AXIS M3115-LVE and AXIS M3116-LVE
- Products with hardware ID 983.1 and 983.2 only support version 10.11.85, as well as LTS track 9.80.3.13 and later. Products with hardware ID 90F.1 and 90F.2 support versions from 10.3.0.1 and LTS track from 9.80.3.1. Products with hardware ID 79E.1 and 79E.2 support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > Hardware ID**. For more information, see <https://www.axis.com/support/faq/FAQ116511>. Applies to: AXIS P3245-V/-VE
- Products with hardware ID 984.1 and 984.2 only support active track 10.11.85 and later, as well as LTS track 9.80.3.13 and later. Products with hardware ID 910.1 and 910.2 only support active track 10.3.0.1 and later, as well as LTS track 9.80.3.1 and later. Products with hardware ID 79F.1, 79F.2, 79F.3 and 79F.4 support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > Hardware ID**. For more information, see <https://www.axis.com/support/faq/FAQ116511>. Applies to: AXIS P3245-LV/-LVE
- Products with hardware ID 985.1, 985.2, 986.1 and 986.2 only support active track 10.11.85 and later, as well as LTS track 9.80.3.13 and later. Products with hardware ID 956.1, 956.2, 956.3 and 956.4 only support active track 10.8.3 and later, as well as LTS track 9.80.3.9 and later. Products with hardware ID 91E.1, 91E.2, 91F.1 and 91F.2 only support active track 10.4.0 and later, as well as LTS track 9.80.3.1 and later. Products with hardware ID 7BE.1, 7BE.2, 7BF.1 and 7BF.2 support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > Hardware ID**. For more information, see <https://www.axis.com/support/faq/FAQ116515>. Applies to: AXIS P3247-LV/-LVE and AXIS P3248-LV/-LVE

## AXIS OS 10.11.81

Release date: 2022-06-10

### New products

- AXIS M1135/-E Mk II
- AXIS M1137/-E Mk II

### Features

- General platform improvements for Axis Edge Vault introducing non-backward compatible changes. It is recommended to first upgrade through AXIS OS 10.10 and then to newer AXIS OS versions. Please be advised that downgrading to a version lower than AXIS OS 10.10 after the device has been running on AXIS OS version 10.11 or higher will cause Axis Edge Vault and underlying security features to become non-operational. Read more [here](#). Applies to: AXIS D4100-E, AXIS FA51/-B, AXIS I8016-LVE, AXIS M2035-LE, AXIS M2036-LE, AXIS M3057-PLVE Mk II, AXIS M3077-PLVE, AXIS M4216-V/-LV, AXIS M4308-PL, AXIS M5000/-G, AXIS M7116, AXIS P1455-LE, AXIS P1455-LE-3, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3255-LVE, AXIS P3265-V/-LV/-LVE, AXIS P3267-LV/-LVE, AXIS P3268-LV/-LVE, AXIS P3727-PL, AXIS P7316, AXIS Q1656/-LE/-B/-BE/-BLE, AXIS Q1715, AXIS Q1951-E, AXIS Q1952-E, AXIS Q3536-LVE, AXIS Q3538-LVE, AXIS Q6078-E and AXIS S3008
- Improved AXIS OS support for additional hardware configurations. Applies to: AXIS M1135/-E Mk II, AXIS M1137/-E Mk II and AXIS M3057-PLVE Mk II, AXIS M3077-PLVE, AXIS P3255-LVE, AXIS P3818-PVE, AXIS Q1715, AXIS Q1951-E and AXIS Q1952-E

## AXIS OS 10.11.76

Release date: 2022-06-02

### New products

- AXIS P3267-LV/-LVE
- AXIS P3268-LV/-LVE

### Features and corrections

- General platform improvements for Axis Edge Vault introducing non-backward compatible changes. It is recommended to first upgrade through AXIS OS 10.10 and then to newer AXIS OS versions. Please be advised that downgrading to a version lower than AXIS OS 10.10 after the device has been running on AXIS OS version 10.11 or higher will cause Axis Edge Vault and underlying security features to become non-operational. Read more [here](#). Applies to: AXIS D4100-E, AXIS FA51/-B, AXIS I8016-LVE, AXIS M2035-LE, AXIS M2036-LE, AXIS M3057-PLVE Mk II, AXIS M3077-PLVE, AXIS M4216-V/-LV, AXIS M4308-PL, AXIS M5000/-G, AXIS M7116, AXIS P1455-LE, AXIS P1455-LE-3, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3255-LVE, AXIS P3265-V/-LV/-LVE, AXIS P3267-LV/-LVE, AXIS P3268-LV/-LVE, AXIS P3727-PL, AXIS P7316, AXIS Q1656/-LE/-B/-BE/-BLE, AXIS Q1715, AXIS Q1951-E, AXIS Q1952-E, AXIS Q3536-LVE, AXIS Q3538-LVE, AXIS Q6078-E and AXIS S3008
- Corrected an issue with WDR toggling where the image can turn black in some rare occasions. Applies to: AXIS P3265-V/-LV/-LVE, AXIS P3267-LV/-LVE and AXIS P3268-LV/-LVE

## AXIS OS 10.11.72

Release date: 2022-05-24

### Features and corrections

- General platform improvements for Axis Edge Vault introducing non-backward compatible changes. It is recommended to first upgrade through AXIS OS 10.10 and then to newer AXIS OS versions. Please be advised that downgrading to a version lower than AXIS OS 10.10 after the device has been running on AXIS OS version 10.11 or higher will cause Axis Edge Vault and underlying security features to become non-operational. Read more [here](#). Applies to: AXIS D4100-E, AXIS FA51/-B, AXIS I8016-LVE, AXIS M2035-LE, AXIS M2036-LE, AXIS M3057-PLVE Mk II, AXIS M3077-PLVE, AXIS M4216-V/-LV, AXIS M4308-PL, AXIS M5000/-G, AXIS M7116, AXIS P1455-LE, AXIS P1455-LE-3, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3255-LVE, AXIS P3265-V/-LV/-LVE, AXIS P3267-LV/-LVE, AXIS P3268-LV/-LVE, AXIS P3727-PL, AXIS P7316, AXIS Q1656/-LE/-B/-BE/-BLE, AXIS Q1715, AXIS Q1951-E, AXIS Q1952-E, AXIS Q3536-LVE, AXIS Q3538-LVE, AXIS Q6078-E and AXIS S3008

- Changed the name of one of the radar profiles to "Area monitoring" (previously "Area protection"). Applies to: AXIS D2110-VE
- Improved AXIS OS support for additional hardware configurations. Applies to: AXIS D2110-VE, AXIS P1455-LE, AXIS P1455-LE-3 and AXIS P3245-LVE-3

## AXIS OS 10.11.69

Release date: 2022-05-16

### Features and corrections

- General platform improvements for Axis Edge Vault introducing non-backward compatible changes. It is recommended to first upgrade through AXIS OS 10.10 and then to newer AXIS OS versions. Please be advised that downgrading to a version lower than AXIS OS 10.10 after the device has been running on AXIS OS version 10.11 or higher will cause Axis Edge Vault and underlying security features to become non-operational. Read more [here](#). Applies to: AXIS D4100-E, AXIS FA51/-B, AXIS I8016-LVE, AXIS M2035-LE, AXIS M2036-LE, AXIS M3057-PLVE Mk II, AXIS M3077-PLVE, AXIS M4216-V/-LV, AXIS M4308-PLE, AXIS M5000/-G, AXIS M7116, AXIS P1455-LE, AXIS P1455-LE-3, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3255-LVE, AXIS P3265-V/-LV/-LVE, AXIS P3267-LV/-LVE, AXIS P3268-LV/-LVE, AXIS P3727-PLE, AXIS P7316, AXIS Q1656/-LE/-B/-BE/-BLE, AXIS Q1715, AXIS Q1951-E, AXIS Q1952-E, AXIS Q3536-LVE, AXIS Q3538-LVE, AXIS Q6078-E and AXIS S3008
- Corrected an issue where the I/O port configuration was missing. Applies to: AXIS P3247-LV/-LVE and AXIS P3248-LV/-LVE

## AXIS OS 10.11.65

Release date: 2022-05-09 (to be rolled out within three weeks of release date)

### New products

- AXIS M3085-V
- AXIS M3086-V

### Features

- General platform improvements for Axis Edge Vault introducing non-backward compatible changes. It is recommended to first upgrade through AXIS OS 10.10 and then to newer AXIS OS versions. Please be advised that downgrading to a version lower than AXIS OS 10.10 after the device has been running on AXIS OS version 10.11 or higher will cause Axis Edge Vault and underlying security features to become non-operational. Read more [here](#). Applies to: AXIS D4100-E, AXIS FA51/-B, AXIS I8016-LVE, AXIS M2035-LE, AXIS M2036-LE, AXIS M3057-PLVE Mk II, AXIS M3077-PLVE, AXIS M4216-V/-LV, AXIS M4308-PLE, AXIS M5000/-G, AXIS M7116, AXIS P1455-LE, AXIS P1455-LE-3, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3255-LVE, AXIS P3265-V/-LV/-LVE, AXIS P3267-LV/-LVE, AXIS P3268-LV/-LVE, AXIS P3727-PLE, AXIS P7316, AXIS Q1656/-LE/-B/-BE/-BLE, AXIS Q1715, AXIS Q1951-E, AXIS Q1952-E, AXIS Q3536-LVE, AXIS Q3538-LVE, AXIS Q6078-E and AXIS S3008
- Updated OpenSSL to version 1.1.1o to increase overall cybersecurity level.
- Added support for configuring multiple HTTP(S) headers when using the VAPIX Custom HTTP header API.

### Corrections

- Improved ACAP SDK stability. Applies to: AXIS D2110-VE, AXIS I8016-LVE, AXIS M1134, AXIS M1135/-E, AXIS M1137/-E, AXIS M3057-PLVE Mk II, AXIS M3067-P, AXIS M3068-P, AXIS M3077-PLVE, AXIS M3115-LVE, AXIS M3116-LVE, AXIS M4308-PLE, AXIS M5000/-G, AXIS M5074, AXIS M5075/-G, AXIS M7104, AXIS M7116, AXIS P1375/-E, AXIS P1377/-LE, AXIS P1378/-LE, AXIS P1455-LE, AXIS P1455-LE-3, AXIS P3245-V/-VE/-LV/-LVE, AXIS P3245-LVE-3, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3255-LVE, AXIS P3265-V/-LV/-LVE, AXIS P3727-PLE, AXIS P3818-PVE, AXIS P3925-R/-LRE, AXIS P3935-LR, AXIS P5654-E, AXIS P5655-E, AXIS P7304, AXIS P7316, AXIS Q1615/-LE Mk III, AXIS Q1656/-LE/-B/-BE/-BLE, AXIS Q1715, AXIS Q1798-LE, AXIS Q1951-E, AXIS Q1952-E, AXIS Q3536-LVE, AXIS Q3538-LVE, AXIS Q3819-PVE, AXIS Q6074/-E, AXIS Q6075/-E/-S/-SE,



AXIS Q6078-E, AXIS Q6135-LE, AXIS Q6315-LE, AXIS Q8752-E, AXIS V5925, AXIS V5938, D201-S XPT Q6075, ExCam XF P1377, ExCam XPT Q6075 and F101-A XF P1377

- Corrected an issue with light patterns in Siren and light when using repetitions as a duration. Applies to: AXIS D4100-E

## AXIS OS 10.11.55

Release date: 2022-04-25

### Features

- General platform improvements for Axis Edge Vault introducing non-backward compatible changes. It is recommended to first upgrade through AXIS OS 10.10 and then to newer AXIS OS versions. Please be advised that downgrading to a version lower than AXIS OS 10.11 after the device has been running on AXIS OS version 10.11 or higher will cause Axis Edge Vault and underlying security features to become non-operational. Read more [here](#). Applies to: AXIS D4100-E, AXIS FA51/-B, AXIS I8016-LVE, AXIS M2035-LE, AXIS M2036-LE, AXIS M3057-PLVE Mk II, AXIS M3077-PLVE, AXIS M4216-V/-LV, AXIS M4308-PLE, AXIS M5000/-G, AXIS M7116, AXIS P1455-LE, AXIS P1455-LE-3, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3255-LVE, AXIS P3265-V/-LV/-LVE, AXIS P3267-LV/-LVE, AXIS P3268-LV/-LVE, AXIS P3727-PLE, AXIS P7316, AXIS Q1656/-LE/-B/-BE/-BLE, AXIS Q1715, AXIS Q1951-E, AXIS Q1952-E, AXIS Q3536-LVE, AXIS Q3538-LVE, AXIS Q6078-E and AXIS S3008
- Updates in the new web interface:
  - Ability to enable signed video
  - Showing supported object classes from metadata producers.
  - Added power saving mode in action rules for products that support it.
  - Possibility to set up IEEE 802.1x with multiple CA certificates.
  - Export recordings with password encryption.
  - Improvements on the installation page.
  - Corrected an issue with time zones in the time picker.
  - Corrected an issue where the stream profile page could hang in some rare cases.
  - Corrected how some time zones were displayed.
- Added support for sending device events over WebSocket connections. For more information, see *Metadata via websocket*.
- Added support for NTP time extensions in RTP headers. This provides absolute timestamps which clients can use instead of RTP relative timestamps.
- Added support for selecting multiple CA certificates when configuring IEEE 802.1x network authentication.
- Added IEEE 802.1X certificate configuration to the server report.
- Added VAPIX and ONVIF users to server report.
- Updated AXIS Video Motion Detection to version 4.5.2.
- Added ONVIF Profile M support. Applies to: AXIS I8016-LVE
- Products with hardware ID 961 only support version 10.11 and later. Products with hardware ID 7C7 support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > HardwareID**. Applies to: AXIS Q9216-SLV
- Added support for signed video. Signed video adds cryptographic signatures to H.264 videos, which can be used to validate the video authenticity and origin. Applies to: AXIS FA51/-B, AXIS M4216-LV/-V, AXIS M4308-PLE, AXIS M5000/-G, AXIS P3265-V/-LV/-LVE, AXIS P3727-PLE, AXIS Q1656/-B/-BE/-BLE/-LE, AXIS Q1715, AXIS Q3536-LVE, AXIS Q3538-LVE and AXIS Q6078-E
- Web interface improvements. Applies to: AXIS Q6100-E
  - Not possible to enable PTZ movements if PTZ is not aligned.

- Corrected an issue for when pan/tilt value is out of range.
- The metadata producer "Axis object analytics" is enabled by default for devices supporting it. It only applies for a new or defaulted device. Upgrade will keep the previous source as it was. Applies to: AXIS M4216-LV/-V, AXIS P3265-V/-LV/-LVE, AXIS Q1656/-B/-BE/-BLE/-LE, AXIS Q3536-LVE and AXIS Q3538-LVE
- Added the ability to select between two different radar profiles: Area protection or Road monitoring. For more information, see: <https://help.axis.com/axis-d2110-ve-security-radar>. Applies to: AXIS D2110-VE
- AXIS Loitering Guard 2.3.2 is preinstalled. Applies to: AXIS P1367/-E, AXIS P1368-E, AXIS P1445-LE, AXIS P1447-LE, AXIS P1448-LE, AXIS P3227-LV/-LVE, AXIS P3228-LV/-LVE, AXIS Q1645/-LE, AXIS Q1647/-LE, AXIS Q1659, AXIS Q1700-LE, AXIS Q1785-LE, AXIS Q1786-LE, AXIS Q1951-E, AXIS Q1952-E, AXIS Q3515-LV/-LVE, AXIS Q3517-LV/-LVE/-SLVE, AXIS Q3518-LVE, AXIS Q3527-LVE, AXIS Q6010-E, AXIS Q6100-E, AXIS Q6215-LE, AXIS Q8752-E, AXIS Q9216-SLV, ExCam XF Q1645, ExCam XF Q1785, F101-A Q1785, XF40-Q1785 and XP40-Q1785
- AXIS Motion Guard 2.3.2 is preinstalled. Applies to: AXIS P1367/-E, AXIS P1368-E, AXIS P1445-LE, AXIS P1447-LE, AXIS P1448-LE, AXIS P3227-LV/-LVE, AXIS P3228-LV/-LVE, AXIS Q1645/-LE, AXIS Q1647/-LE, AXIS Q1659, AXIS Q1700-LE, AXIS Q1785-LE, AXIS Q1786-LE, AXIS Q1951-E, AXIS Q1952-E, AXIS Q3515-LV/-LVE, AXIS Q3517-LV/-LVE/-SLVE, AXIS Q3518-LVE, AXIS Q3527-LVE, AXIS Q6010-E, AXIS Q6100-E, AXIS Q6215-LE, AXIS Q8752-E, AXIS Q9216-SLV, ExCam XF Q1645, ExCam XF Q1785, F101-A Q1785, XF40-Q1785 and XP40-Q1785
- AXIS Fence Guard 2.3.2 is preinstalled. Applies to: AXIS P1367/-E, AXIS P1368-E, AXIS P1445-LE, AXIS P1447-LE, AXIS P1448-LE, AXIS P3227-LV/-LVE, AXIS P3228-LV/-LVE, AXIS Q1645/-LE, AXIS Q1647/-LE, AXIS Q1659, AXIS Q1700-LE, AXIS Q1785-LE, AXIS Q1786-LE, AXIS Q1951-E, AXIS Q1952-E, AXIS Q3515-LV/-LVE, AXIS Q3517-LV/-LVE/-SLVE, AXIS Q3518-LVE, AXIS Q3527-LVE, AXIS Q6010-E, AXIS Q6100-E, AXIS Q6215-LE, AXIS Q8752-E, AXIS Q9216-SLV, ExCam XF Q1645, ExCam XF Q1785, F101-A Q1785, XF40-Q1785 and XP40-Q1785
  - Reduced risk of false alarms when objects move in opposite direction of fence alarm direction.
- The metadata producer "Axis object analytics" will also include motion detected objects without classification. These were previously filtered out from the metadata. Applies to: AXIS M4216-LV/-V, AXIS M4308-PLVE, AXIS P3255-LVE, AXIS Q1615/-LE Mk III, AXIS Q1656/-B/-BE/-BLE/-LE, AXIS Q1715, AXIS Q3536-LVE and AXIS Q3538-LVE
- Added support for a 10 band graphic audio equalizer, which can be configured in the new web interface via **Audio > Audio Mixer > Ten band graphic equalizer**. Axis products using audio via portcast over AXIS T6101 are currently not supported. Applies to: AXIS M3077-PLVE, AXIS M4308-PLVE and AXIS V5925
- Added NTCIP support over SNMP. NTCIP pan-tilt control is only supported if the Axis device is mounted on an AXIS T99A positioning unit. Applies to: AXIS P1367/-E, AXIS P1368-E, AXIS P1375/-E, AXIS P1377/-LE, AXIS P1378/-LE, AXIS Q1615/-LE Mk III, AXIS Q1645/-LE, AXIS Q1647/-LE, AXIS Q1656/-B/-BE/-BLE/-LE, AXIS Q1659, AXIS Q1715, AXIS Q1785-LE, AXIS Q1786-LE, ExCam XF P1377, ExCam XF Q1645, ExCam XF Q1785, F101-A XF P1377, F101-A Q1785, XF40-Q1785 and XP40-Q1785
- Corrected an issue where changing rotation required restart of the device for the metadata in AXIS Object Analytics to be correct. Applies to: AXIS M1137/-E, AXIS M4216-LV/-V, AXIS M4308-PLVE, AXIS P1375/-E, AXIS P1377/-LE, AXIS P1378/-LE, AXIS P1455-LE, AXIS P3245-V/-VE/-LV/-LVE, AXIS P3255-LVE, AXIS P3727-PLVE, AXIS P5654-E, AXIS P5655-E, AXIS Q1615/-LE Mk III, AXIS Q1656/-B/-BE/-BLE/-LE, AXIS Q1715, AXIS Q1798-LE, AXIS Q3536-LVE, AXIS Q3538-LVE, AXIS Q3819-PVE, AXIS Q6074/-E, AXIS Q6075/-E/-S/-SE, AXIS Q6078-E, AXIS Q6135-LE, AXIS Q6315-LE, D201-S XPT Q6075, ExCam XF P1377, ExCam XPT Q6075 and F101-A XF P1377
- Improved object detection and added support for new object classes; HumanFace, LicensePlate, Bus, Car and Truck. These classes have been added to the RTSP video analytics metadata stream. Applies to: AXIS P1375/-E, AXIS P1377/-LE, AXIS P1378/-LE, AXIS P1455-LE, AXIS P3245-V/-VE/-LV/-LVE, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P5654-E, AXIS P5655-E, AXIS Q1798-LE, AXIS Q6074/-E, AXIS Q6075/-E/-S/-SE, AXIS Q6078-E, AXIS Q6135-LE, AXIS Q6315-LE, D201-S XPT Q6075, ExCam XF P1377, ExCam XPT Q6075 and F101-A XF P1377

