

# AXIS Q3548-LVE Dome Camera

## Advanced 8 MP AI-powered dome

Built on ARTPEC-9, this AI-powered camera offers 8 MP resolutions and delivers outstanding image quality even in the harsh weather and environments. The IR-shielded dome prevents IR reflections ensuring clear, sharp video every time. A deep learning processing unit lets you run advanced features and powerful analytics on the edge. For instance, it comes with AXIS Object Analytics preinstalled to detect and track objects. Made from high-grade aluminum, this robust camera is both vandal- and impact-resistant. Furthermore, Axis Edge Vault, a hardware-based cybersecurity platform, safeguards the device and protects sensitive information from unauthorized access.

- > Outstanding image quality in 8 MP
- > Next-generation AI-powered analytics
- > IR-shielded dome to prevent reflections
- > Lightfinder 2.0 and Forensic WDR
- > Built-in cybersecurity with Axis Edge Vault



# AXIS Q3548-LVE Dome Camera

## Camera

### Image sensor

1/1.2" progressive scan RGB CMOS  
Pixel size 2.9 µm

### Lens

Varifocal, 6.3–13, F1.6–2.9  
Horizontal field of view: 104°–50°  
Vertical field of view: 56°–28°  
Minimum focus distance: 0.50 m (1.64 ft)  
2x optical zoom  
IR corrected, remote zoom and focus, P-Iris control

### Day and night

Automatic IR-cut filter

### Minimum illumination

Color: 0.04 lux at 50 IRE, F1.6  
B/W: 0 lux at 50 IRE, F1.6  
0 lux with IR illumination on

### Shutter speed

1/67500 s to 2 s

### Camera adjustment

Pan ±180°, tilt -42 to +80°, rotation ±180°

## System on chip (SoC)

### Model

ARTPEC-9

### Memory

4 GB RAM, 8 GB Flash

### Compute capabilities

Deep learning processing unit (DLPU)

## Video

### Video compression

H.264 (MPEG-4 Part 10/AVC) Baseline, Main and High Profiles  
H.265 (MPEG-H Part 2/HEVC) Main Profile  
AV1  
Motion JPEG

### Resolution

16:9: Up to 3840x2160  
16:10: Up to 1280x800  
4:3: Up to 2880x2160

### Frame rate

With Forensic WDR: Up to 25/30 fps (50/60 Hz) in all resolutions  
No WDR: Up to 50/60 fps (50/60 Hz) in all resolutions

### Video streaming

Up to 20 unique and configurable video streams<sup>1</sup>  
Axis Zipstream technology in H.264, H.265 and AV1  
Controllable frame rate and bandwidth  
VBR/ABR/MBR H.264/H.265/AV1  
Low latency mode  
Video streaming indicator

### Signal-to-noise ratio

>55 dB

### WDR

Forensic WDR: Up to 120 dB depending on scene

### Multi-view streaming

Up to 7 individually cropped out view areas

### Noise reduction

Spatial filter (2D noise reduction)  
Temporal filter (3D noise reduction)

### Image settings

Saturation, contrast, brightness, sharpness, white balance, day/night threshold, local contrast, tone mapping, exposure mode, exposure zones, defog, barrel distortion correction, compression, rotation: 0°, 90°, 180°, 270° including corridor format, mirroring, dynamic text and image overlay, overlay widget, privacy masks, lock aperture, target aperture

1. We recommend a maximum of 3 unique video streams per camera or channel, for optimized user experience, network bandwidth, and storage utilization. A unique video stream can be served to many video clients in the network using multicast or unicast transport method via built-in stream reuse functionality.