- Updated AXIS Object Analytics to version 1.0.39 Applies to: AXIS M4216-LV/-V, AXIS P3255-LVE, AXIS P3265-V/-LV/-LVE, AXIS Q1656/-B/-BE/-BLE/-LE, AXIS Q1715, AXIS Q3536-LVE and AXIS Q3538-LVE
  - Reduced risk of false alarms when objects move in the opposite direction of the configured line in a line crossing scenario.
  - Reduced risk of false alarms when objects come in partial contact with the include area borders.
  - Added the possibility to visualize recommended minimum object size.
  - Added support for trajectories for alarming objects in visual confirmation.
- Updated AXIS Object Analytics to version 1.0.39 Applies to: AXIS M1137/-E, AXIS P1375/-E, AXIS P1377/-LE, AXIS P1378/-LE, AXIS P1455-LE, AXIS P3245-V/-VE/-LV/-LVE, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3727-PLVE, AXIS P5654-E, AXIS P5655-E, AXIS Q1798-LE, AXIS Q3819-PVE, AXIS Q6074/-E, AXIS Q6075/-E/-S/-SE, AXIS Q6078-E, AXIS Q6135-LE, AXIS Q6315-LE, D201-S XPT Q6075, ExCam XF P1377, ExCam XPT Q6075 and F101-A XF P1377
  - Reduced risk of false alarms when objects move in the opposite direction of the configured line in a line crossing scenario.
  - Reduced risk of false alarms when objects come in partial contact with the include area borders.
  - Added the possibility to visualize recommended minimum object size.
  - Added support for trajectories for alarming objects in visual confirmation.
  - General improvements in low light situations. Not applicable to AXIS M1137-E, AXIS P3727-PLVE and AXIS Q3819-PVE.

## Corrections

- Receiving ICMP redirects from other network hosts is now disabled to increase overall minimum cybersecurity level.
- Corrected an issue with AXIS Video Motion Detection not accepting ONVIF requests with float coordinates as per specification.
- Corrected an issue with AXIS Video Motion Detection where it no longer required a sensitivity value in requests from ONVIF.
- Corrected an issue that prevented source-specific multicast to work for more than one client at a time.
- Corrected an issue that prevented requesting an I-frame via the ONVIF parameter SetSynchronizationPoint.
- Corrected an issue where multiline parameters were not accepted for ACAPs.
- Improved the IR cut filter switching. Applies to: AXIS I8016-LVE, AXIS M1134, AXIS M1135/-E, AXIS M1137/-E, AXIS M3057-PLVE, AXIS M3057-PLVE Mk II, AXIS M3058-PLVE, AXIS M3064-V, AXIS M3065-V, AXIS M3066-V, AXIS M3067-P, AXIS M3068-P, AXIS M3075-V, AXIS M3077-PLVE, AXIS M3115-LVE, AXIS M3116-LVE, AXIS M3205-LVE, AXIS M3206-LVE, AXIS M4216-LV/-V, AXIS M4308-PLVE, AXIS M5000/-G, AXIS M7104, AXIS M7116, AXIS P1367/-E, AXIS P1368-E, AXIS P1375/-E, AXIS P1377/-LE, AXIS P1378/-LE, AXIS P1445-LE, AXIS P1445-LE-3, AXIS P1447-LE, AXIS P1448-LE, AXIS P1455-LE, AXIS P1455-LE-3, AXIS P3227-LV/-LVE, AXIS P3228-LV/-LVE, AXIS P3245-V/-VE/-LV/-LVE, AXIS P3245-LVE-3, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3255-LVE, AXIS P3265-V/-LV/-LVE, AXIS P3715-PLVE, AXIS P3717-PLVE, AXIS P3719-PLVE, AXIS P3727-PLVE, AXIS P3807-PVE, AXIS P3925-R/-LRE, AXIS P3935-LR, AXIS P5654-E, AXIS P5655-E, AXIS P7304, AXIS P7316, AXIS Q1615/-LE Mk III, AXIS Q1645/-LE, AXIS Q1647/-LE, AXIS Q1656/-B/-BE/-BLE/-LE, AXIS Q1659, AXIS Q1700-LE, AXIS Q1715, AXIS Q1785-LE, AXIS Q1786-LE, AXIS Q1798-LE, AXIS Q3515-LV/-LVE, AXIS Q3517-LV/-LVE/-SLVE, AXIS Q3518-LVE, AXIS Q3527-LVE, AXIS Q3536-LVE, AXIS Q3538-LVE, AXIS Q3819-PVE, AXIS Q6010-E, AXIS Q6074/-E, AXIS Q6075/-E/-S/-SE, AXIS Q6078-E, AXIS Q6100-E, AXIS Q6135-LE, AXIS Q6215-LE, AXIS Q6315-LE, AXIS Q8752-E, AXIS Q9216-SLV, AXIS V5925, AXIS V5938, D101-A XF P3807, D201-S XPT Q6075, ExCam XF P1377, ExCam XF Q1645, ExCam XF Q1785, ExCam XPT Q6075, F101-A XF P1377, F101-A Q1785, XF40-Q1785 and XP40-Q1785
- Corrected status LED behavior. Applies to: AXIS P3818-PVE and AXIS Q3819-PVE



- Corrected an issue with saving invalid counting zone. Applies to: AXIS P8815-2
- Increased the length of the URL allowed in the reporting section > Report to server. Applies to: AXIS P8815-2
- Corrected an issue where panorama view in wall mount mode was not correctly displayed. Applies to: AXIS M3057-PLVE and AXIS M3058-PLVE
- Corrected an issue that caused the manual illumination angle to be displayed incorrectly. Applies to: AXIS Q1700-LE, AXIS Q1785-LE, AXIS Q1786-LE and AXIS Q1798-LE
- On some units focus might drift over time. Lens control has been improved to reduce this type of issues. Calibrate and autofocus the camera after upgrade. Applies to: AXIS P3245-V/-VE/-LV/-LVE
- Corrected an issue with tracking and autotune. Applies to: AXIS Q6010-E and AXIS Q6100-E
- Corrected an issue where sound was not working as intended when using the Sound Detector ACAP. Applies to: AXIS Q6100-E

## AXIS OS 10.10.72

Release date: 2022-04-11

### Corrections

- Corrected an issue that caused the TPM module not to be time-synchronized with the device system time after factory default. Applies to: AXIS Q3536-LVE and AXIS Q3538-LVE

## AXIS OS 10.10.69

Release date: 2022-03-30 (to be rolled out within three weeks of release date)

### Features

- Updates in the new web interface:
  - Pixel counter
  - Display MQTT topic in MQTT publication
  - Output relay as triggers in events
  - Possible to play/pause video with space
  - Write-protected recordings are marked on the recording page
  - Corrected an issue where overlays were not displayed for panoramic cameras Applies to: AXIS P3818-PVE and AXIS Q3819-PVE
  - Corrected an issue that prevented the creation of actions with '#' '%' as folder name
  - Corrected an issue where the adaptive stream was not scaling correctly
- Updated libupnp to version 1.14.0 to increase overall minimum cyber security level.
- Updated OpenSSL to version 1.1.1n to increase overall cybersecurity level.
- Upgraded Apache to version 2.4.53 to increase overall cybersecurity level.
- Added support for password encrypted recordings. This will add support for exporting recordings in a Zip with 256-bit AES encryption. Currently only available in the old web interface. **Note:** Some Zip extract applications may have password length limitations.
- Added support for full certificate chains during TLS-based communication such as HTTPS, IEEE 802.1x and SRTP. The Axis device will present its client certificate as well as the issuing intermediate and/or root certificate instead of just the client certificate.
- Added buffering support for events sent over MQTT. Events will be buffered when the device is unintentionally disconnected from the broker. When the connection to the broker is re-established, buffered events will be transmitted.
- Added temperature control to API discovery.

- AXIS Object Analytics is no longer the provider of object classification in the metadata analytics stream. Object classification is handled by AXIS OS and can be configured through the web interface. AXIS Object Analytics will continue to work as an application that provides the detection via event stream. Applies to: AXIS M1137/-E, AXIS M4216-V/-LV, AXIS M4308-PL, AXIS P1375/-E, P1377/-LE, AXIS P1378/-LE, AXIS P1455-LE, AXIS P3245-V/-VE/-LV/-LVE, AXIS P3255-LVE, AXIS P3727-PL, AXIS P5654-E, AXIS P5655-E, AXIS Q1615/-LE Mk III, AXIS Q1656/-LE, AXIS Q1715, AXIS Q1798-LE, AXIS Q3536-LVE, AXIS Q3538-LVE, AXIS Q3819-PVE, AXIS Q6074/-E, AXIS Q6075/-E/-S/-SE, AXIS Q6078-E, AXIS Q6135-LE, AXIS Q6315-LE, D201-S XPT Q6075, ExCam XF P1377, ExCam XPT Q6075 and F101-A XF P1377
- Updated primary web user interface. Applies to: AXIS I8016-LVE
- Support for a new audio codec - ADAU1361 - has been added. Applies to: AXIS P3935-LR
- Updated AXIS License Plate Verifier to version 2.3.1. Applies to: AXIS P1445-LE-3, AXIS P1455-LE-3 and AXIS P3245-LVE-3
- Updated Axis Object Analytics to version 1.0.37. Applies to: AXIS M1137/-E, AXIS M4216-V/-LV, AXIS M4308-PL, AXIS P1375/-E, AXIS P1377/-LE, AXIS P1378/-LE, AXIS P1455-LE, AXIS P3245-V/-VE/-LV/-LVE, AXIS P3255-LVE, AXIS P3727-PL, AXIS P5654-E, AXIS P5655-E, AXIS Q1615/-LE Mk III, AXIS Q1656/-LE, AXIS Q1715, AXIS Q1798-LE, AXIS Q3536-LVE, AXIS Q3538-LVE, AXIS Q3819-PVE, AXIS Q6074/-E, AXIS Q6075/-E/-S/-SE, AXIS Q6078-E, AXIS Q6135-LE, AXIS Q6315-LE, D201-S XPT Q6075, ExCam XF P1377, ExCam XPT Q6075 and F101-A XF P1377
- The server report will include snapshots from all video sensors, instead of snapshots only from the first video sensor. Applies to: AXIS P3715-PLVE
- Adjustable live stream API has been added. This API makes it possible to adjust the quality of an ongoing stream without restarting the stream. Applies to: AXIS A8207-VE, AXIS A8207-VE Mk II, AXIS D2050-VE, AXIS D2110-VE, AXIS FA51/-B, AXIS FA54, AXIS I8016-LVE, AXIS M1134, AXIS M1135/-E, AXIS M1137/-E, AXIS M3057-PLVE, AXIS M3057-PLVE Mk II, AXIS M3058-PLVE, AXIS M3067-P, AXIS M3068-P, AXIS M3077-PLVE, AXIS M3115-LVE, AXIS M3116-LVE, AXIS M4308-PL, AXIS M7104, AXIS M7116, AXIS P1367/-E, AXIS P1368-E, AXIS P1375/-E, AXIS P1377/-LE, AXIS P1378/-LE, AXIS P1445-LE, AXIS P1445-LE-3, AXIS P1447-LE, AXIS P1448-LE, AXIS P1455-LE, AXIS P1455-LE-3, AXIS P3227-LV/-LVE, AXIS P3228-LV/-LE, AXIS P3245-V/-VE/-LV/-LVE, AXIS P3245-LVE-3, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3255-LVE, AXIS P3715-PLVE, AXIS P3717-PL, AXIS P3727-PL, AXIS P3807-PVE, AXIS P3818-PVE, AXIS P3925-R/-LRE, AXIS P3935-LR, AXIS P5654-E, AXIS P5655-E, AXIS P7304, AXIS P8815-2, AXIS Q1615/-LE Mk III, AXIS Q1645/-LE, AXIS Q1647/-LE, AXIS Q1656/-LE, AXIS Q1659, AXIS Q1700-LE, AXIS Q1715, AXIS Q1785-LE, AXIS Q1786-LE, AXIS Q1798-LE, AXIS Q1951-E, AXIS Q1952-E, AXIS Q3515-LV/-LVE, AXIS Q3517-LV/-LVE/-SLVE, AXIS Q3518-LVE, AXIS Q3527-LVE, AXIS Q3536-LVE, AXIS Q3538-LVE, AXIS Q3819-PVE, AXIS Q6074/-E, AXIS Q6075/-E/-S/-SE, AXIS Q6078-E, AXIS Q6135-LE, AXIS Q6215-LE, AXIS Q6315-LE, AXIS Q8752-E, AXIS V5925, AXIS V5938, D101-A XF P3807, D201-S XPT Q6075, ExCam XF P1367, ExCam XF P1377, ExCam XF Q1645, ExCam XF Q1785, ExCam XPT Q6075, F101-A XF P1367, F101-A XF P1377, F101-A XF Q1785 and XP40-Q1785
- The Axis device ID certificate is used by default instead of the "Default (self-signed) certificate" for web server HTTPS and RTSPS (SRTP) connections. Applies to: AXIS A8207-VE, AXIS A8207-VE Mk II, AXIS D2050-VE, AXIS FA51/-B, AXIS FA54, AXIS I8016-LVE, AXIS M3057-PLVE, AXIS M3057-PLVE Mk II, AXIS M3058-PLVE, AXIS M3077-PLVE, AXIS M3205-LVE, AXIS M3206-LVE, AXIS M4216-V/-LV, AXIS M4308-PL, AXIS M7116, AXIS P1367/-E, AXIS P1368-E, AXIS P1445-LE, AXIS P1445-LE-3, AXIS P1447-LE, AXIS P1448-LE, AXIS P1455-LE, AXIS P1455-LE-3, AXIS P3227-LV/-LVE, AXIS P3228-LV/-LE, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3255-LVE, AXIS P3717-PL, AXIS P3727-PL, AXIS P3807-PVE, AXIS P3818-PVE, AXIS P5655-E, AXIS Q1645/-LE, AXIS Q1647/-LE, AXIS Q1656/-LE, AXIS Q1659, AXIS Q1715, AXIS Q1785-LE, AXIS Q1786-LE, AXIS Q1951-E, AXIS Q1952-E, AXIS Q3515-LV/-LVE, AXIS Q3517-LV/-LVE/-SLVE, AXIS Q3518-LVE, AXIS Q3527-LVE, AXIS Q3536-LVE, AXIS Q3538-LVE, AXIS Q6078-E, AXIS Q6215-LE, AXIS S3008, D101-A XF P3807, ExCam XF P1367, ExCam XF Q1645, ExCam XF Q1785, F101-A XF P1367, F101-A XF Q1785 and XP40-Q1785
- Added support for encrypted event and audio/video streams with certificate validation between the Axis network recorder and its connected cameras. More information can be found at: <https://www.axis.com/vapix-library/>. Subject to VMS support. Applies to: AXIS S3008
- Added support for metadata PoE failure event, which allows the Axis PTZ camera to notify if not enough PoE-power is received at startup: tns1:Device/HardwareFailure/PowerSupplyFailure/tnsaxis:

PTZPowerFailure Applies to: AXIS P5654-E, AXIS P5655-E, AXIS Q6074/-E, AXIS Q6075/-E/-S/-SE, AXIS Q6078-E, AXIS Q6135-LE, AXIS Q6215-LE, AXIS Q6315-LE, D201-S XPT Q6075 and ExCam XPT Q6075.

- LLDP max power is activated per default. Apply only for new installations or after factory default. Applies to: AXIS I8016-LVE, AXIS P1367/-E, AXIS P1368-E, AXIS P1445-LE, AXIS P1445-LE-3, AXIS P1447-LE, AXIS P1448-LE, AXIS P1455-LE, AXIS P1455-LE-3, AXIS P3925-R, AXIS P3935-LR, AXIS Q1700-LE, AXIS Q1785-LE, AXIS Q1786-LE, AXIS Q1951-E, AXIS Q1952-E, AXIS Q3515-LV/-LVE, AXIS Q3517-LV/-LVE/-SLVE, AXIS Q3518-LVE, AXIS Q3527-LVE and AXIS Q9216-SLV.
- Added support for a 10 band graphic audio equalizer, which is configurable in the new web interface via **Audio > Audio Mixer > Ten band graphic equalizer**. Axis products using audio via portcast over AXIS T6101 are currently not supported. Applies to: AXIS A8207-VE, AXIS A8207-VE Mk II, AXIS FA54, AXIS I8016-LVE, AXIS M1134, AXIS M1135/-E, AXIS M1137/-E, AXIS M3064-V, AXIS M3065-V, AXIS M3066-V, AXIS M3075-V, AXIS P1367/-E, AXIS P1368-E, AXIS P1375/-E, AXIS P1377/-LE, AXIS P1378/-LE, AXIS P1445-LE, AXIS P1447-LE, AXIS P1448-LE, AXIS P1455-LE 29 mm, AXIS P1455-LE-3, AXIS P3245-LVE-3, AXIS P3255-LVE, AXIS P3818-PVE, AXIS P3935-LR, AXIS P5655-E, AXIS P7304, AXIS Q1645/-LE, AXIS Q1647/-LE, AXIS Q1656/-LE, AXIS Q1659, AXIS Q1700-LE, AXIS Q1715, AXIS Q1785-LE, AXIS Q1786-LE, AXIS Q1798-LE, AXIS Q1951-E, AXIS Q1952-E, AXIS Q3517-LV/-LVE/-SLVE, AXIS Q3518-LVE, AXIS Q3527-LVE, AXIS Q3536-LVE, AXIS Q3538-LVE, Q3819-PVE, ExCam XF P1367, ExCam XF P1377, ExCam Q1645, F101-A XF P1367 and F101-A XF P1377.

#### Corrections

- Corrected an issue where dynamic overlay on rare occasions was removed after upgrade.
- Corrected an issue that caused the Send images event to stop uploading towards an FTP server when the filename included a space (" ").
- Corrected an issue that caused the #b overlay to not show the correct video stream bitrate average values.
- Corrected an issue where it was not possible to use modifiers for folder names in action rules.
- The maximum size of manifest.json file in ACAP applications has been increased to 80 KB.
- Improved handling of empty recordings.
- Improved tracking at large angles. Applies to: AXIS D2110-VE
- Reduced risk of broken tracks. Applies to: AXIS D2110-VE
- Corrected a delay issue when updating occupancy values. Applies to: AXIS P8815-2
- Corrected an issue that could cause the auto exposure to stop working. Applies to: AXIS Q1645/-LE and ExCam XF Q1645
- Corrected an issue where incorrect preset and movement positioning made applications unable to function correctly. Applies to: AXIS P5654-E, AXIS P5655-E, AXIS Q6010-E, AXIS Q6074/-E, AXIS Q6075/-E/-S/-SE, AXIS Q6078-E, AXIS Q6100-E, AXIS Q6135-LE, AXIS Q6215-LE, AXIS Q6315-LE, D201-S XPT Q6075 and ExCam XPT Q6075
- Corrected an issue with the passthrough threshold value that does not change when updated with a new value. Applies to: AXIS P8815-2
- Corrected an issue that prevented the IR-cut filter to switch after AXIS OS upgrade on rare occasion. Applies to: AXIS P5655-E
- Corrected an issue that on rare occasions caused the image to show horizontal lines or an over-saturated image. Applies to: AXIS M3064-V, AXIS M3065-V, AXIS M3066-V, AXIS M3075-V, AXIS M3205-LVE, AXIS M3206-LVE and AXIS Q9216-SLV
- Corrected an issue where fps values higher than 30 was not possible to enter for 4K resolution. Applies to: AXIS Q3536-LVE and AXIS Q3538-LVE

## AXIS OS 10.9.5

Release date: 2022-01-31

#### Corrections

- Corrected a stability issue that could occur in certain conditions with video streams. Applies to: AXIS P3245-LV/-LVE, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE and AXIS Q8752-E

## AXIS OS 10.9.4

Release date: 2022-01-14

### Features

- Updated Apache to version 2.4.52 to increase overall cybersecurity level.
- Added capture mode 1080p 60 fps. Applies to: AXIS P1375/-E and AXIS P1377/-LE

## AXIS OS 10.9.3

Release date: 2022-01-05

### Features

- Added support for ONVIF profile T. Applies to: AXIS I8016-LVE
- Added support for configuring bit length and bit offset for card UID. Applies to: AXIS A8207-VE and AXIS A8207-VE Mk II
- Added support for reading data from Mifare Desfire (EV1 & EV2), Mifare Classic and Mifare Plus. Applies to: AXIS A8207-VE Mk II
- Added support for configuring bit length and bit offset for card data. Applies to: AXIS A8207-VE Mk II
- Added mediaclick as an onscreen control, making it visible for AXIS Camera Station and other clients. It adds controls for playclip with a list of available clips and stopclip. Earlier this was only done in network speakers. Applies to: AXIS A8207-VE and AXIS A8207-VE Mk II

### Corrections

- Corrected an issue that could cause 'transmit.cgi' to close connection prematurely when transmitting audio to the camera. Applies to: AXIS A8207-VE, AXIS A8207-VE Mk II and AXIS I8016-LVE

## AXIS OS 10.9.1

Release date: 2022-01-04

### Corrections

- Corrected an issue that prevented the IR-LEDs to be turned off. Applies to: AXIS Q6315-LE
- Resolved an issue making AXIS Camera Station use more licenses than intended. Applies to: AXIS M7116

## AXIS OS 10.9.0

Release date: 2022-01-03 (to be rolled out within three weeks of release date)

### Features

- Added support for showing the entire MQTT topic structure in **Events > MQTT events** to make it easier for the user to subscribe to selected device events. **Note:** This is not yet available in the new GUI. For products that have the new GUI as a primary web client, you need to open the old GUI to find the setting.
- Added support for ALPN (Application Layer Protocol Negotiation) in MQTT client settings.
- Added support for SHA-256 hashed fingerprints for secure FTP image and video uploads on Axis devices.
- Added support for ONVIF profile M. Applies to: AXIS M3057-PLVE Mk II, AXIS M3067-P, AXIS M3068-P and AXIS M3077-PLVE

- Added support for ONVIF profile T. Applies to: AXIS D2110-VE, AXIS FA51/-B, AXIS FA54, AXIS M1134, AXIS M1135/-E, AXIS M1137/-E, AXIS M3057-PLVE, AXIS M3058-PLVE, AXIS P3717-PLE and AXIS Q1700-LE
- The Orientation aid application (ACAP) is now pre-installed. Applies to: AXIS P1375/-E, AXIS P1377/-LE and AXIS P1378/-LE
- Removed legacy AXIS OS upgrade framework. It's required to update through LTS 2018 (8.40) if an upgrade to AXIS OS active 10.9 or higher should be performed, otherwise the upgrade will fail. Applies to: AXIS D2050-VE, AXIS FA54, AXIS M3057-PLVE, AXIS M3058-PLVE, AXIS P1367/-E, AXIS P1368-E, AXIS P1445-LE, AXIS P1445-LE-3, AXIS P1447-LE, AXIS P1448-LE, AXIS P3227-LV/-LVE, AXIS P3228-LV/-LVE, AXIS P3807-PVE, AXIS Q1645/-LE, AXIS Q1647/-LE, AXIS Q1659, AXIS Q3515-LV/-LVE, AXIS Q3517-LV/-LVE/-SLVE, D101-A XF P3807, ExCam XF P1367, ExCam XF Q1645, and F101-A XF P1367
- Products with hardware ID 93E.1 and 93E.2 only support version 10.9.0 and later. Products with hardware ID 7C9.1 and 7C9.2 support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > HardwareID**. For more information, see <https://www.axis.com/support/faq/FAQ116572>. Applies to: AXIS Q6315-LE
- Axis Object Analytics 1.0.36 is preinstalled and includes:
  - Stability improvements
  - Minor UI changes
  - Applies to: AXIS M4308-PLE, AXIS P3255-LVE, AXIS Q1615/-LE Mk III, AXIS Q1656/-LE, AXIS M1137/-E, AXIS P1375/-E, AXIS P1377/-LE, AXIS P1378/-LE, AXIS P1455-LE, AXIS P3245-V/-VE/-LV/-LVE, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3727-PLE, AXIS P5654-E, AXIS P5655-E, AXIS Q1798-LE, AXIS Q3819-PVE, AXIS Q6074/-E, AXIS Q6075/-E/-S/-SE, AXIS Q6078-E, AXIS Q6135-LE and AXIS Q6315-LE
- Added mediaplay as an onscreen control, making it visible for AXIS Camera Station and other clients. It adds controls for playclip with a list of available clips and stopclip. Earlier this was only done in network speakers. Applies to: AXIS FA54, AXIS P1367/-E, AXIS P1368-E, AXIS P1375/-E, AXIS P1377/-LE, AXIS P1378/-LE, AXIS P3245-LV/-LVE, AXIS P3245-LVE-3, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3255-LVE, AXIS P7304, AXIS Q1615/-LE Mk III, AXIS Q1645/-LE, AXIS Q1647/-LE, AXIS Q1659, Q3515-LV/-LVE, AXIS Q6074, AXIS Q6075, AXIS V5925 and AXIS V5938
- Updated primary web user interface. The legacy user interface is available via the **Options** menu. Applies to: AXIS FA51/-B, AXIS FA54, AXIS M1137/-E, AXIS M3057-PLVE, AXIS M3057-PLVE Mk II, AXIS M3058-PLVE, AXIS M3064-V, AXIS M3065-V, AXIS M3066-V, AXIS M3067-P, AXIS M3068-P, AXIS M3075-V, AXIS M3077-PLVE, AXIS M3115-LVE, AXIS M3116-LVE, AXIS M3205-LVE, AXIS M3206-LVE, AXIS M4308-PLE, AXIS P1367-E, AXIS P1368-E, AXIS P1375-E, AXIS P1377-LE, AXIS P1378-LE, AXIS P1445-LE, AXIS P1445-LE-3, AXIS P1447-LE, AXIS P1448-LE, AXIS P1455-LE, AXIS P1455-LE-3, AXIS P3227-LV/-LVE, AXIS P3228-LV/-LVE, AXIS P3245-V/-VE/-LV/-LVE, AXIS P3245-LVE-3, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3255-LVE, AXIS P3715-PLVE, AXIS P3717-PLE, AXIS P3719-PLE, AXIS P3727-PLE, AXIS P3807-PVE, AXIS P3818-PVE, AXIS P3925-R/-LRE, AXIS P3935-LR, AXIS Q1656/-LE, AXIS Q3515-LV/-LVE, AXIS Q3517-LV/-LVE/-SLVE, AXIS Q3518-LVE, AXIS Q3527-LVE, AXIS Q3819-PVE, AXIS Q9216-SLV, ExCam XF Q1785, F101-A XF Q1785 and XP40-Q1785

## Corrections

- Improved access logging of user management related configuration. For more information, see *Device access logging*.
- Improved system stability of the Network Services.
- Improved HDMI video output. Applies to: AXIS M3064-V, AXIS M3065-V, AXIS M3066-V and AXIS M3075-V
- Corrected a display issue in the occupancy tab after a browser refresh. Applies to: AXIS P8815-2
- Corrected an issue with the condition "A3DPCCassthroughThresholdEvent" that occasionally does not trigger the event. Applies to: AXIS P8815-2
- Corrected an issue that caused an internal server error message when enabling "Send data to developers". Applies to: AXIS P8815-2

- Corrected an issue that could cause 'transmit.cgi' to close connection prematurely when transmitting audio to the camera. Applies to: AXIS FA54, AXIS M1134, AXIS M1135/-E, AXIS M1137/-E, AXIS M3077-PLVE, AXIS M4308-PLVE, AXIS P1367/-E, AXIS P1368-E, AXIS P1375/-E, AXIS P1377/-LE, AXIS P1378/-LE, AXIS P1445-LE, AXIS P1445-LE-3, AXIS P1447-LE, AXIS P1448-LE, AXIS P1455-LE, AXIS P1455-LE-3, AXIS P3245-LV/-LVE, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3245-LVE-3, AXIS P3255-LVE, AXIS P3818-PVE, AXIS P3935-LR, AXIS P5655-E, AXIS P7304, AXIS Q1615/-LE Mk III, AXIS Q1645/-LE, AXIS Q1647/-LVE, AXIS Q1656/-LE, AXIS Q1659, AXIS Q1700-LE, AXIS Q1785-LE, AXIS Q1786-LE, AXIS Q1798-LE, AXIS Q1951-E, AXIS Q1952-E, AXIS Q3515-LV/-LVE, Q3517-LV/-LVE/-SLVE, AXIS Q3518-LVE, AXIS Q3527-LVE, AXIS Q3819-PVE, AXIS Q6074, AXIS Q6075, AXIS Q8752-E, AXIS Q9216-SLV, AXIS V5925, AXIS V5938, ExCam XF Q1645, ExCam XF Q1785, F101-A XF Q1785 and XP40-Q1785

## AXIS OS 10.8.4

Release date: 2022-01-13

### Limitations

- The product is optimized for H.264 and H.265 video compression. Using MJPEG video compression will limit the frame rate of the video stream. Applies to: AXIS M4216-V/-LV
- Some functionality is not yet configurable in the new web interface. You need to open the legacy web interface to configure these settings. Applies to: AXIS M4216-V/-LV

## AXIS OS 10.8.3

Release date: 2021-11-30

### Corrections

- Corrected an issue that didn't give the camera enough power when using certain PoE switches. Applies to: AXIS P5654-E
- Products with hardware ID 956.x only support 10.8.3 and later. Products with hardware ID 91E.x and 91F.x support 10.4.0 and later. Products with hardware ID 7BE.x and 7BF.x support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > HardwareID**. Applies to: AXIS P3245-LV/-LVE, AXIS P3247-LV/-LVE and AXIS P3248-LV/-LVE

## AXIS OS 10.8.2

Release date: 2021-11-29

### Corrections

- Improved system stability. Applies to: AXIS M3077-PLVE, AXIS M3115-LVE, AXIS M3116-LVE, AXIS M3205-LVE, AXIS M3206-LVE and AXIS Q6315-LE
- Corrected an issue where it was not possible to factory default the camera with the button at startup. Applies to: AXIS Q6315-LE

## AXIS OS 10.8.1

Release date: 2021-11-29

### Features

- Updated Apache to version 2.4.51 to increase overall cybersecurity level.