## Image processing

Axis Zipstream, Forensic WDR, Lightfinder 2.0

### Pan/Tilt/Zoom

Digital PTZ, optical zoom, preset positions  
Limited guard tour, control queue, on-screen directional indicator  
Tour recording (max 10, max duration 16 minutes each), guard tour (max 100)

## Audio

### Audio features

Automatic gain control  
10-band graphic equalizer for audio input  
Speaker pairing

### Audio streaming

Configurable duplex:  
Two-way (half duplex, full duplex)

### Audio input

Input for external unbalanced microphone, optional 5 V microphone power  
Digital input, optional 12 V ring power  
Unbalanced line input  
Input through speaker pairing or portcast technology

### Audio output

Output through speaker pairing or portcast technology

### Audio encoding

AAC-LC 8/16/32/48 kHz, G.711 PCM 8 kHz, G.726  
ADPCM 8 kHz, Opus 8/16/48 kHz, LPCM 48 kHz  
Configurable bitrate

## Network

### Network protocols

IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPS<sup>2</sup>, HTTP/2, TLS<sup>2</sup>, QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, NTS, RTSP, RTP, SRTP/RTSPS, TCP, UDP, IGMPv1/v2/v3, RTCP, ICMP, DHCPv4/v6, ARP, SSH, LLDP, CDP, MQTT v3.1.1, Secure syslog (RFC 3164/5424, UDP/TCP/TLS), Link-Local address (ZeroConf)

## System integration

### Application Programming Interface

Open API for software integration, including VAPIX®, metadata and AXIS Camera Application Platform (ACAP); specifications at [axis.com/developer-community](https://axis.com/developer-community).  
One-click cloud connection  
ONVIF® Profile G, ONVIF® Profile M, ONVIF® Profile S, and ONVIF® Profile T, specifications at [onvif.org](https://onvif.org)  
Support for Voice over IP (VoIP) through the Session Initiation Protocol (SIP), using peer-to-peer (P2P) or Private Branch Exchange (PBX).

### Video management systems

Compatible with AXIS Camera Station Edge, AXIS Camera Station Pro, AXIS Camera Station 5, and video management software from Axis' partners available at [axis.com/vms](https://axis.com/vms).

### Onscreen controls

Autofocus  
Image stabilization  
Day/night shift  
Defog  
Wide dynamic range  
Video streaming indicator  
IR illumination  
Privacy masks  
Media clip  
Heater

### Edge-to-edge

Speaker pairing

### Event conditions

Application  
Audio: audio detection, audio clip playing, audio clip currently playing  
Call: DTMF, state, state change  
Device status: above/below/within operating temperature, casing open, fan failure, IP address blocked/removed, live stream active, network lost, new IP address, ring power overcurrent protection, shock detected, system ready  
Digital audio: digital signal contains Axis metadata, digital signal has invalid sample rate, digital signal missing, digital signal okay  
Edge storage: recording ongoing, storage disruption, storage health issues detected  
I/O: digital input, manual trigger, virtual input  
MQTT: stateless  
Scheduled and recurring: schedule  
Video: average bitrate degradation, day-night mode

2. This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. ([openssl.org](https://openssl.org)), and cryptographic software written by Eric Young ([ey@cryptsoft.com](mailto:ey@cryptsoft.com)).

## Event actions

Audio clips: play, stop  
Calls: answer call, end SIP call, make SIP call  
Day-night mode  
Guard tour  
I/O: toggle I/O once, toggle I/O while the rule is active  
Illumination: use lights, use lights while the rule is active  
LEDs: flash status LED, flash status LED while the rule is active  
MQTT: publish  
Notification: HTTP, HTTPS, TCP and email  
Overlay text  
PTZ: PTZ preset, start/stop guard tour  
Pre- and post-alarm video or image buffering for recording or upload  
Recordings: SD card and network share  
Security: erase configuration  
SNMP traps: send, send while the rule is active  
Images or video clips: FTP, SFTP, HTTP, HTTPS, network share and email  
WDR mode

## Built-in installation aids

Pixel counter, remote zoom and focus, straighten image, level grid, leveling assistant

## Analytics

### Applications

#### Included

AXIS Object Analytics, AXIS Image Health Analytics, AXIS Scene Metadata, AXIS Live Privacy Shield, AXIS Video Motion Detection, audio detection