## AXIS OS 10.8.0

Release date: 2021-11-09 (to be rolled out within three weeks of release date)

### Features



- Added support in action service – send notification action (HTTP/HTTPS) for optionally supplying; method, HTTP headers and (for applicable method types) a body.
  - Added support in HW2 action engine UI to specify method, HTTP headers and body.
  - Added support in preview UI to specify method, HTTP headers and body.
- Added support for POST/PUT/PATCH/DELETE HTTP methods in event rule HTTP notifications actions. Together with the new methods, it's also possible to provide custom request body and HTTP headers. UI support is only available in the new web interface. See example in this [video clip](#).
- Device-level topic prefix support added. This feature can be used to specify a topic prefix that can be reused when publishing and subscribing to MQTT messages. This prefix can also be utilized as a device id within the global topic structure.
- Added support to create filepath when exporting to external disk.
- Added support for ONVIF profile M. Applies to: AXIS FA51/-B, AXIS M1134, AXIS M1135/-E, AXIS M1137/-E, AXIS M3064-V, AXIS M3065-V, AXIS M3066-V, AXIS M3075-V, AXIS M3115-LVE, AXIS M3116-LVE, AXIS M3205-LVE, AXIS M3206-LVE, AXIS M4308-PLV, AXIS P1367/-E, AXIS P1368-E, AXIS P1445-LE, AXIS P1445-LE-3, AXIS P1447-LE, AXIS P1448-LE, AXIS P1455-LE-3, AXIS P3227-LV/-LVE, AXIS P3228-LV/-LVE, AXIS P3245-LVE-3, AXIS P3807-PVE, AXIS P3818-PVE, AXIS P3925-R/LRE, AXIS P3935-LR, AXIS Q1645/-LE, AXIS Q1647/-LE, AXIS Q1659, AXIS Q1700-LE, AXIS Q1785-LE, AXIS Q1786-LE, AXIS Q1951-E, AXIS Q1952-E, AXIS Q3515-LV/-LVE, AXIS Q3517-LV/-LVE, AXIS Q3518-LVE, AXIS Q3527-LVE, AXIS Q6215-LE, AXIS Q9216-SLV, AXIS V5925, AXIS V5938, D101-A XF P3807, ExCam XF P1367, ExCam XF Q1645, ExCam XF Q1785, F101-A XF P1367, F101-A XF Q1785 and XP40-Q1785
- Added straighten image as a new image correction functionality. Applies to: AXIS P3255-LVE
- Added the possibility to individually control IR-light intensity. Applies to: AXIS P1455-LE and AXIS P1455-LE-3
- Added a 10 band audio equalizer. Currently only available via the audio mixer cgi API. Functionality is currently limited to the first input. Applies to: AXIS M3205-LVE, AXIS M3206-LVE, AXIS Q3515-LV/-LVE, AXIS Q9216-SLV, AXIS P3245-LV/-LVE, AXIS P3247-LV/-LVE and AXIS P3248-LV/-LVE

## Corrections

- Corrected a display issue when a user logs in as a viewer on the **Statistics** tab.
- Improved recording stability. Applies to: AXIS S3008
- Improved autofocus speed. Applies to: AXIS M7104, AXIS M7116, AXIS P5654-E, AXIS P5655-E, AXIS P7304, AXIS Q1700-LE, AXIS Q1785-LE, AXIS Q1786-LE, AXIS Q1798-LE, AXIS Q6074/-E, AXIS Q6075/-E/-S/-SE, AXIS Q6078-E, AXIS Q6135-LE, AXIS Q6215-LE, AXIS Q6315-LE, AXIS Q8752-E, AXIS V5925, AXIS V5938, ExCam XF Q1785, F101-A XF Q1785 and XP40-Q1785
- Corrected an issue where the "not enough power" text overlay was not shown. Applies to: AXIS Q3819-PVE
- Updated the header for H.265 streams to not include delay information in order to avoid that some video clients may mistake it for B-frames. Applies to: AXIS D2110-VE, AXIS I8016-LVE, AXIS M1134, AXIS M1135/-E, AXIS M1137/-E, AXIS M3057-PLVE Mk II, AXIS M3067-P, AXIS M3068-P, AXIS M3077-PLVE, AXIS M3115-LVE, AXIS M3116-LVE, AXIS M4308-PLV, AXIS M7104, AXIS M7116, AXIS P1375/-E, AXIS P1377/-LE, AXIS P1378/-LE, AXIS P1455-LE, AXIS P1455-LE-3, AXIS P3245-V/-VE/-LV/-LVE, AXIS P3245-LVE-3, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3255-LVE, AXIS P3727-PLV, AXIS P3818-PVE, AXIS P3925-R/-LRE, AXIS P3935-LR, AXIS P5654-E, AXIS P5655-E, AXIS P7304, AXIS Q1615/-LE Mk III, AXIS Q1798-LE, AXIS Q1951-E, AXIS Q1952-E, AXIS Q3819-PVE, AXIS Q6074/-E, AXIS Q6075/-E/-S/-SE, AXIS Q6078-E, AXIS Q6135-LE, AXIS Q6315-LE, AXIS Q8752-E, AXIS V5925 and AXIS V5938
- Corrected an issue where the camera sometimes did not recover from night mode. Please power off/on the camera after upgrade for this correction to take effect. Applies to: AXIS M3205-LVE and AXIS M3206-LVE

## Limitations

- On single channel products, text and image overlays are no longer shown for streams using **overview=1**. This results in some ACAPs, like AXIS Video Motion Detection and AXIS Live Privacy Shield, will no longer have text and image overlays on their configuration pages. It also means that text and image overlays

are not shown on the **Image**, **Privacy mask**, and **View area** tabs in the web interface if a view area is created. Applies to: AXIS M1134, AXIS M1135/-E, AXIS M1137/-E, AXIS M3057-PLVE, AXIS M3058-PLVE, AXIS M3057-PLVE Mk II, AXIS M3064-V, AXIS M3065-V, AXIS M3066-V, AXIS M3075-V, AXIS M3067-P, AXIS M3068-P, AXIS M3115-LVE, AXIS M3116-LVE, AXIS M3205-LVE, AXIS M3206-LVE, AXIS P1375/-E, AXIS P1377/-LE, AXIS P1378/-LE, AXIS P1445-LE, AXIS P1445-LE-3, AXIS P1447-LE, AXIS P1448-LE, AXIS P3245-V/-VE/-LV/-LVE, AXIS P3245-LVE-3, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3255-LVE, AXIS Q1615/-LVE Mk III, AXIS Q1645/-LE, AXIS Q1647/-LE, AXIS Q1645/-LE, AXIS Q1659, AXIS Q1700-LE, AXIS Q1785-LE, AXIS Q1786-LE, AXIS Q1798-LE, AXIS Q3819-PVE, AXIS Q9216-SLV and ExCam XF Q1645,

#### ACAP updates

- *AXIS Object Analytics* 1.0.33 is pre-installed. Applies to: AXIS P3255-LVE, AXIS Q1615/-LE Mk III, AXIS M4308-PLVE, AXIS M1137/-E, AXIS P1375/-E, AXIS P1377/-LE, AXIS P1378/-LE, AXIS P1455-LE, AXIS P3245-V/-VE/-LV/-LVE, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3727-PLVE, AXIS P5654-E, AXIS P5655-E, AXIS Q1798-LE, AXIS Q3819-PVE, AXIS Q6074/-E, AXIS Q6075/-E/-S/-SE, AXIS Q6078-E, AXIS Q6135-LE and AXIS Q6315-LE
  - Stability improvements
  - Minor UI changes

### AXIS OS 10.7.3

Release date: 2021-10-11

#### Corrections

- Improved streaming stability for devices used in AXIS Companion systems. Applies to: AXIS M1137/-E, AXIS P1375/-E, AXIS P1377/-LE, AXIS P1378/-LE, AXIS P1455-LE, AXIS P1455-LE-3, AXIS P3245-V/-LV/-VE/-LVE, AXIS P3245-LVE-3, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P5654-E, AXIS P5655-E, AXIS Q1798-LE, AXIS Q6074/-E, AXIS Q6075/-E/-S/-SE, AXIS Q6078-E, AXIS Q6135-LE and AXIS Q6315-LE

#### ACAP updates

- Axis Object Analytics 1.0.30 is preinstalled.
  - Corrected an issue with the stream in the configuration web page.

### AXIS OS 10.7.2

Release date: 2021-10-04

#### ACAP updates – AXIS Q3819-PVE only

- Axis Object Analytics 1.0.30 is preinstalled.
  - Corrected an issue with the stream in the configuration web page.

### AXIS OS 10.7.1

Release date: 2021-10-28

#### Corrections

- Corrected a network issue that on rare occasions could cause the product to lose its internet connection.

### AXIS OS 10.7.0

Release date: 2021-09-27 (to be rolled out within three weeks of release date)

#### Features

- ACAPs containing a manifest.json file are now fully supported. The manifest.json file contains settings and parameters for the application. The older package.conf file is still supported.



- Net-SNMP is now the new SNMP backend for AXIS OS devices and will replace the legacy SNMP backend that was used previously. Net-SNMP provides significantly higher security mechanisms and authentication for SNMPv3 than previously could be provided. Highlights and other changes:
  - The default "initial"-user is now pre-configured with SHA-1 and AES-128 authentication/privacy compared to MD5 and DES previously. A factory default is required in order to use the new security settings.
  - Added support for SHA-1, SHA-256, SHA-384, SHA-512 for authentication and AES-128, AES-256 for privacy. For additional configuration of these methods, please contact the Axis Support Helpdesk.
  - An upgrade to AXIS OS 10.7 with SNMP enabled will migrate the configured SNMP settings, with the exception of the SNMPv3 user access configuration.
  - Added support for switching between either UDP or TCP as transport protocol during runtime via the VAPIX parameter `SNMP.TransportProtocol` in **Plain Config > SNMP**.
  - Multiple SNMPv3 users as well as corresponding different access-role configurations are currently not supported.
- Added support for MQTT subscription. With this support, it will be possible to use incoming MQTT messages as action triggers in the rule engine of the new preview web interface.
- Added optional API status property in VAPIX API Discovery JSON response body.
- Updated Apache to version 2.4.48 to increase overall cybersecurity level.
- Updated OpenSSL to version 1.1.1l to increase overall minimum cybersecurity level.
- Extended the 802.1x EAP-Identity field character limit from 32 to 128 characters.
- Added support for .ogg and .opus encoded mediaclips. Applies to: AXIS A8207-VE, AXIS A8207-VE Mk II, AXIS D2110-VE, AXIS FA54, AXIS I8016-LVE, AXIS M1134, AXIS M1135/-E, AXIS M1137/-E, AXIS M3057-PLVE, AXIS M3057-PLVE Mk II, AXIS M3058-PLVE, AXIS M3064-V, AXIS M3065-V, AXIS M3066-V, AXIS M3075-V, AXIS M3067-P, AXIS M3068-P, AXIS M3077-PLVE, AXIS M3115-LVE, AXIS M3116-LVE, AXIS M3205-LVE, AXIS M3206-LVE, AXIS P1367/-E, AXIS P1368-E, AXIS P1375/-E, AXIS P1377/-LE, AXIS P1378/-LE, AXIS P1455-LE, AXIS P1455-LE-3, AXIS P3227-LV/-LVE, AXIS P3228-LV/-LVE, AXIS P3245-V/-VE/-LV/-LVE, AXIS P3245-LVE-3, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3255-LVE, AXIS P3715-PLVE, AXIS P3719-PLVE, AXIS P3807-PVE, AXIS P3925-R/-LRE, AXIS P5655-E, AXIS P8815-2, AXIS Q1615/-LE Mk III, AXIS Q1645/-LE, AXIS Q1647/-LE, AXIS Q1659, AXIS Q1700-LE, AXIS Q1798-LE, AXIS Q3515-LV/-LVE, AXIS Q3517-LV/-LVE/-SLVE, AXIS Q3518-LVE, AXIS Q3527-LVE, AXIS Q6010-E, AXIS Q6074, AXIS Q6075/-E/-S/-SE, AXIS Q6078-E, AXIS Q6100-E, AXIS Q6135-LE, AXIS Q6315-LE, AXIS Q8752-E, AXIS Q9216-SLV, AXIS V5925, AXIS V5938 and ExCam XF Q1645
- Added straighten image as a new image correction functionality. Applies to: AXIS P3245-V/-VE/-LV/-LVE, AXIS P3247-LV/-LVE, and AXIS P3248-LV/-LVE
- Added web pages for visualizing occupancy value and stop & go signage based on occupancy levels. Applies to: AXIS P8815-2
- Improved privacy protection for customers choosing to upload pipeline debug data to external storage. Applies to: AXIS P8815-2
- Added support for 1080p 60 fps. Applies to: AXIS M1137/-E
- Added the possibility to start/stop object tracking with the autopilot in the camera's event system. Applies to: AXIS Q6010-E and AXIS Q6100-E
- Added the possibility to allow/disallow PTZ movement with directional audio detection in the camera's event system. Applies to: AXIS Q6100-E
- Added support for allocation of max-power via Link Layer Discovery Protocol (LLDP) in addition to PoE-class based power allocation. This allows the switch to allocate less power to the camera and potentially a greater number of PoE devices can be connected to the switch. LLDP can be enabled in **Settings > System > PlainConfig > Network > LLDP POE > LLDP Send Max PoE**. Applies to: AXIS M3077-PLVE
- Added support for a new NTCIP solution. NTCIP was previously supported through an ACAP, but is now enabled using the parameter `root.SNMP.NTCIP.Enabled` in **Plain Config > SNMP**. Please remove the

NTCIP ACAP after upgrading to AXIS OS 10.7 or higher. Applies to: AXIS P5654-E, AXIS P5655-E, AXIS Q1700-LE, AXIS Q1785-LE, AXIS Q1786-LE, AXIS Q1798-LE, AXIS Q6010-E, AXIS Q6074/-E, AXIS Q6075/-E/-S/-SE, AXIS Q6078-E, AXIS Q6100-E, AXIS Q6135-LE, AXIS Q6215-LE, AXIS Q6315-LE, AXIS Q8752-E, AXIS V5925, AXIS V5938, ExCam XF Q1785, F101-A XF Q1785 and XP40-Q1785

## Corrections

- Corrected *CVE-2021-31986*.
- Corrected *CVE-2021-31988*.
- Corrected an issue that prevented legacy motion detection from working.
- Corrected an issue with MQTT subscriptions when reconnecting.
- Corrected MQTT default message so it no longer starts with an empty string.
- Corrected an issue that caused the anonymous viewer functionality to be removed after upgrade to 10.6.0.
- Audio now uses the new `audiodevicecontrol.cgi` instead of the old API. This means that the gain values may be different in the web interface, but the actual audio level should be the same as before.
- Corrected an issue that prevented the Sound Intelligence Sound Detector ACAP to get an audio stream.
- Improved RTP timestamp accuracy for metadata streams.
- Corrected an issue that could cause an RTSP stream to stop after 60+ seconds if streamed to an openRTSP client.
- Corrected the product name in the web interface. Applies to: AXIS M3058-PLVE
- Corrected an issue that caused too many SNMP PTZ error codes to be spammed in the logs. Applies to: AXIS Q6215-LE and AXIS Q6315-LE
- Masks created in the digital zoom range before upgrade might not cover the same exact area after upgrade. Applies to: AXIS M7104, AXIS P5654-E, AXIS P5655-E, AXIS P7304, AXIS P7316, AXIS Q1798-LE, AXIS Q6074/-E, AXIS Q6075/-E/-S/-SE, AXIS Q6078-E, AXIS Q6135-LE, AXIS Q6215-LE, AXIS Q6315-LE, AXIS Q8752-E, AXIS V5925 and AXIS V5938
- Corrected an issue that caused the radar to point in the wrong direction, relative to the user input, if the stream was rotated before calibration. Applies to: AXIS D2110-VE
- Corrected an issue that could prevent installation configuration in iOS. Applies to: AXIS P3719-PLE, AXIS Q6010-E and AXIS Q6100-E
- Corrected an issue that prevented the possibility to change manual IR Illumination angle in the web interface. Applies to: AXIS Q1785-LE, AXIS Q1786-LE and AXIS Q1798-LE
- Improved stability when using rotated streams. Applies to: AXIS FA54
- Improved start-up process. Applies to: AXIS P3719-PLE
- Corrected an issue that caused input gain to revert to default value after upgrade. Applies to: AXIS M1134, AXIS M1135/-E, AXIS M1137/-E, AXIS M3057-PLVE Mk II, AXIS M3057-PLVE, AXIS M3058-PLVE, AXIS M3064-V, AXIS M3065-V, AXIS M3066-V, AXIS M3075-V, AXIS M3067-P, AXIS M3068-P, AXIS M3077-PLVE, AXIS M3115-LVE, AXIS M3116-LVE, AXIS M3205-LVE, AXIS M3206-LVE, AXIS P3227-LV/-LVE, AXIS P3228-LV/-LVE, AXIS P3245-V/-VE/-LV/-LVE, AXIS P3245-LVE-3, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3255-LVE, AXIS P3715-PLVE, AXIS P3719-PLE, AXIS P3807-PVE, AXIS P3925-LRE, AXIS P3925-R, AXIS P8815-2, AXIS Q6135-LE and AXIS Q8752-E

## ACAP updates

- *AXIS Video Motion Detection* has been updated to version 4.5.1.
  - Fixed a streaming issue on the configuration web page for some products.
- *AXIS Motion Guard 2.3.0* is preinstalled.
  - Fixed a streaming issue on the configuration web page for some products.
- *AXIS Fence Guard 2.3.0* is preinstalled.
  - Fixed a streaming issue on the configuration web page for some products.

- *AXIS Loitering Guard* 2.3.0 is preinstalled.
  - Fixed a streaming issue on the configuration web page for some products.
- *Axis Object Analytics* 1.0.28 is preinstalled.
  - Relaxed requirements on cgi calls with empty params field to match documented VAPIX API.
  - Fix for buildup of consumed memory over time when specifically using AnyMotion in a crowded scene.

## **AXIS OS 10.6.10**

Release date: 2021-07-14

### **Corrections**

- Improved stability of blocked view detection. Applies to: AXIS P3925-R and AXIS P3935-LR

## **AXIS OS 10.6.9**

Release date: 2021-07-12

### **Features**

- Added the parameter "Locked focus presets" in plain config, which saves new autofocus presets with fixed focus. Applies to: AXIS Q6074/-E and AXIS Q6075/-E/-S/-SE
- Added the parameter "Set preset trigger focus" in plain config, which opens the iris and does a refocus when a new preset is set. Applies to: AXIS Q6074/-E and AXIS Q6075/-E/-S/-SE

## **AXIS OS 10.6.8**

Release date: 2021-07-05

### **Corrections**

- Improved double talk performance in SIP/VMS calls. Applies to: AXIS A8207-VE, AXIS A8207-VE Mk II and AXIS I8016-LVE

## **AXIS OS 10.6.7**

Release date: 2021-07-05

### **Corrections**

- Corrected an issue with MQTT subscriptions when reconnecting. Applies to: Products in and .

## **AXIS OS 10.6.6**

Release date: 2021-06-28

### **Corrections**

- Corrected an issue with MQTT subscriptions when reconnecting. Applies to: AXIS A8207-VE, AXIS A8207-VE Mk II and AXIS I8016-LVE
- Corrected an issue with O3C-based solutions when accessing the intercom interface remotely. Applies to: AXIS A8207-VE, AXIS A8207-VE Mk II and AXIS I8016-LVE

## **AXIS OS 10.6.4**

Release date: 2021-06-28

### **Corrections**

- Corrected an issue that caused ONVIF conformance to fail. Applies to: AXIS P3719-PLE
- Corrected an issue that could cause streaming to fail to O3C devices. Applies to: AXIS P3719-PLE, AXIS Q6010-E and AXIS Q6100-E

## **AXIS OS 10.6.1**

Release date: 2021-06-11

## Corrections

- Enabled Axis Edge Vault. Applies to: AXIS Q3819-PVE

## AXIS OS 10.6.0

Release date: 2021-06-14 (to be rolled out within three weeks of release date)

## Features

- Added the possibility to show day/night information in overlay text by using **#dn**. This will show both the current value and the threshold value for the day/night change.
- HTTPS Ciphers are checked and unsupported ciphers removed on standard AXIS OS upgrade
- Added a parameter to disable Apache and OpenSSL version in HTTP(S) responses via **Plain Config > System**.
- Upgraded OpenSSL to 1.1.1k to increase overall minimum cyber security level.
- Added barrel distortion correction. Applies to: AXIS M1134, AXIS M1135/-E and AXIS M1137/-E
- Added object classifications in metadata stream when *AXIS Object Analytics* ACAP is running. If the ACAP is restarted for any reason, the metadata stream also needs to be restarted. Applies to: AXIS M1137/-E, AXIS P1375/-E, AXIS P1377/-LE, AXIS P1378/-LE, AXIS P1455-LE, AXIS P3245-V/-VE/-LV/-LVE, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3255-LVE, AXIS P5654-E, AXIS P5655-E, AXIS Q1615/-LE Mk III, AXIS Q1798-LE, AXIS Q3819-PVE, AXIS Q6074/-E, AXIS Q6075/-E/-S/-SE, AXIS Q6135-LE and AXIS Q6315-LE
- Support for stream specific legacy overlays has been removed. With this change, the URL option for both legacy image and text overlay will no longer be supported. Applies to: products in and .
- Added support for ONVIF profile T. Applies to: AXIS P3807-PVE and AXIS Q1659
- Updated AXIS License Plate Verifier to 2.1.0. Applies to: AXIS P1455-LE-3
- Added the option to select which overlay should be used in a stream profile. Applies to: products with support for text overlay
- Added "Audio clip playing" as a new condition in the event system. Applies to: all products except AXIS A8207-VE, AXIS A8207-VE Mk II, AXIS I8016-LVE and AXIS S3008
- Changed the default values for input and output gain to better reflect what is used in normal installations. Values will not change after upgrade, only after default. Applies to: AXIS A8207-VE and AXIS A8207-VE Mk II
- Changed the default values for input gain to better reflect what is used in normal installations. Values will not change after upgrade, only after default. Applies to: AXIS I8016-LVE
- New VAPIX intercom APIs can be found at <https://www.axis.com/vapix-library> Applies to: AXIS A8207-VE and AXIS A8207-VE Mk II
- Added support for ONVIF profile M Applies to: AXIS P1375/-E, AXIS P1377/-LE, AXIS P1378/-LE, AXIS P1455-LE, AXIS P3245-V/-VE/-LV/-LVE, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3255-LVE, AXIS P5654-E, AXIS P5655-E, AXIS Q1615/-LE Mk III, AXIS Q1798-LE, AXIS Q3819-PVE, AXIS Q6074/-E, AXIS Q6075/-E/-S/-SE, AXIS Q6078-E, AXIS Q6135-LE and AXIS Q6315-LE

## Corrections

- Improved motion detection to handle scenes with extreme lighting changes and improved the general behavior for applications that make use of this engine and data.
- Corrected an issue that did not account for MTU packet fragmentation for IEEE 802.1x authentication. Previously the Axis device was not able to authenticate properly against an 802.1x network when the MTU was configured to 1410 or lower.
- Corrected an issue that on some occasions could prevent the export of a part of a recording.

- Corrected an issue that in combination with some VMSeS and low resolution could cause brief disconnections in the video stream.
- Corrected an issue that caused AXIS Fence Guard to fail to install and run when the camera's date and time changed to year 19xx after a reset or factory default, and no date and time was configured by the user. Applies to: products with support for *AXIS Fence Guard*
- Improved handling of large objects by adding height filter parameter. Applies to: AXIS P8815-2
- Corrected an issue that removed events using wiper action after upgrade. Applies to: AXIS Q8752-E
- Improved behavior when using guard tour with the control queue. Applies to: products with support for guard tour
- Corrected an issue that made ceiling mounted cameras go to the wrong position when using absolute movements via VISCA commands. Applies to: AXIS V5925 and AXIS V5938
- Increased the maximum speaker output volume which helps to improve conversations in loud environments. Applies to: AXIS A8207-VE and AXIS A8207-VE Mk II
- Improved autodetection of NTSC cameras. Applies to: AXIS M7104 and AXIS P7304

### Known bugs/limitations

- AXIS License Plate Verifier must have version 2.0 or higher to work with AXIS OS version 10.6.0. Applies to: AXIS P1445-LE
- Sometimes the web page gets stuck in a loop trying to load the Plain Config page. Refreshing the page will solve this. Applies to: AXIS A8207-VE, AXIS A8207-VE Mk II and AXIS I8016-LVE
- Automatic detection of video source might not always detect the correct video standard. If the camera is not detected correctly, use manual mode instead. Applies to: AXIS M7104 and AXIS P7304

### ACAP updates

- *AXIS Motion Guard* 2.2.9 is preinstalled.
- *AXIS Fence Guard* 2.2.9 is preinstalled.
- *AXIS Loitering Guard* 2.2.9 is preinstalled.
- *AXIS Video Motion Detection* has been updated to version 4.5.0.
- *Axis Object Analytics* 1.0.22 is preinstalled.

## AXIS OS 10.5.2

Release date: 2021-04-28

### Corrections

- Corrected an issue that on some occasions prevented an upgrade to version 10.5.0.
- Corrected an issue that could cause O3C-based connections with the device to be interrupted.

## AXIS OS 10.5.1

Release date: 2021-04-26

### Corrections

- Added an option to manually re-calibrate focus. Please do not re-calibrate until you have read the instructions related to this available here: [https://www.axis.com/files/manuals/Re-calibrationQ6074\\_6075.pdf](https://www.axis.com/files/manuals/Re-calibrationQ6074_6075.pdf) Applies to: AXIS Q6074/-E

## AXIS OS 10.5.0

Release date: 2021-04-26 (to be rolled out within three weeks of release date)

### Features

- OpenSSL has been upgraded to 1.1.1j to fix CVE-2021-23841 and CVE-2021-23840.
- RTSP and HTTP stream URL:s now allow for filtering overlays based on overlay type. This is done by setting 'overlays=<all|text|image|application|off>' in the URL (only one value).Applies to: all products with overlay support
- Updated pjsip to version 2.10 to increase overall cyber security.Applies to: products with SIP support ( AXIS I8016-LVE, AXIS A8207-VE/-VE MK II, AXIS P3245-V/-VE/-LV/-LVE, AXIS P3245-LVE-3, AXIS P3247-LV/-LVE, AXIS P3248-LV/-LVE, AXIS P3255-LVE, AXIS Q3515-LV/-LVE, AXIS Q3517-LV/-LVE/-SLVE, AXIS Q3518-LVE, AXIS Q9216-SLV and AXIS V5925)
- Added support for day-night shift in onscreen control.Applies to: AXIS P5654-E, AXIS P5655-E, AXIS Q6074/-E, AXIS Q6075/-E/-S/-SE and AXIS Q6135-LE
- Added support for defog and image stabilization in onscreen control.Applies to: AXIS Q6075/-E
- Added support for polygon privacy masks.Applies to: AXIS M3064-V, AXIS M3065-V, AXIS M3066-V, AXIS M3075-V, AXIS M3205-LVE and AXIS M3206-LVE
- Added one shot auto focus. To set, go to **Settings > System > Plain config > PTZ**. Scroll down to UserAdv U1 and tick the check box **One shot AF**. Scroll down to the end of the page and click the **Save** button.Applies to: AXIS Q6074/-E and AXIS Q6075/-E/-S/-SE
- Added an option to manually re-calibrate focus. Please do not re-calibrate until you have read the instructions related to this available here: [https://www.axis.com/files/manuals/Re-calibrationQ6074\\_6075.pdf](https://www.axis.com/files/manuals/Re-calibrationQ6074_6075.pdf)Applies to: AXIS Q6075/-E/-S/-SE
- The occupancy level estimation is increased any time a person enters, regardless of previously recorded statistics.Applies to: AXIS P8815-2
- Q87 Zoom Sync is now a pre-installed ACAP to make it possible for a synchronized zoom movement between the visual and thermal lens. The visual zoom acts as a primary and the thermal zoom follows as a secondary. **Note!** This function only applies to AXIS Q87 cameras equipped with thermal zoomApplies to: AXIS Q8752-E
- Added the possibility to switch between HDMI and SDI in the web interface (**System > HDMI**).Applies to: AXIS V5925
- It is now possible to transmit audio to AXIS T6101 audio output.Applies to: AXIS P3245-LVE
- A new configuration check page have been added for ease of installation and troubleshooting, making it possible to verify configurations without physically being on site at the unit.Applies to: AXIS A8207-VE/-VE Mk II and AXIS I8016-LVE
- The call button LED behavior in the web interface has been clarified.Applies to: AXIS A8207-VE/-VE Mk II and AXIS I8016-LVE
- Added the feature to retrieve OAK in the web interface, found under Services/AVHS.Applies to: AXIS I8016-LVE
- Improved day/night switching algorithm.Applies to: AXIS I8016-LVE
- Added option to perform a factory default in combination with upgrading/downgrading. It's mandatory to factory default the product when downgrading to an older AXIS OS.Applies to: AXIS I8016-LVE

### Corrections

- Increased the number of allowed characters for event condition name to 512.
- Corrected an issue that prevented the use of some special characters in ONVIF passwords.

- Corrected an issue that prevented the Axis device to respond with "HTTP 403 Forbidden" when the source-ip address was blocked when using PreventDOSAttack in **Plain Config > System**. Previously "HTTP 401 Unauthorized" was returned.
- Corrected an issue that caused the video to be stretched if in corridor mode and cropped. Applies to: all products in .
- Added possibility to reset occupancy level at a user-defined specific time. Applies to: AXIS P8815-2
- Corrected an issue that caused the video over HDMI to show the stream from overview instead of the selected view area. Applies to: all products in .
- Improved image tuning to avoid ghosting of moving objects. Applies to: AXIS Q6010-E and AXIS Q6100-E
- Corrected an issue that caused already established secure connections such as HTTPS or O3C (one-click cloud connection) to be interrupted. Applies to: AXIS P3715-PLVE
- Corrected an issue when query=position sometimes did not show the right auto-iris state. Applies to: AXIS Q6215-LE

### Limitations

- On products using capture mode 720p, the edges of the polygon privacy masks could be rough. Applies to: AXIS M3064-V and AXIS M30675-V

### ACAP updates

- *Axis Object Analytics* 1.0.20 is pre-installed.

## AXIS OS 10.4.5

Release date: 2021-03-23

- AXIS Object Analytics 1.0.19 has been preinstalled. Go to *AXIS Object Analytics* for a list of supported products.
- Corrected an AXIS Object Analytics configuration issue that occurred while using HTTPS.

## AXIS OS 10.4.3

Release date: 2021-03-15

- Updated AXIS License Plate Verifier to version 1.8.4 in AXIS P1445-LE-3.
- Added option to perform a factory default in combination with upgrading/downgrading. It's mandatory to factory default the product when downgrading to an older AXIS OS. Applies to: AXIS A8207-VE and AXIS A8207-VE Mk II.

## AXIS OS 10.4.2

Release date: 2021-03-08

### Corrections

- Corrected an issue that made the PT functionality not work in combination with AXIS T99A10 Positioning Unit 24 V AC/DC. Applies to: AXIS Q1645/-LE, AXIS Q1647/-LE, ExCam XF Q1645, AXIS P1375/-E, AXIS P1377/-LE, F101-A XF P1377, AXIS P1378/-LE and AXIS Q1615/-LE Mk III.

## AXIS OS 10.4.1

Release date: 2021-03-04



- Corrected an issue that on rare occasions caused the image in one or more sensors to show horizontal lines or an oversaturated image. Applies to: AXIS Q6010-E and AXIS Q6100-E.

## AXIS OS 10.4.0

Release date: 2021-03-08 (to be rolled out within three weeks of release date)

### Features

- Added support for new action "Publish MQTT", available in the web interface via **Events > Device events > Rules setup**. This new action makes it possible to publish MQTT messages with custom topic and payload.



To watch this video, go to the web version of this document.

- OpenSSL upgraded to version 1.1.1i to fix *CVE-2020-1971*.
- Successful and failed user login attempts are now logged in detail when the access log parameter is enabled from **Plain Config > System > Access Log**.
- For products with view areas it is now possible to select which source should be shown by default in the web interface. To set, go to **Settings > System > Plain config > Layout > Live view video** and select the number for the source.
- Added actions "Play audio clip while active" and "Stop playing audio clip" to the event system for products that support audio out.
- Added support for quad view. Applies to: AXIS Q6010-E and AXIS Q6100-E.
- Added TVI 4K 12.5/15 fps support on channel 1. Note: 4K mode disables channel 3 and it is no longer possible to use cameras connected to the third channel. Applies to: AXIS P7304
- Improved angle accuracy. Applies to: AXIS D2110-VE.
- Added support for portcast in order to support AXIS T6101- and AXIS T6112-based solutions. Applies to: AXIS Q6135-LE.
- Added support for allocation of max-power via Link Layer Discovery Protocol (LLDP) in addition to PoE-class based power allocation. This allows the switch to allocate less power to the camera and potentially a greater number of PoE devices can be connected to the switch. LLDP can be enabled in **Settings > System > PlainConfig > Network > LLDP POE > LLDP Send Max PoE**. Applies to: AXIS M3115-LVE and AXIS M3116-LVE.

### Corrections

- Corrected an issue that erased the password from the MQTT broker connection settings when editing settings occasionally, which required the user to re-enter the password when it happened.
- Corrected an issue that caused the MQTT configuration in the device to get corrupt on rare occasions.
- Corrected an issue that could cause an MQTT event to be duplicated upon registering the same event multiple times.
- Updated digital input LogicalState metadata API to consistently use 0/1 on all camera models.
- Corrected an issue that caused the device to send an EPRT command when transferring an image or video via FTP instead of an EPSV command.
- Corrected an issue where a network share used as a recipient could get its properties overwritten by another network share created from the Storage page.



- Corrected nice names for the PreventDoSAttack parameters in Settings > System > Plain Config > System > PreventDoSAttack.
- Improved Link Layer Discovery Protocol (LLDP) system stability.
- Improved the PoE budget management for AXIS S3008.
- Corrected an issue that on rare occasions caused the image to turn green after a power loss. Applies to: AXIS Q6215-LE
- Enabled device preset number for a server preset to be set by user. Applies to: AXIS P7304 and AXIS M7104.
- Corrected an issue with the installation height parameter that previously was truncated to an integer value. Applies to: AXIS D2050-VE and AXIS D2110-VE.
- Improved system stability for multisensor products when streaming multiple video streams at the same time.

#### Limitations

- When connecting a camera to AXIS M7104 Network Video Encoder on channel 2 only, there are sometimes image disruptions resulting in "No video". By connecting the cameras from left to right starting with channel 1, these disruptions are removed.

#### ACAP updates

- *AXIS Object Analytics* (Machine Learning Processing Unit) is updated to version 1.0.18.
- *AXIS Object Analytics* (Deep Learning Processing Unit) is updated to version 1.0.18.

### **AXIS OS 10.3.4**

Release date: 2021-02-24

- Corrected an issue with mirrored image that occurred on some units. Applies to: AXIS P3807-PVE and D101-A XF P3807.

### **AXIS OS 10.3.3**

Release date: 2021-02-04

- Fixed the camera booting issue when the cover top is off for AXIS M3077-PLVE.

### **AXIS OS 10.3.2**

Release date: 2021-02-01

- Improved manual focus adjustment. Applies to: AXIS Q6074/-E, AXIS Q6075/-E/-S/-SE and ExCam XPT Q6075.
- Corrected an issue where gain got higher value when toggling AGC on/off. Applies to: AXIS M3077-PLVE.

### **AXIS OS 10.3.1**

Release date: 2021-01-14

- Added missing help text sections for AXIS P3255-LVE.

### **AXIS OS 10.3.0.2**

Release date: 2021-01-19

- Corrected an issue that sometimes made the IR-LED not work as expected. Applies to: AXIS P1447-LE, AXIS P1448-LE and AXIS P1455-LE.

## AXIS OS 10.3.0.1

Release date: 2021-01-14

- Products with hardware ID 924.2, 924 and 925 only support version 10.3.0.1 and later. Products with hardware ID 7A7.2, 7A7 and 7A8 support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > Hardware ID**. For more information, see <https://www.axis.com/support/faq/FAQ116512>. Applies to: AXIS M1134 and AXIS M1135/-E
- Products with hardware ID 910.1 and 910.2 only support version 10.3.0.1 and later. Products with hardware ID 79F.1 and 79F.2 support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > Hardware ID**. For more information, see <https://www.axis.com/support/faq/FAQ116511>. Applies to: AXIS P3245-LV/-LVE, AXIS P3247-LV/-LVE and AXIS P3248-LV/-LVE
- Products with HardwareID 90F.1 and 90F.2 only support version 10.3.0.1 and later. Products with HardwareID 79E.1 and 79E.2 support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > Hardware ID**. For more information, see <https://www.axis.com/support/faq/FAQ116511>. Applies to: AXIS P3245-V/-VE
- Products with hardware ID 90B, 90C and 90D only support version 10.3.0.1 and later. Products with hardware ID 7DD, 763 and 764 support all AXIS OS versions. The hardware ID can be found in **Plain config > Properties > System > Hardware ID**. For more information, see <https://www.axis.com/support/faq/FAQ116510>. Applies to: AXIS P1447-LE, AXIS P1448-LE and AXIS P1455-LE

## AXIS OS 10.3.0

Release date: 2021-01-19 (to be rolled out within three weeks of release date)

### Breaking changes

- Removed support for trigger data functionality. Support for trigger data will continue on 9.80 LTS.

### Features

- Updated OpenSSL to version 1.1.1h to increase overall minimum cyber security level.
- MQTT is now activated by default upon power loss or reboot if MQTT was enabled prior to it.
- Added the possibility to set a wear level for the SD card that the event system can trigger on. This is set and displayed on the **Storage** page if the SD card supports this feature.
- Added support for audit logging when a user exports video from the device's edge recording (SD card, network share).
- Improved video streaming stability in multi-stream and ONVIF Audio Backchannel scenarios.
- Added support for allocation of max-power via Link Layer Discovery Protocol (LLDP) in addition to PoE-class based power allocation for selected products. This allows the switch to allocate less power to the camera and potentially a greater number of PoE devices can be connected to the switch. LLDP can be enabled in **Settings > System > PlainConfig > Network > LLDP POE > LLDP Send Max PoE**.
- Camstreamer ACAP is no longer preinstalled on newer versions of AXIS V5925. Voucher for download is included in box.
- Added support for controlling PTZ using the VISCA protocol over IP and RS232 for AXIS V5925.
- Added the feature image freeze for AXIS V5925.
- Improved controls for switching video output in onscreen controls for AXIS V5925.
- Added support for live occupancy metrics and stateful events based on occupancy thresholds for AXIS P8815-2.