#### Supported

AXIS Perimeter Defender, AXIS License Plate Verifier  
Support for AXIS Camera Application Platform enabling installation of third-party applications, see [axis.com/acap](https://axis.com/acap)

### AXIS Object Analytics

**Object classes:** humans, vehicles (types: cars, buses, trucks, bikes, other)

**Scenarios:** line crossing, object in area, time in area, crossline counting, occupancy in area, tailgating detection, PPE monitoring<sup>BETA</sup>, motion in area, motion line crossing

Up to 10 scenarios

**Other features:** triggered objects visualized with trajectories, color-coded bounding boxes and tables  
Polygon include/exclude areas  
Perspective configuration  
ONVIF Motion Alarm event

## AXIS Image Health Analytics

### Detection settings:

Tampering: blocked image, redirected image

Image degradation: blurred image, underexposed image

**Other features:** sensitivity, validation period

## AXIS Scene Metadata

**Object classes:** humans, faces, vehicles (types: cars, buses, trucks, bikes), license plates

**Object attributes:** vehicle color, upper/lower clothing color, confidence, position

## Approvals

### Product markings

CSA, UL/cUL, CE, KC, VCCI, RCM

### Supply chain

TAA compliant

## EMC

CISPR 35, CISPR 32 Class A, EN 55035, EN 55032 Class A, EN 50121-4, EN 61000-3-2, EN 61000-3-3, EN 61000-6-1, EN 61000-6-2

**Australia/New Zealand:** RCM AS/NZS CISPR 32 Class A

**Canada:** ICES(A)/NMB(A)

**Japan:** VCCI Class A

**Korea:** KS C 9832 Class A, KS C 9835

**USA:** FCC Part 15 Subpart B Class A

**Railway:** IEC 62236-4

## Safety

CAN/CSA C22.2 No. 62368-1 ed. 3, IEC/EN/UL 62368-1 ed. 3, IEC/EN 62471 risk group exempt

## Environment

IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-14, IEC 60068-2-27, IEC 60068-2-78, IEC/EN 60529 IP66/IP69, IEC/EN 62262 IK10, ISO 21207 (Method B), ISO 20653 IP6K9K, NEMA 250 Type 4X

## Network

NIST SP500-267

## Cybersecurity

FIPS 140

## Cybersecurity

### Edge security

**Software:** Signed OS, brute force delay protection, digest authentication and OAuth 2.0 RFC6749 OpenID Authorization Code Flow for centralized ADFS account management, password protection, Axis Cryptographic Module (FIPS 140-2 level 1)

**Hardware:** Axis Edge Vault cybersecurity platform  
Secure keystore: Secure element (CC EAL 6+, FIPS 140-3 Level 3), system-on-chip security (TEE)  
Axis device ID, signed video, secure boot, encrypted filesystem (AES-XTS-Plain64 256bit)

### Network security

IEEE 802.1X (EAP-TLS, PEAP-MSCHAPv2)<sup>3</sup>, IEEE 802.1AE (MACsec PSK/EAP-TLS), IEEE 802.1AR, HTTPS/HSTS<sup>3</sup>, TLS v1.2/v1.3<sup>3</sup>, Network Time Security (NTS), X.509 Certificate PKI, host-based firewall

### Documentation

*AXIS OS Hardening Guide*

*Axis Vulnerability Management Policy*

*Axis Security Development Model*

AXIS OS Software Bill of Material (SBOM)

To download documents, go to [axis.com/support/cybersecurity/resources](https://axis.com/support/cybersecurity/resources)

To read more about Axis cybersecurity support, go to [axis.com/cybersecurity](https://axis.com/cybersecurity)

## General

### Casing

IP66-, IP6K9K-, NEMA 4X- and IK10-rated

Polycarbonate hard-coated dome

Aluminum casing, weathershield (PC/ASA)

Color: white NCS S 1002-B

For repainting instructions, go to the product's support page. For information about the impact on warranty, go to [axis.com/warranty-implication-when-repainting](https://axis.com/warranty-implication-when-repainting).

### Mounting

Mounting bracket with junction box holes (double-gang, single-gang, 4" square, and 4" octagon)

3/4" (M25) conduit side entries

### Power

Power over Ethernet (PoE) IEEE/802.3at Type 2 Class 4, max 25.5 W, typical (heater off, IR off) 6.9 W

8–28 VDC, max 25.5 W, typical (heater off, IR off) 6.9 W

Features: power meter

### I/O functionality

I/O: Terminal block for two configurable supervised inputs / digital outputs (12 V DC output, max load 50 mA)

I/O connectivity through portcast technology accessories. For more information, see *Optional accessories*.

### Connectors

Network: Shielded RJ45 10BASE-T/100BASE-TX/1000BASE-T PoE

Power: DC input, terminal block

I/O: 4-pin 2.5 mm terminal block

Audio: 3.5 mm mic/line in

### IR illumination

OptimizedIR with power-efficient, long-life 850 nm IR LEDs

### Storage

Support for microSD/microSDHC/microSDXC card

Support for SD card encryption (AES-XTS-Plain64 256bit)

Recording to network-attached storage (NAS)

For SD card and NAS recommendations see [axis.com](https://axis.com)

### Operating conditions

Temperature: -50 °C to 55 °C (-58 °F to 131 °F)

Maximum temperature according to NEMA TS 2 (2.2.7): 74 °C (165 °F)

Start-up temperature: -40 °C

Humidity: 10–100% RH (non-condensing)

### Storage conditions

Temperature: -40 °C to 65 °C (-40 °F to 149 °F)

Humidity: 5–95% RH (non-condensing)

### Dimensions

For the overall product dimensions, see the dimension drawing in this datasheet.

Effective Projected Area (EPA): 0.041 m<sup>2</sup> (0.44 ft<sup>2</sup>)

### Weight

2310 g (5.1 lb)

### Box content

Camera, weathershield, installation guide, terminal block connectors, connector guard, cable gaskets, owner authentication key

3. This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. ([openssl.org](https://openssl.org)), and cryptographic software written by Eric Young ([eay@cryptsoft.com](mailto:eay@cryptsoft.com)).

## System tools

AXIS Site Designer, AXIS Device Manager, product selector, accessory selector, lens calculator  
Available at [axis.com](https://axis.com)

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## Languages

English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Polish, Traditional Chinese, Dutch, Czech, Swedish, Finnish, Turkish, Thai, Vietnamese

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## Warranty

5-year warranty, see [axis.com/warranty](https://axis.com/warranty)

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## Part numbers

Available at [axis.com/products/axis-q3548-lve#part-numbers](https://axis.com/products/axis-q3548-lve#part-numbers)

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## Optional accessories

### Portcast

AXIS T61 MkII Audio and I/O Interface Series

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### Installation

AXIS T8415 Wireless Installation Tool

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### Mounting

AXIS TQ3204-E Recessed Mount  
AXIS TQ3103-E Pendant Kit

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### Storage

AXIS Surveillance Cards

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AXIS TQ3818-E Dome Smoked  
For more accessories, go to [axis.com/products/axis-q3548-lve#compatible-products](https://axis.com/products/axis-q3548-lve#compatible-products)

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## Sustainability

### Substance control

PVC free, BFR/CFR free in accordance with JEDEC/ECA Standard JS709  
RoHS in accordance with EU RoHS Directive 2011/65/EU and 2015/863, and standard EN IEC 63000:2018  
REACH in accordance with (EC) No 1907/2006. For SCIP UUID, see [echa.europa.eu](https://echa.europa.eu)