- Improved autofocus accuracy. Applies to: AXIS P1367-E, AXIS P1368-E, AXIS P1445-LE, AXIS P1445-LE-3, AXIS P1447-LE, AXIS P1448-LE, AXIS Q1645/-LE, AXIS Q1647/-LE, AXIS Q3515-LV/-LVE, AXIS Q3517-LV/-LVE, AXIS Q3518-LVE and AXIS Q3527-LVE.
- Added installation feature quad and 360 view for newer fisheye cameras like AXIS M3067-P and AXIS M3068-P.
- Added support for a new revision of the audio solution in AXIS M7304. The new revision is included in products with part number 01680-001-02. Note that these products will not work with AXIS OS older than the current release.

### Corrections

- Corrected an issue that caused the audio transfer over HTTPS to not work properly and with that, the audio-gain-level behavior was also reverted back to the state it was known in AXIS OS releases up to AXIS OS 10.0.2. It is therefore mandatory to upgrade to AXIS OS 10.3 when experiencing audio-related issues on Axis devices running on AXIS OS 10.1 and 10.2. Upon release of AXIS OS 10.3, AXIS OS 10.1 and 10.2 will be made unavailable for download from [www.axis.com](http://www.axis.com).
- Corrected an issue that prevented setting the gain individually on the left and right channel on products with stereo audio input.
- Corrected an issue that caused PKCS#12-formatted certificate uploads to fail when certain special characters were used as a password.
- Corrected text for time offset in the **Date & Time** page, the offset is now shown in milliseconds instead of seconds.
- Corrected an issue that caused the value of Quality of Service (QoS) to not be respected in always multicast mode.
- Corrected an issue that prevented the device to stream in always-multicast mode after the video stream processing has been restarted.
- Corrected an issue where overlays sometimes could be placed incorrectly in the video stream. Applies to: products in .
- Corrected a focus issue that occurred after upgrade. Applies to: AXIS Q1615/-LE Mk III, AXIS Q1645/-LE and AXIS Q1647/-LE.
- Corrected an issue that always displayed a current focal length value of 0 in overlays for AXIS Q1798-LE.
- Corrected an issue for AXIS P1377-LE that did not give the entire OID list and their corresponding information when polling via SNMP.
- Corrected an issue that on rare occasions could cause the live image to blink in dark conditions. Applies to: products in .
- Corrected an issue with pause-frame handling that could cause network disconnections if pause-frames were enabled and used in the network. Applies to: products in and .
- Corrected an issue that prevented the device to utilize the available network bandwidth in high-latency networks such as 4G cellular network. Applies to: products in and .
- Removed 100Mbit/s and 10Mbit/s half and full duplex network speed options as valid available selections from **Plain Config > Network > Connection Type** for AXIS Q6010-E.
- Corrected header response videostatus.cgi in which headers were in same line to individual header lines for AXIS P7304.
- Corrected an issue to allow users to be able to select balanced in for audio in AXIS V5925.
- Corrected an issue that caused video clients to not display a low-fps video stream due to missing base fps info in VUI timing info. Applies to: products in and .

### ACAP updates

- *AXIS Object Analytics* (Machine Learning Processing Unit) is updated to version 1.0.17.
- *AXIS Object Analytics* (Deep Learning Processing Unit) is updated to version 1.0.17.
- *AXIS Video Motion Detection* has been updated to version 4.4.9
- *AXIS Guard Suite* has been updated to version 2.2.8

## AXIS OS 10.2.2

Release date: 2020-12-02

### Features

- Added health monitoring of radar transmitter and receiver for AXIS D2110-VE.

### Corrections

- Corrected an issue that sometimes made AXIS D2110-VE lose the ability to detect objects.

## AXIS OS 10.2.1

Release date: 2020-11-20

### ACAP updates

- Updated *AXIS License Plate Verifier* to version 1.80.0 for AXIS P1445-LE-3.

## AXIS OS 10.2.0

Release date: 2020-11-10 (to be rolled out within three weeks of release date)

### Features

- From this release all camera products support SRTP (Secure Real-time Transport Protocol).
- Updated Apache web server to version 2.4.46 to increase overall minimum cybersecurity level.
- Support for supervised digital audio has been added to products with digital audio. Four new events for supervising the digital audio input have been added to the event system in the web interface.
- Removed support for AXIS Internet Dynamic DNS Service (*axiscam.net*). For more information, see <https://www.axis.com/support/technical-notes/broadband-connection>.
- Removed the previously deprecated VAPIX Record/Play CGI that allowed for playback of MJPEG recordings. It is recommended to use the RTSP protocol instead with support for all formats (H.264, H.265, MJPEG, etc.)
- Removed support for NAT Traversal. It is recommended to use AXIS Secure Remote Access or similar services instead. The following NAT Traversal related VAPIX parameters have been removed:
  - Network.UPnP.NATTraversal.Active
  - Network.UPnP.NATTraversal.Enabled
  - Network.UPnP.NATTraversal.ExternalIPAddress
  - Network.UPnP.NATTraversal.MaxPort
  - Network.UPnP.NATTraversal.MinPort
  - Network.UPnP.NATTraversal.Router
- Added support for ONVIF profile T to AXIS Q6215-LE.
- Added support for LLDP allocation of max-power for AXIS S3008. Enabled per default in AXIS S3008, which allows for smarter PoE-management when the connected Axis device has support for and has this feature enabled as well.
- Added support for single sensor mode for AXIS D2110-VE.

- Added support for mirroring and rotation in dual view. Applies to: AXIS P3715-PLVE, AXIS P3717-PLE and AXIS P3719-PLE.

#### Corrections

- Corrected an issue that caused the last will & testament message not to work. Therefore, the default behavior for connect, disconnect and last will & testament messages have been modified. By default a common topic, {device serial number}/event/connection, and a common payload structure will be used for such messages.
- Corrected an issue that sometimes could make it impossible to export the full length of recordings.
- Corrected an issue that caused the device to stop video streaming over multicast after receiving multiple RTSP PLAY requests with "npt=0.000-" payload.
- Corrected an issue that caused an error message to pop up when pressing the test button of an event using HTTP recipients.
- Corrected an issue with iris adjustments for AXIS Q6215-LE.
- Corrected an issue that caused parallel HTTPS cgi requests to fail on rare occasions. Applies to: AXIS P3715-PLVE, AXIS Q1615/-LE Mk III, AXIS Q3527-LVE, AXIS Q6074/-E, AXIS Q6075/-E/-S, AXIS Q9216-SLV.
- Corrected an issue that sometimes prevented adjustment of the focus window. Applies to: AXIS P1367/-E, AXIS P1368-E, AXIS P1375/-E, AXIS P1377/-LE, AXIS P1378/-LE, AXIS Q1615/-LE Mk III, AXIS Q1645/-LE, AXIS Q1647/-LE.
- P-Iris lens driver selection menu is now hidden when an i-CS lens is connected. Selecting P-Iris driver for a connected P-Iris lens also works as expected now. Applies to: AXIS Q1615/-LE Mk III, AXIS Q1645/-LE, AXIS Q1647/-LE.

#### ACAP updates

- *AXIS Object Analytics Beta* (Deep Learning Processing Unit) has been updated to version 1.0.15.
- *AXIS Object Analytics* (Machine Learning Processing Unit) has been updated to version 1.0.15.

### AXIS OS 10.1.2

Release date: 2020-10-05

#### Corrections

- Improved manual focus behavior for AXIS Q6074/-E and AXIS Q6075/-E/-S.
- Corrected an issue that caused the privacy masks to be rendered incorrectly affecting AXIS FA54 and AXIS Q6010-E.
- Corrected a stability issue that could occur when AXIS P3719-PLE or AXIS Q6010-E was connected to a VMS and used motion stability.

### AXIS OS 10.1.1

Release date: 2020-10-02

#### Known bugs/limitations – AXIS P8815-2 only

- Export data function within the **Statistics** page produces the last 30 days of data.
- Only the live view and live counts from primary device are shown in the **Statistics** page.
- Primary and secondary devices need to be restored to factory default settings to renew certificate.
- Data that has previously been successfully reported to server cannot be re-sent.

- UTC is utilized in the time stamps for data reported to server.
- Turning back the date and time of the device will result in application not counting, the device needs to be restarted to resume normal operation.

## AXIS OS 10.1.0

Release date: 2020-09-23 (to be rolled out within three weeks of release date)

### Features

- Added support for Remote Syslog API which enables Axis devices to send log messages to a remote syslog server. Remote Syslog can be configured via the web interface under **Settings > System > TCP/IP** or using the VAPIX API that can be found *here*. Look at *this example* on how to use this.
- The download.cgi API has been removed. The exportrecording.cgi API which was introduced in 5.60 is the substitute.
- The parameters Time.ServerTime and Time.ServerDate that have been deprecated for some time have now been removed.
- Added support for a new overlay modifier "%v" that displays seconds in 1/1000 fractions.
- Added support for HTTP Strict Transport Security (HSTS) when using HTTPS
- Added support for certificate-based client authentication in MQTT.
- Support for average bitrate (ABR) has been added to selected products, see *Average bitrate (ABR)* for more information.
- A factory default is now mandatory when trying to downgrade the device. See *How to downgrade* for more information.
- Improved performance when building up an RTSP video stream by 30%.
- Updated UPnP to version 1.8.7 which patches CVE-2020-12695 (Callstranger).
- The following HTTP headers are now configured per default to increase overall cybersecurity level:
  - X-Frame-Options: SAMEORIGIN
  - X-Content-Type-Options: nosniff
  - X-XSS-Protection: 1; mode=block.
- Changes in 802.1x:
  - Added support for IEEE 802.1x-2010 which provides support for EAPoL version 3 and changed default IEEE 802.1x EAPoL setting from version 1 to 3.
  - Added support for configuring 802.1X without CA certificate. This will make the device authenticate on any network, not just the trusted one.
  - The EAP-TLS-identity field in the 802.1x configuration is now by default filled with "axis-  
<serial-number>" value.
  - IEEE 802.1x is enabled per default on Axis products that support AXIS Edge Vault, e.g. AXIS S3008. This enables Axis products to utilize Axis device ID via IEEE 802.1AR.
- Added autotracking 2 for AXIS P5654-E and AXIS P5655-E.
- Removed support for SMB versions lower than 2.1 in AXIS S3008.
- Added the possibility to use AXIS Q6010-E in solo mode without having a PTZ camera connected.
- Added automatic gain control for AXIS M3075-V.

### ACAP updates

- *AXIS License Plate Verifier* has been updated to version 1.7.2. Pre-installed on AXIS P1445 LE-3 only.
- *AXIS Guard Suite* has been updated to version 2.2.7.

- *AXIS Video Motion Detection* has been updated to version 4.4.8.
- *AXIS Object Analytics Beta* has been pre-installed in another few selected products, e.g. AXIS Q1615/-LE Mk III which is compatible with AXIS Object Analytics using deep learning.

## AXIS OS 10.0.2

Release date: 2020-07-13

### Corrections

- Corrected an issue that sometimes caused event triggered recordings to fail.
- Corrected an issue for AXIS S3008 that prohibited the use of a new AXIS OS.

## AXIS OS 10.0.1

Release date: 2020-07-06

### Corrections

- Corrected an issue that prevented mute to work. Applies to: AXIS M3064-V, AXIS M3065-V, AXIS M3066-V, AXIS M3075-V and AXIS P3719-PL.
- Corrected an issue that prevented the heater from working properly. Applies to: AXIS P3245-V/-VE/-LV/-LVE, AXIS Q3515-LV/-LVE, AXIS Q3517-LV/-LVE and AXIS Q3518-LVE.

## AXIS OS 10.0.0

Release date: 2020-06-23

### Features

- For products with audio clips it is now possible to use MP3 format.
- ONVIF profile T has been added to ExCam XF Q1785 and F101-A XF Q1785.
- LLDP allocation for max-power is available for AXIS M3205-LVE and AXIS M3206-LVE. This allows the switch to allocate less power to the camera and potentially a greater number of PoE devices can be connected to the switch. LLDP allocation for max-power can be enabled in **Settings > System > PlainConfig > Network > LLDP POE > LLDP Send Max PoE**.
- Added VAPIX API for enabling/disabling all privacy masks. Exception: AXIS D2050-VE.
- Administrator credentials are now required to access `privacymask.cgi`. Exception: AXIS D2050-VE.
- Added the possibility to retrieve the device Owner Authentication Key (OAK) in the web interface. Note that this functionality requires that the product have direct access to the internet.
- Updated Apache to version 2.4.43 to increase overall cyber security level.
- Updated OpenSSL to version 1.1.1g to increase overall minimum cyber security level.

### Corrections

- Corrected an issue that sometimes could cause problems with edge sync between the camera and Genetec VMS.
- Corrected an issue that prevented cross device triggering to work properly when IPv6 was used.
- Corrected an issue that sometimes made it impossible to edit action rules after upgrade.
- Corrected an issue in products with temperature compensation that could potentially cause bad focus.
- Corrected an issue that caused AXIS Q6215-LE to get stuck with the IR-cut filter off after power-loss.
- Corrected an issue in radar products where the user interface did not show the current values when radar transmission was toggled.



#### ACAP updates

- *AXIS License Plate Verifier* has been updated to version 1.7.0. Pre-installed on AXIS P1445 LE-3 only.
- *AXIS Object Analytics Beta* version 1.0.4 has been pre-installed.

## AXIS OS 9 to 5

In this section, you can find highlights and feature information about releases on the active track prior to AXIS OS 10.0.0.

### Active 2020 (9.80)

Release date: 2020-05-05 (to be rolled out within three weeks of release date)

This release includes:

#### NTP status

It is now possible to see NTP status in the web interface.

#### Custom header CGI

Support has been added for custom header CGI, meaning it is now possible to customize headers to support e.g. Access-Control-Allow-Origin (CORS) and X-Frame-Options to increase minimum cybersecurity level. Go to the *VAPIX library* for more information.

#### Automatic gain control for audio input

Support for automatic gain control has been added to selected products with audio support. See full list in .

#### Disabling SD card

It is now possible to disable the SD card slot via **Plain config > Storage > Storage.S0.Enabled**.

#### ACAP updates

*AXIS Guard Suite* has been updated to version 2.2.4 and *AXIS Video Motion Detection* has been updated to version 4.4.5.

### Active 2020 (9.70)

Release date: 2020-03-10 (to be rolled out within three weeks of release date)

This release includes:

#### Session Initiation Protocol (SIP)

Support for SIP has been added to selected AXIS M30, AXIS M31 and AXIS M32 products. Read more and see full list in .

#### ONVIF profile T

Support for ONVIF profile T has been added to AXIS P3719-PLE. Read more in .

### Active 2019 (9.60)

Release date: 2020-01-07 (to be rolled out within three weeks of release date)

This release includes:

#### Audio disabled per default

Audio is now disabled per default and needs to be enabled upon first usage. Applies to all products with audio support in factory defaulted state.

#### Copy action rules, schedules and recipients

It is now possible to copy action rules, schedules and recipients in the web interface.

#### Geolocation API

Geolocation API has been added to all products. Read more in the *VAPIX library*.

#### Image orientation

It is now possible to set image rotation in ONVIF media profiles.

#### ACAP updates

- *AXIS Guard Suite* has been updated to version 2.2.2
- *AXIS Video Motion Detection* has been updated to version 4.4.3

- Orientation aid PTZ has been updated to version 1.4.1
- Support for *AXIS Live Privacy Shield* has been added to AXIS M1137/-E, AXIS P1375/-E, AXIS P1377/-LE, AXIS P1378/-LE and AXIS P3245-V/-LV/-VE/-LVE

## Active 2019 (9.50)

Release date: 2019-11-11 (to be rolled out within three weeks of release date)

This release includes:

### Session Initiation Protocol (SIP)

Support for SIP has been added to selected AXIS M30 and AXIS Q35 products, read more and see full list in .

### Onvif profile T

Support for ONVIF profile T has been added to selected products, read more and see full list in .

### Backlit entrance scene profile

The profile has been introduced for selected products to get more visibility of face details in entrances that have strong backlight. It also reduces WDR artifacts.

Available for: AXIS Q1645/-LE, AXIS Q1647/-LE, AXIS Q1785-LE and AXIS Q1786-LE.

### H.264 over HTTP

It is now possible to stream H.264 over HTTP in an mp4 or a matroska container. Examples:

- <http://<camera-ip>/axis-cgi/media.cgi?container=mp4>
- <http://<camera-ip>/axis-cgi/media.cgi?container=matroska>

### Support for disabling the web interface

It is now possible to disable the web interface to increase overall minimum cybersecurity level.

The web interface can be disabled under **System > Plain config > System > Sytem Web Interface Disabled**. To enable the web interface after it has been disabled, the VAPIX parameter **System.WebInterfaceDisabled** must be set to "no".

### Web interface updates

- Support has been added for Image Frequency in Event Settings.
- It is now possible for operators to turn the IR cut filter on or off for AXIS Q6215-LE.

### Apache web server update

Apache web server has been updated to version 2.4.41 to increase overall minimum cybersecurity level.

### OpenSSL update

OpenSSL has been updated to version 1.1.1d to increase overall minimum cybersecurity level.

### ACAP updates

*AXIS Video Motion Detection* has been updated to version 4.4.2, including improvements and corrections.

## Active 2019 (9.40)

Release date: 2019-09-12

This release includes:

### Initial device access change

For security reasons the initial device access is changed so that it requires a password to be set before any other APIs are open. For more information, go to .

### Average bitrate (ABR)

With this feature enabled you can set a bandwidth budget that the camera will keep over a period of time, allowing for high peaks of bandwidth and if necessary adjusting the quality setting for the entire period. See list of supported products in .

### Session Initiation Protocol (SIP)

Support for SIP has been added to selected AXIS P32 products, see full list in .

### Onvif profile T

Support for ONVIF profile T has been added to selected products, see full list in . Read more about profile T at <https://www.onvif.org/profiles/profile-t/>.

### Automatic rollback verification

When upgrading AXIS OS through the web interface, the user can now select a time period to acknowledge that the upgrade was successful, otherwise it will rollback to previous version and configuration. This is especially useful when upgrading remotely. Check out the video in to see how it works.

### Secondary NTP server

Added support for configuring a secondary NTP server in the web interface under **Settings > System > Date & Time** or via VAPIX Time API.

### ACAP updates

*AXIS Video Motion Detection* and *AXIS Guard Suite* have been updated to new versions that include improvements and corrections. *AXIS Loitering Guard* is now pre-installed on AXIS P1280-E, AXIS P1290-E and all Axis Q-line cameras.

## Active 2019 (9.30)

Release date: 2019-06-14

This release includes:

### Source-specific multicast (SSM)

Support added via <http://ip-address/axis-media/ssm/media.amp>. Go to the *VAPIX library* for more information and documentation.

### Portcast and AXIS T61 Audio and I/O Interface Series

Support for portcast and AXIS T6101/T6112 has been added to AXIS P3717-PLE. See full list of supported products in .

### Web interface updates

- Support has been added for onscreen controls. Onscreen controls gives the user quick and easy access to commands to the camera, not only from the web interface but also from VMS software that supports this functionality. Some cameras have predefined onscreen controls, but it is also possible to add user-defined onscreen controls.
- The video stream is now paused per default to save bandwidth and to make the web-interface more responsive when working over slow connections.
- The classic web pages are now completely removed.

### Apache web server update

Updated to version 2.4.39 to increase overall minimum cybersecurity level.

### TLSv1.3

The camera platform now supports TLSv1.3 in Apache for improved performance and increased overall minimum cyber security level. TLS1.0 and TLS1.1 is now disabled per default.

### ACAP updates

*AXIS Video Motion Detection*, *AXIS Motion Guard*, *AXIS Fence Guard* and *AXIS Loitering Guard* have been updated to new versions that include improvements and corrections.

## Active 2019 (9.20)

Release date: 2019-04-17

This release includes:

### Signed firmware

AXIS OS is now signed by Axis. Support has been added to all products. Read more in the *white paper* on [axis.com](http://axis.com).

### LLDP allocation for max-power

Available for selected products, see full list in . This allows the switch to allocate less power to the camera and potentially a greater number of PoE devices can be connected to the switch. LLDP allocation for max-power can be enabled in **Settings > System > Plain config > Network > LLDP POE > LLDP Send Max PoE**.

#### Onvif profile T

Support for ONVIF profile T has been added to selected products, see full list in . Read more about profile T at <https://www.onvif.org/profiles/profile-t/>.

#### Apache web server update

Apache web server has been updated to version 2.4.38 to increase overall minimum cybersecurity level.

#### OpenSSL update

OpenSSL has been updated to version 1.1.1a to increase overall minimum cybersecurity level.

#### ACAP updates

*AXIS Video Motion Detection*, *AXIS Motion Guard*, *AXIS Fence Guard* and *AXIS Loitering Guard* have been updated to new versions that include improvements and corrections.

### Active 2019 (9.10)

Release date: 2019-02-19

This release includes:

#### Rollback of ACAP applications in AXIS OS recovery

The recovery/rollback feature makes it possible to undo an AXIS OS upgrade. The feature now includes ACAP applications and their respective settings.

#### Apache web server update

Apache web server has been updated to version 2.4.37 to increase overall minimum cybersecurity level.

#### OpenSSL update

OpenSSL has been updated to version 1.0.2q to increase overall minimum cybersecurity level.

### Active 2018 (8.50)

Release date: 2018-11-30

This release includes:

#### Onvif profile T

Support has been added to selected products, see full list in .  
Read more about profile T at <https://www.onvif.org/profiles/profile-t/>.

#### CDP support for PoE negotiation

Support has been added for Power over Ethernet (PoE+ 30W, IEEE 802.3at type 2 class 4) negotiations over Cisco Discovery Protocol (CDP). If LLDP and CDP are enabled simultaneously on the switch port, the camera will take the protocol that is first advertised by the switch for PoE negotiation.

#### API Discovery service

API Discovery service makes it possible to retrieve information about your product's supported APIs. Read more in the *VAPIX library*.

#### Apache web server update

Apache web server has been updated to version 2.4.35 to increase overall minimum cyber security level.

#### OpenSSL update

OpenSSL has been updated to version 1.0.2p to increase overall minimum cyber security level.

#### ACAP updates

*AXIS Video Motion Detection*, *AXIS Motion Guard*, *AXIS Fence Guard* and *AXIS Loitering Guard* have been updated to new versions that include improvements and corrections.

## Active 2018 (8.40)

Release date: 2018-09-20

This release includes:

### Portcast and AXIS T61 I/O and Audio Interface Series

Support for portcast and AXIS T6101/T6112 has been added to selected products, see full list in .

### 256-bit SD card encryption

Support has been added for AES-CBC 256-bit SD card encryption. Available for selected products, see full list in .

### Apache web server update

Apache web server has been updated to version 2.4.33 to increase overall minimum cyber security level.

### ACAP updates

*AXIS Video Motion Detection*, *AXIS Motion Guard*, *AXIS Fence Guard* and *AXIS Loitering Guard* have been updated to new versions that include improvements and corrections.

## Active 2018 (8.30)

Release date: 2018-06-25

This release includes:

### Camera tampering

Tampering detection has been added to AXIS Q1941-E and AXIS Q1942-E. The tampering event will be the same as for visual cameras, except for the removal of the dark image detection setting.

### ONVIF Audio Backchannel

Support has been added for ONVIF Audio Backchannel, with support for G.711 and G.726 audio codecs. Cameras are able to retrieve audio while sending an audio capable video stream with metadata in the same RTSP session.

### Automatic negotiation of SMB/CIFS version

Support has been added for negotiating the preferred SMB protocol version of 2.10, 3.0 or 3.02 to increase overall minimum cybersecurity level. For more information, see <https://www.axis.com/support/faq/FAQ116392>.

### 256-bit SD card encryption

Support has been added for AES-XTS-512 256-bit SD card encryption. Available for selected products, see full list in .

### Google analytics

Added the possibility for the user to share anonymous usage data with Axis developers. Examples of information collected: which pages are visited, the AXIS OS version of the product, language setting, video format, aspect ratio, browser and operating system. This is done in order to continue improving the products and user experience. The feature is disabled per default but can be enabled during installation, or under **System -> Maintenance**.

### ACAP updates

*AXIS Video Motion Detection*, *AXIS Motion Guard*, *AXIS Fence Guard* and *AXIS Loitering Guard* have been updated to new versions that include improvements and corrections.

## Active 2018 (8.20)

Release date: 2018-05-03

This release includes:

### Portcast and AXIS T61 Audio and I/O Interface Series

Support for the new portcast technology has been added to selected AXIS M30 products. Portcast makes it possible to add audio and I/O ports via a new network utility box (AXIS T6101 and AXIS T6112). See full list of supported products in .

#### Default audio bitrate

All products with audio support now have 32 kbps bitrate per default.

#### Polygon privacy masks

Support for polygon privacy masks has been added for selected products, see full list in .

#### Dynamic overlays

Support has been added for dynamic overlays, which will replace the older overlays. This adds capabilities like free positioning, more font sizes and colors. It is possible to migrate from existing overlays to dynamic overlays and support has been added to all products **except** AXIS Companion Cube L/LW, AXIS Companion Dome V/WV, AXIS M1045-LW, AXIS M1065-LV/-LW, AXIS M3044-V/-WV, AXIS M3045-V/-WV, AXIS M3046-V, AXIS M3106-L/-LVE, AXIS M3106-L/-LVE Mk II and AXIS Q6125-LE.

#### Hidden resolutions

Support has been added for showing hidden resolutions via API. The parameter **Properties.Image.ShowSuboptimalResolutions** has been added, which will, when enabled, make the parameter **Properties.Image.Resolution** show all of the products supported resolutions.

#### Exposure data provided as Exif tags

Exposure data is now provided as Exif tags in JPEG and Motion JPEG. This is intended for customers that require a richer set of sensor data to be used in advanced analytics applications.

#### ACAP updates

*AXIS Video Motion Detection*, *AXIS Motion Guard* and *AXIS Fence Guard* have been updated to new versions that include improvements and corrections.

### Active 2018 (8.10)

Release date: 2018-02-16

This release includes:

#### Apache web server update

Apache web server has been updated to version 2.4.29 to increase overall minimum cyber security level.

#### ACAP updates

*AXIS Video Motion Detection* has been updated to version 4.2, which is compatible with ONVIF Imaging Spec 17.06, and also includes improvements and corrections.

### Active 2017 (7.40)

Release date: 2017-12-11

This release includes:

#### Rollback

The user can roll back to a previous AXIS OS and its configuration.

#### HTTP keep-alive connections via ONVIF

PTZ products can now be controlled via HTTP keep-alive connections. This increases PTZ control accuracy, reduces overhead communication and therefore lowers the risk for security focused network infrastructure or unstable networks to block or drop PTZ control commands.

#### OPUS audio codec

The OPUS audio codec is supported by all audio products except Axis Companion Cube L/LW. The codec can be selected in the web-interface under **Settings > Audio > Encoding**, or via VAPIX API.

#### Browser stream statistics

Browser stream statistics is supported in live view. Stream statistics lists: resolution, stream type, encoding, frame rate, bitrate, uptime, buffer, dropped frames and refreshed.

#### OpenSSL update

OpenSSL has been updated to version 1.0.2p to increase overall minimum cyber security level.



### Password security confirmation check

To increase the overall cybersecurity awareness, a user-configured password that is considered "weak" need to be confirmed actively twice by the user.

### ACAP updates

*AXIS Video Motion Detection* has been updated to a new version, which includes improvements and corrections. *AXIS Motion Guard* and *AXIS Fence Guard* are now pre-installed on all Axis Q-line products.

## Active 2017 (7.30)

Release date: 2017-09-22

This release includes:

### SRTP

Support has been added for SRTP (Encrypted Video Streaming) according to RFC 3711. The cameras video stream can be received via secure end-to-end encrypted transportation method only by authorized clients.

SRTP is supported by all products **except** the following: AXIS Companion Cube L/LW, AXIS Companion Dome V/WV, AXIS M1045-LW, AXIS M1065-L/-LW, AXIS M2026-LE, AXIS M2026-LE-Mk II, AXIS M3044-V/-WV, AXIS M3045-V/-WV, AXIS M3046-V, AXIS M3106-L/-LVE, AXIS M3106-L/-LVE Mk II.

### Zipstream dynamic FPS and GOP

It is now possible to further adjust and set limits for the dynamic FPS and dynamic GOP settings for Zipstream.

### FTP disabled per default

The FTP server has been disabled by default to increase overall minimum security standards. The FTP server may be enabled during advanced maintenance or troubleshooting.

### Brute force delay protection

With brute force delay protection, the product can block a client for a period of time if too many login attempts fails. Brute force delay protection can be configured under **System > Plain config > System > System PreventDoSAttack**.

### Noise reduction

Support for noise reduction has been added to AXIS Q1755/-E, AXIS Q6052/-E, AXIS Q6054/-E and AXIS Q6055/-E/-C/-S.

### Web interface updates

- Adaptive resolution is now enabled per default. When viewing live stream in the web interface, the viewing client will receive an image resolution that is adapted, or close to, the viewing clients real display resolution.
- Support has been added for automatic license key installation when installing an ACAP.
- It is now possible to choose "flash all" (i.e. factory default) when doing an AXIS OS upgrade from the web interface.
- It is now possible to fast forward/backward to any time position of the selected recording within the recording list in the web interface.
- PTZ control in the live view has been improved for cameras with both mechanical or digital PTZ.
- Support has been added for entering manual SSIDs in wireless settings.
- The area zoom functionality has been removed from the web interface to improve the overall PTZ usability (area zoom was used to draw a rectangle in the live view to let the camera pan, tilt or zoom to this desired position).

## Active 2017 (7.20)

This release includes:

### AXIS SD Card health API

Support for Axis SD card health API has been added. The API allows a client to track and request the health and wear out state of cameras with AXIS Surveillance Cards.

### 24-bit LPCM audio

Support for 24-bit LPCM audio mode has been added. The mode is disabled by default.

### Keep-alive for Axis PTZ products

PTZ products can now be controlled via HTTP 1.1 keep-alive connections. This increases PTZ control accuracy and reduces overhead communication, which in turn lowers the risk of PTZ control commands to be blocked when controlling a PTZ camera.

#### HTTPS enabled by default

When performing a factory default, the camera will generate a self-signed certificate at boot and can enable HTTPS. This allows clients to use encrypted access from start.

If HTTPS is to be used in daily operations, it is recommended to replace the generated self-signed certificate with a CA-signed certificate.

#### Open SSL update

OpenSSL has been updated to version 1.0.2k to increase overall minimum cyber security level.

#### Apache web server update

Apache web server has been updated to version 2.4.25 to increase overall minimum cyber security level.

### Active 2017 (7.10)

This release includes:

#### New web interface

In this version, a new web interface with improved usability and broader support of web clients and operating systems has been introduced. It supports 12 different pre-installed languages which will be added automatically based on browser settings, meaning it is no longer required to upload individual language files.

Supported languages: English - German - French - Spanish - Italian - Portuguese - Polish - Russian -Japanese - Chinese (Mainland) - Chinese (Taiwan) - Korean.

#### ACAP updates

AXIS Video Motion Detection 4.1 is pre-installed in all products, and will replace AXIS Video Motion Detection 3. The new version comes with a better analytics engine and mechanical PTZ camera support.

#### Audio streaming capabilities API

A new audio streaming capabilities API has been implemented for better handling of the product's supported codecs, sample rates, bitrates and channels. Only supported audio combinations will be shown.

#### Axis On-Screen Controls

Axis On-Screen Controls make it possible for Axis Camera Station or a VMS to get information about various features of the camera. This information is available via a CGI. Read more in the *VAPIX library*.

#### Open SSL update

OpenSSL has been lifted to 1.0.2j to increase overall cybersecurity level.

#### LLDP

Support for LLDP neighbor announcements has been added. Products will now announce themselves in the network via the LLDP protocol.

### Active 2016 (6.50)

This release includes:

#### ACAP updates

AXIS Video Motion Detection 4 is pre-installed in all products. The new version offers improved detection with a possibility to configure multiple detection areas.

Pre-installing the new version will not affect any current installation or configuration of previous versions of AXIS Video Motion Detection.

### Active 2016 (6.40)

Release date: 2016-10-10

This release contains no major feature/capability updates.

## Active 2016 (6.30)

This release includes:

### ONVIF profile G

Support for ONVIF profile G has been added. More information about profile G at <https://www.onvif.org/profiles/profile-g/>.

### Zipstream with dynamic frame rate

The latest enhancement of Axis Zipstream technology now offers even more storage and bandwidth savings in video surveillance applications without compromising important image details. It dynamically adjusts the frame rate, instantly adapting to any changes in the scene.

## Active 2016 (6.20)

Release date: 2016-03-22

This release includes:

### Zipstream for Axis PTZ products

Axis Zipstream improvements for PTZ products.

## Active 2016 (6.10)

Release date: 2016-02-22

This release includes:

### Removed predefined stream profiles

Removed predefined stream profiles "Quality", "HDTV", "Balanced", "Bandwidth" and "Mobile".

Note that if a user upgrades from a previous AXIS OS (where the stream profiles exists), the stream profiles are kept until a factory reset has been done.

### Removed parameter based event API

Users of the old event handling API need to convert the events before upgrading to version 6.10 not to loose events. A convert button is available in the web interface, in the events setup section.

## Active 2015 (5.90)

Release date: 2015-10-16

This release contains no major feature/capability updates.

## Active 2015 (5.80)

Release date: 2015-05-22

This release includes:

### Axis Zipstream technology

Optimized for video surveillance, AXIS Zipstream technology is a radically more efficient H.264 implementation, lowering bandwidth and storage requirements by an average of 50% or more. Axis Zipstream technology conforms to the H.264 standard and is compatible with third-party clients and VMS solutions that decode H.264 video. To use the Zipstream dynamic GOP mode, some clients might need to adapt their H.264 playback implementation. The fixed GOP mode works with all implementations.

Axis Zipstream is available in selected Axis products. The *VAPIX library* has been updated with new information and new APIs.

### AXIS Video Motion Detection 3 pre-installed

AXIS Video Motion Detection 3, which includes AXIS False Alarm Filtering, is now a pre-installed ACAP application. It replaces the built-in video motion detection in the web interface in all products **except** Axis PTZ cameras and Axis video encoders. PTZ cameras and encoders will still use the built in motion detection.

### ONVIF media profiles

Available ONVIF media profiles are now presented and configurable in the products' web interface.

### SD card encryption

With SD card encryption, it is possible to enable encryption of the SD card to protect your data. This encryption is transparent to users and VMS solutions making it possible to activate without adaptations. The feature is presented and configurable both in the web interface and via VAPIX.

### Improved time to video

The start-up of the product is now optimized and the time until the first video is delivered is reduced by an average of 20%.

## Active 2015 (5.70)

This release includes:

### Secure FTP (SFTP)

Systems using Secure FTP (SFTP) notifications and uploads from the product can now do this in a secure way over FTP

### Matroska fixer

It is now possible to get broken recordings if the recording was ongoing during a power loss, or if a storage media was removed without proper disconnection (i.e. unmounts).