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## Materials

Renewable carbon-based plastic content: 38% ( bio-based: 34%, carbon capture based: 4%)  
Screened for conflict minerals in accordance with OECD guidelines  
To read more about sustainability at Axis, go to [axis.com/about-axis/sustainability](https://axis.com/about-axis/sustainability)

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## Environmental responsibility

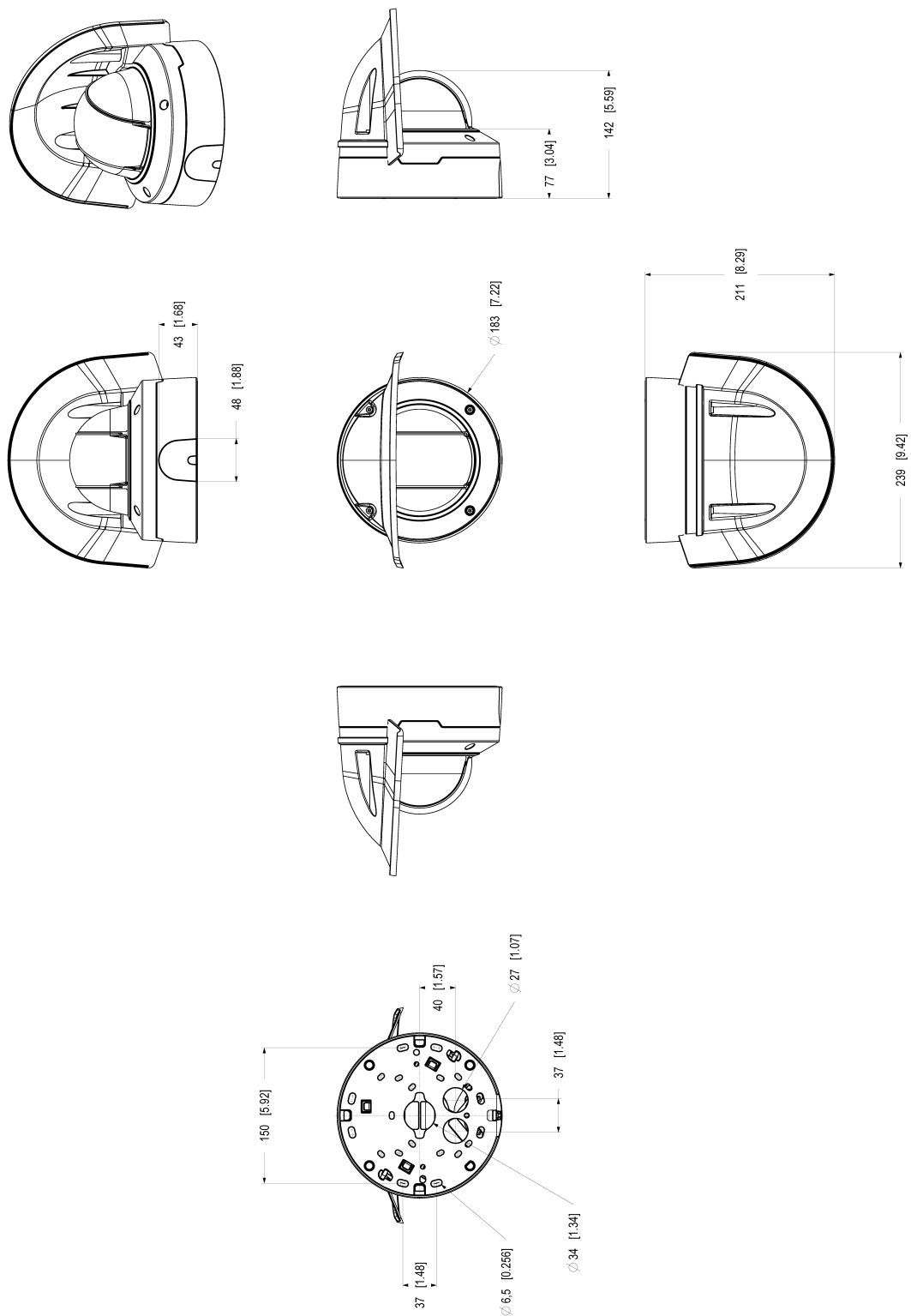
[axis.com/environmental-responsibility](https://axis.com/environmental-responsibility)  
Axis Communications is a signatory of the UN Global Compact, read more at [unglobalcompact.org](https://unglobalcompact.org)

**Detect, Observe, Recognize, Identify (DORI)**

	DORI definition	Distance (wide)	Distance (tele)
Detect	25 px/m (8 px/ft)	88 m (289 ft)	178 m (584 ft)
Observe	63 px/m (19 px/ft)	35 m (115 ft)	71 m (233 ft)
Recognize	125 px/m (38 px/ft)	18 m (59 ft)	36 m (118 ft)
Identify	250 px/m (76 px/ft)	9 m (30 ft)	18 m (59 ft)

The DORI values are calculated using pixel densities for different use cases as recommended by the EN-62676-4 standard. The calculations use the center of the image as the reference point and consider lens distortion. The possibility to recognize or identify a person or object depends on factors such as object motion, video compression, lighting conditions, and camera focus. Use margins when planning. The pixel density varies across the image, and the calculated values can differ from the distances in the real world.

## Dimension drawing





## Highlighted capabilities

### AXIS Object Analytics

AXIS Object Analytics is a preinstalled, multifeatured video analytics that detects and classifies humans, vehicles, and types of vehicles. Thanks to AI-based algorithms and behavioral conditions, it analyzes the scene and their spatial behavior within – all tailored to your specific needs. Scalable and edge-based, it requires minimum effort to set up and supports various scenarios running simultaneously.

### AXIS Live Privacy Shield

Remotely monitor activities both indoors and outdoors while safeguarding privacy in real-time.

With AI-based dynamic masking you can choose what to mask or blur while addressing rules and regulations protecting privacy and personal data. The application enables masking of moving and still objects such as humans, license plates, or backgrounds. The application works in real-time and on both live and recorded video streams.

### Axis Edge Vault

Axis Edge Vault is the hardware-based cybersecurity platform that safeguards the Axis device. It forms the foundation that all secure operations depend on and offer features to protect the device's identity, safeguard its integrity and protect sensitive information from unauthorized access. For instance, **secure boot** ensures that a device can boot only with **signed OS**, which prevents physical supply chain tampering. With signed OS, the device is also able to validate new device software before accepting to install it. And the **secure keystore** is the critical building-block for protecting cryptographic information used for secure communication (IEEE 802.1X, HTTPS, Axis device ID, access control keys etc.) against malicious extraction in the event of a security breach. The secure keystore and secure connections are provided through a Common Criteria or FIPS 140 certified hardware-based cryptographic computing module.

Furthermore, signed video ensures that video evidence can be verified as untampered. Each camera uses its unique video signing key, which is securely stored in the secure keystore, to add a signature into the video stream allowing video to be traced back to the Axis camera from where it originated.

To read more about Axis Edge Vault, go to [axis.com/solutions/edge-vault](https://axis.com/solutions/edge-vault).

### Electronic image stabilization

Electronic image stabilization (EIS) provides smooth video in situations where a camera is subject to vibrations. Built-in gyroscopic sensors continuously

detect the camera's movements and vibrations, and they automatically adjust the frame to ensure you always capture the details you need. Electronic image stabilization relies on different algorithms for modeling camera motion, which are used to correct the images.

### OptimizedIR

Axis OptimizedIR provides a unique and powerful combination of camera intelligence and sophisticated LED technology, resulting in our most advanced camera-integrated IR solutions for complete darkness. In our pan-tilt-zoom (PTZ) cameras with OptimizedIR, the IR beam automatically adapts and becomes wider or narrower as the camera zooms in and out to make sure that the entire field of view is always evenly illuminated.