With the Matroska fixer, an attempt to fix broken recordings is performed. When a storage media is connected (mounted), any broken recording is detected and operations to fix the recording start. The recordings are fixed in a queue fashion, i.e. one recording is fixed at a time. After the recording is fixed, its stop time and duration are amended (increased).

### Storage limit

Adding ability to control storage allocation quotas on edge storage devices, i.e. NAS. A storage allocation quota parameter will decide how much storage a camera is allowed to allocate.

### NAS drives over 2 TB

Axis network cameras now support NAS disk drives up to 8 TB.

### Automatic repair

It is now possible to configure automatic repair of ext4 file system if it has become corrupt. This increase the level of robustness of the SD edge storage feature.

### Init removed

Systemd has replaced init. Init was previously deprecated and is now completely removed and replaced with systemd.

### Apache web server

Changing from BOA to Apache web server due to maintenance reason.

## Active 2015 (5.60)

This release includes:

### ACAP updates

AXIS OS 5.60 extends the ACAP SDK which gives new possibilities to develop ACAP's. It is also possible to enable multiple ACAP applications to run simultaneously. The combination of applications should however be validated by the system integrator before deployment.

### AXIS Video MIB

Axis is now extending the SNMP offering with AXIS Video MIB (Management Information Base). AXIS Video MIB is targeting system integrators and end-users that are using SNMP, and enables network administrators to detect possible malfunctions in Axis products such as fan failures, temperature limits, storage disruptions, tampering, video/audio connectors disconnections, etc. via SNMP traps. Available traps are depending on the Axis product.

AXIS Video MIB is released for Axis products, see <https://www.axis.com/techsup/software/index.htm> for more information.

AXIS Video MIB is supported from various 5.55 AXIS OS releases.

### **Edge storage auto-format SD card**

AXIS OS now has the ability to auto-format an SD card to a specified file system upon insertion. This will allow an easy installation of a new SD card that automatically will be formatted to a preselected file system, mounted and recording will be resumed. Less manual intervention is needed on installation and service.

Edge storage auto-format is supported from the 5.55 AXIS OS.

### **Edge storage recording indicator**

With the edge storage recording indicator it is possible to indicate, e.g. in the live view, that an edge storage recording is ongoing. This allows the operator to be notified if a recording of scene is ongoing or not.

Edge storage recording indicator is supported from the 5.55 AXIS OS.

### **Extended edge storage support**

Supporting memory cards up to 512 GB.

### **Optimal live view resolution**

The live view page is updated with responsive design and scales with different screen resolutions and browser window sizes. This will allow the user to always see the complete page without the need to scroll.

### **Quick HDTV live view demonstration**

For all megapixel products, a new default viewing profile for HDTV resolution has been added. This viewing profile is visible in the live view and is beneficial for demonstration purposes, especially in full screen mode.

### **Export video clip**

The export video clip capability enables the export of recordings directly from the camera to a PC or a smartphone.

Select the wanted portion of an edge storage recording from your camera and export them as playable video files to a client. The exported recording will be a playable Matroska file.

### **SSH**

SSH was introduced in 5.50 and is now the only supported protocol to establish a connection. Telnet is no longer supported. SSH is not enabled by default but can be activated by an API.

### **Developer information: RTSP server improvement**

RTSP server and video streaming are updated and improved. This is an internal architectural improvement with minor corrections in the API to comply with the standard in RFC 2326.

### **Developer information: ACAP management**

The limitation of running only one application at a time has been removed. It's now possible (depending on available resources) to run several applications simultaneously. The combination of applications should be validated by the system integrator before deployment. A new API has been added enabling a client to get extended information of installed applications.

### **Developer information: generic ACAP configuration**

All applications taking advantage of the new platform can provide a URL for configuration. The intention of this is that a client, such as a VMS, can provide this link or embed it into the application in a generic way.

### **Developer information: ACAP upgrade**

When upgrading an application, it is now possible to keep the configuration for the application. This is decided during the implementation of the ACAP.

### **Developer information: ACAP interfaces**

A range of new APIs has been added to the platform allowing an application to directly interface with local storage, PTZ control, I/Os and audio. In addition it is now possible to interact with the event system in a more flexible way.

### **Developer information: device service query**

An entry service has been added allowing a client to query which webservice API that is available in the product.

### **Developer information: system log enhancements**

The system log has been improved and uses a standardized logging format. Important messages will be kept longer and repeated messages will print the actual message that was repeated.

## Active 2015 (5.50)

Release date: 2015-03-05

This release includes:

### Local language support

Added support for changing the language of the product's web interface from English. Supported languages are: Brazilian Portuguese, French, German, Italian, Japanese, Korean, Russian, simplified Chinese and Spanish. The local language files are available at [www.axis.com](http://www.axis.com) for each camera model immediately after the AXIS OS release. The selection and installation of the files do not require any knowledge in the English language.

### Extended number of privacy masks

It is now possible to configure up to 32 simultaneous privacy masks. The previous limit was 3 to 16, depending on product model. The number of available privacy masks depends on the product model.

### Extended edge storage support

Supporting memory cards up to 64 GB.

### Edge storage disruption detection

It is now possible to be notified when the edge storage detects disruptions. The event is used to notify administrators to quickly resolve issues, typically disk unavailable, read/write error, disk full or disk locked.

### Text overlay character set extension

Ability to use non-western characters in the video text overlay. All left-to-right languages are supported.

### Text overlay font size

It is now possible to select three different font sizes for the video text overlay in order to increase readability. This is especially helpful in high resolution video.

### Text overlay message action

Support has been added for a product action that provides a way to display a user defined message in the text overlay upon a detected event. The message can be used to communicate information to the operator, visually mark video for later video forensics or provide an easy way for a user to validate event detectors during installation and configuration.

### ONVIF profile S conformance

The ONVIF profile S replaces ONVIF Version 1.02. ONVIF has developed a profile concept to simplify identification of interoperable products. For more details see <https://www.onvif.org/profiles/profile-s/>.

### Support for common e-mail services

Ability to connect products to common email services requiring SSL/TLS security. Predefined profiles for Gmail, Hotmail, AOL and Yahoo are included in order to simplify configuration.

### HTTPS recipient

Systems using HTTP notifications and uploads from the product can now do this in a secure way over HTTPS.

### Send video clip action

It is now possible to upload a video clip to an FTP server or an email recipient upon an event. A media player with support for H.264 and Matroska file format (MKV) is required to play the clip.

### Live stream access detection

In some sensitive installations it may be necessary to notify people that someone is actively monitoring a camera (for example, in a conference room). The live stream access event may be used to control a nearby "alert light" connected to digital output port of the camera.

### System ready event

It is now possible to get notified when the product has booted and all services are initialized. The event is typically used to notify an operator (or system) that the unit has been restarted.

### ACAP updates

Improvements in AXIS Cross Line Detection 1.x and AXIS Video Motion Detection 2.x. The applications will be less prone to false detect on very small objects.

### **Centralized certificate management**

Certificates for HTTPS and 802.1x are now managed in one place. The AXIS OS also includes a number of pre-installed CA certificates such as VeriSign, Thawte and GeoTrust. It is also possible to install additional CA certificates.

### **Improved constant bitrate control**

The constant bitrate (CBR) will now adjust to target bitrate quicker and smoother.

### **PTZ control error notification**

It is now possible to be notified if malfunction in a mechanical PTZ product is detected. The event is typically used to trigger a notification to the administrator/operator for service. The error detection is available for selected mechanical PTZ products.

### **Virtual inputs**

Input may be used by clients to initiate action rules in the camera. Virtual inputs extend the existing "manual trigger" with 32 additional virtual inputs.

### **SSH (Secure Shell)**

SSH is a command line interface to the products that may be used for specific support and maintenance activities. SSH extends the Telnet capabilities in order to establish a secure remote command line connection. The Telnet and SSH capabilities are not enabled by default.



## LTS 2020 (9.80) archive

Support phase: 2020 – 2025-12-31

In this section you can find the highlights of the LTS 2020 releases prior to AXIS OS 9.80.3.3.

### LTS 2020 - 9.80.3.2

Release date: 2021-05-03 (to be rolled out within three weeks of release date)

This release includes:

#### OpenSSL update

OpenSSL has been updated to version 1.1.1k to increase overall minimum cybersecurity level.

### LTS 2020 - 9.80.3.1

Release date: 2021-03-15 (to be rolled out within three weeks of release date)

This release includes:

#### OpenSSL update

OpenSSL has been updated to version 1.1.1i to increase overall minimum cybersecurity level.

### LTS 2020 - 9.80.3

Release date: 2021-01-19 (to be rolled out within three weeks of release date)

This release includes:

#### OpenSSL update

OpenSSL has been updated to version 1.1.1h to increase overall minimum cybersecurity level.

### LTS 2020 - 9.8.2.4

Release date: 2020-10-28 (to be rolled out within three weeks of release date)

This release includes:

#### HSTS support when using HTTPS

HSTS (HTTP Strict Transport Security) is now supported when using HTTPS.

### LTS 2020 - 9.80.2.3

Release date: 2020-10-07

This release includes:

#### Apache web server update

Apache web server has been updated to version 2.4.46 to increase overall minimum cybersecurity level.

#### Default custom headers

The following HTTP headers have been configured to increase overall cybersecurity level:

- X-Frame-Options: SAMEORIGIN
- X-Content-Type-Options: nosniff
- X-XSS-Protection: 1; mode=block

### LTS 2020 - 9.80.2.2

Release date: 2020-07-21

This release includes general improvements and security updates.

## **LTS 2020 - 9.80.2**

Release date: 2020-06-23

This release includes:

### **OpenSSL update**

OpenSSL will be updated to version 1.1.1g to increase overall minimum cybersecurity level.

### **Apache web server update**

Apache web server will be updated to version 2.4.43 to increase overall minimum cybersecurity level.

### **OAK VAPIX API**

Support has been added for retrieving the OAK key for O3C-connections in **Settings > System > O3C**.

## LTS 2018 (8.40) archive

Support phase: 2018 – 2023-12-31

In this section you can find the highlights of the LTS 2018 releases prior to AXIS OS 8.40.4.1.

### LTS 2018 - 8.40.4

Release date: 2020-07-21

This release includes:

#### OpenSSL update

OpenSSL has been updated to version 1.1.1g to increase overall minimum cybersecurity level.

#### Apache web server update

Apache web server has been updated to version 2.4.43 to increase overall minimum cybersecurity level.

#### OAK in the web interface

It is now possible to retrieve the device Owner Authentication Key (OAK) in the web interface.

### LTS 2018 - 8.40.3.3

This release includes general improvements and security updates.

### LTS 2018 - 8.40.3.2

This release includes general improvements and security updates.

### LTS 2018 - 8.40.3.1

This release includes:

#### OpenSSL update

OpenSSL has been updated to version 1.1.1d to increase overall minimum cybersecurity level.

#### Apache web server update

Apache web server has been updated to version 2.4.41 to increase overall minimum cybersecurity level.

See the release notes for each product for more detailed information about corrections and improvements.

### LTS 2018 - 8.40.3

This release includes:

#### Initial device access change

For security reasons the initial device access is changed so that it requires a password to be set before any other APIs are open. For more information, go to go to .

#### libssh2 update

Updated to version 1.9.0 to increase overall minimum cybersecurity level. Includes correction for CVE-2019-13115.

### LTS 2018 - 8.40.2.2

#### Security vulnerabilities

Corrections to increase overall minimum cybersecurity level: CVE-2019-9494, CVE-2019-9495, CVE-2019-9496, CVE-2019-9497, CVE-2019-9498, CVE-2019-9499. CVE-2019-11477, CVE-2019-11478, CVE-2019-11479 CVE-2019-6454.

#### OpenSSL

Updated to version 1.1.1c to increase overall minimum cybersecurity level.

#### **TLSv1.3**

Support added for TLSv1.3 to increase overall minimum cybersecurity level.

#### **NetApp NAS**

Corrected an issue that caused SMB connection problems to NetApp NAS configured for SMBv2.

#### **Focus improvement**

Improved focus in wide and night mode for AXIS Q6155-E and AXIS Q6154-E.

Corrected an issue that caused focus not to respect set near focus limits on rare occasions for AXIS Q6052/-E, AXIS Q6054/-E and AXIS Q6054/-E Mk II.

### **LTS 2018 - 8.40.2.1**

#### **Apache web server**

Updated to version 2.4.39 to increase overall minimum cybersecurity level.

#### **O3C client**

Updated to improve robustness.

#### **OpenSSL**

Updated to version 1.1.1b to increase overall minimum cybersecurity level.

#### **OpenSSH**

Updated to version 7.9p to increase overall minimum cybersecurity level.

### **LTS 2018 - 8.40.2**

#### **Security vulnerabilities**

Corrections to increase overall minimum cybersecurity level: CVE-2019-3855, CVE-2019-3856, CVE-2019-3857, CVE-2019-3858, CVE-2019-3859, CVE-2019-3860, CVE-2019-3861, CVE-2019-3862, CVE-2019-3863, CVE-2018-16864, CVE-2018-16865, CVE-2018-16866, CVE-2017-16544, CVE-2019-0217.

#### **OpenSSL**

Updated to version 1.0.2r to increase overall minimum cybersecurity level.

#### **Web interface**

Correction of issue that prevented the upload of a client certificate or CA certificate using Microsoft Edge.

## LTS 2016 (6.50) archive

Support phase: 2016 – 2022-12-31 (extended from 2021-12-31)

In this section you can find the highlights of the LTS 2016 releases prior to AXIS OS 6.50.5.3.

### LTS 2016 - 6.50.5.2

Release date: 2020-08-03

This release includes:

#### OpenSSL update

OpenSSL has been updated to version 1.1.1g to increase overall minimum cybersecurity level.

#### Apache web server update

Apache web server has been updated to version 2.4.43 to increase overall minimum cybersecurity level.

#### TLSv1.3

Support added for TLSv1.3 to increase overall minimum cybersecurity level.

#### OAK in the web interface

It is now possible to retrieve the device Owner Authentication Key (OAK) in the web interface.

### LTS 2016 - 6.50.5.1

This release includes general improvements and security updates.

### LTS 2016 - 6.50.5

This release includes:

#### OpenSSL update

OpenSSL has been updated to version 1.1.1d to increase overall minimum cybersecurity level.

### LTS 2016 - 6.50.4.2

6.50.4.2 includes a fix for an issue that appeared when setting the time manually in 6.50.4.1.

6.50.4.1 includes:

#### OpenSSL update

OpenSSL has been updated to version 1.0.2t to increase overall minimum cybersecurity level.

#### Apache web server update

Apache web server has been updated to version 2.4.41 to increase overall minimum cybersecurity level.

#### Web interface update

Time zones have been updated in the date/time settings in the web interface.

### LTS 2016 - 6.50.4.1

This release includes:

#### OpenSSL update

OpenSSL has been updated to version 1.0.2t to increase overall minimum cybersecurity level.

#### Apache web server update

Apache web server has been updated to version 2.4.41 to increase overall minimum cybersecurity level.

#### Web interface update

Time zones have been updated in the date/time settings in the web interface.

## **LTS 2016 - 6.50.4**

This release includes:

### **Initial device access change**

For security reasons the initial device access is changed so that it requires a password to be set before any other APIs are open. For more information, go to .

### **OpenSSL update**

Updated to version 1.0.2s to increase overall minimum cybersecurity level.

### **Security vulnerability correction**

Corrected security vulnerability in Systemd CVE-2019-6454 to increase overall minimum cyber security level.

### **Increased limit of HTTP requests**

Increased the limit of concurrent HTTP requests for I/O related VAPIX commands from 4 to 10.

### **Triggered data in SEI messages correction**

Corrected an issue that prevented the insertion of triggered data in SEI messages when streaming H.264.

## **LTS 2016 - 6.50.3.1**

### **Apache web server**

Updated to version 2.4.39 to increase overall minimum cybersecurity level.

### **O3C client**

Updated to improve robustness.

### **OpenSSL**

Updated to version 1.0.2r to increase overall minimum cybersecurity level.

### **Security vulnerabilities**

Corrections to increase overall minimum cybersecurity level: CVE-2019-3855, CVE-2019-3856, CVE-2019-3857, CVE-2019-3858, CVE-2019-3859, CVE-2019-3860, CVE-2019-3861, CVE-2019-3862, CVE-2019-3863, CVE-2018-16865, CVE-2018-16866, CVE-2018-17182, CVE-2017-16544.

## **LTS 2016 - 6.50.3**

### **Apache web server**

Updated to version 2.4.33 to increase overall minimum cybersecurity level.

### **OpenSSL**

Updated to version 1.0.2o to increase overall minimum cybersecurity level.

### **Handling of ACAPs**

Corrected an issue with incorrect handling of ACAPs after camera boot.

### **Perfect forward secrecy ciphers**

Added perfect forward secrecy ciphers (DHE-RSA) to the ciphers selection.

### **Security vulnerabilities**

Correction to increase overall minimum cybersecurity level: CVE-2018-14526.

### **Options for disabling TLSv1.0 and TLSv1.2**

Added selection boxes for disabling TLSv1.0 and TLSv1.1 in Settings > System > Plain config > HTTPS to enforce the highest possible HTTPS negotiation client handshake via TLSv1.2.

## **LTS 2016 - 6.50.2**

### **Apache web server**

Updated to version 2.4.27 to increase overall minimum cybersecurity level.

### **OpenSSL**

Updated to version 1.0.2k to increase overall minimum cybersecurity level.

**Triple DES cipher**

The triple DES cipher is not selected as DEFAULT in the HTTPS settings to increase overall cyber security level.

**Certificate handling**

Improved certificate handling. Certificates were previously not usable when updating straight from AXIS OS 5.40 to 6.50.

**Critical vulnerabilities**

Correction of critical vulnerabilities: ACV-120444 and ACV-116267.

**Security vulnerabilities**

Corrections to increase overall minimum cybersecurity level: CVE-2016-2147 and CVE-2016-2148.

**System stability**

Improved overall system stability.



