

AXIS Q3546-LVE Dome Camera

Advanced 4 MP AI-powered dome

Built on ARTPEC-9, this AI-powered camera offers 4 MP resolutions and delivers outstanding image quality even in the harshest 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 4 MP
- > Next-generation AI-powered analytics
- > IR-shielded dome to prevent reflections
- > Wide or tele lenses available
- > Built-in cybersecurity with Axis Edge Vault



AXIS Q3546-LVE Dome Camera

Camera

Variants

AXIS Q3546-LVE 10 mm

AXIS Q3546-LVE 51 mm

Image sensor

1/1.8" progressive scan RGB CMOS

Pixel size 2.9 µm

Lens

10 mm lens

Varifocal, 4.7–10, F1.1–1.2

Horizontal field of view: 101°–44°

Vertical field of view: 54°–25°

Minimum focus distance: 0.50 m (1.64 ft)

2.2x optical zoom

P-Iris control, IR corrected, remote zoom and focus

51 mm lens

Varifocal, 13–51, F1.7–2.1

Horizontal field of view: 33°–9°

Vertical field of view: 18°–5°

Minimum focus distance: 2.60 m (8.53 ft)

3.8x optical zoom

P-Iris control, IR corrected, remote zoom and focus

Day and night

Automatic IR-cut filter

Minimum illumination

10 mm lens

Color: 0.01 lux at 50 IRE, F1.1

B/W: 0.002 lux at 50 IRE, F1.1

0 lux with IR illumination on

51 mm lens

Color: 0.04 lux at 50 IRE, F1.7

B/W: 0.008 lux at 50 IRE, F1.7

0 lux with IR illumination on

Shutter speed

1/49500 s to 2 s

Camera adjustment

10 mm lens

Pan $\pm 180^\circ$, tilt -42 to $+80^\circ$, rotation $\pm 180^\circ$

51 mm lens

Pan $\pm 180^\circ$, tilt -42 to $+89^\circ$, rotation $\pm 180^\circ$

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 2688x1512

16:10: Up to 1280x800

4:3: Up to 2016x1512

Frame rate

With Forensic WDR: Up to 25/30 fps (50/60 Hz) in all resolutions

No WDR: Up to 100/120 fps (50/60 Hz) in all resolutions

Video streaming

Up to 20 unique and configurable video streams¹

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

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.

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

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

Features

Automatic gain control

10-band graphic equalizer for audio input

Speaker pairing

Streaming

Configurable duplex:

Two-way (half duplex, full duplex)

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

Output

Output through speaker pairing or portcast technology

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, HTTPS², HTTP/2, TLS², QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, PTP, 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.

One-click cloud connection

ONVIF® Profile G, ONVIF® Profile M, ONVIF® Profile S, and ONVIF® Profile T, specifications at 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.

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

Siren and light pairing

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

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

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

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^{BETA}, 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

UL, FCC, ICES, CE, KC, VCCI, RCM, WEEE

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

ETSI EN 303 645, BSI IT Security Label, FIPS 140

Cybersecurity

Edge security

Software: Signed OS, brute force delay protection,
digest authentication and OAuth 2.0 RFC6749 Client
Credential Flow/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)³,
IEEE 802.1AE (MACsec PSK/EAP-TLS), IEEE 802.1AR,
HTTPS/HSTS³, TLS v1.2/v1.3³, 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

To read more about Axis cybersecurity support, go to
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.

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) 6.3 W
8–28 VDC, max 25.5 W, typical (heater off, IR off) 6.2 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

3. This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (openssl.org), and cryptographic software written by Eric Young (ey@cryptsoft.com).

IR illumination

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

10 mm lens

Range of reach 60 m (195 ft) or more depending on the scene

51 mm lens

Range of reach 70 m (230 ft) or more depending on the scene

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

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 m² (0.44 ft²)

Weight

2360 g (5.2 lb)

Box content

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

System tools

AXIS Site Designer, AXIS Device Manager, product selector, accessory selector, lens calculator

Available at axis.com

Languages

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

Warranty

5-year warranty, see axis.com/warranty

Part numbers

Available at axis.com/products/axis-q3546-lve#part-numbers

Optional accessories

Portcast

AXIS T61 MkII Audio and I/O Interface Series

Installation

AXIS T8415 Wireless Installation Tool

Mounting

AXIS TQ3204-E Recessed Mount

AXIS TQ3103-E Pendant Kit

Storage

AXIS Surveillance Cards

AXIS TQ3818-E Dome Smoked

For more accessories, go to axis.com/products/axis-q3546-lve#compatible-products

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

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

Environmental responsibility

axis.com/environmental-responsibility

Axis Communications is a signatory of the UN Global Compact, read more at unglobalcompact.org

Detect, Observe, Recognize, Identify (DORI)

10 mm lens

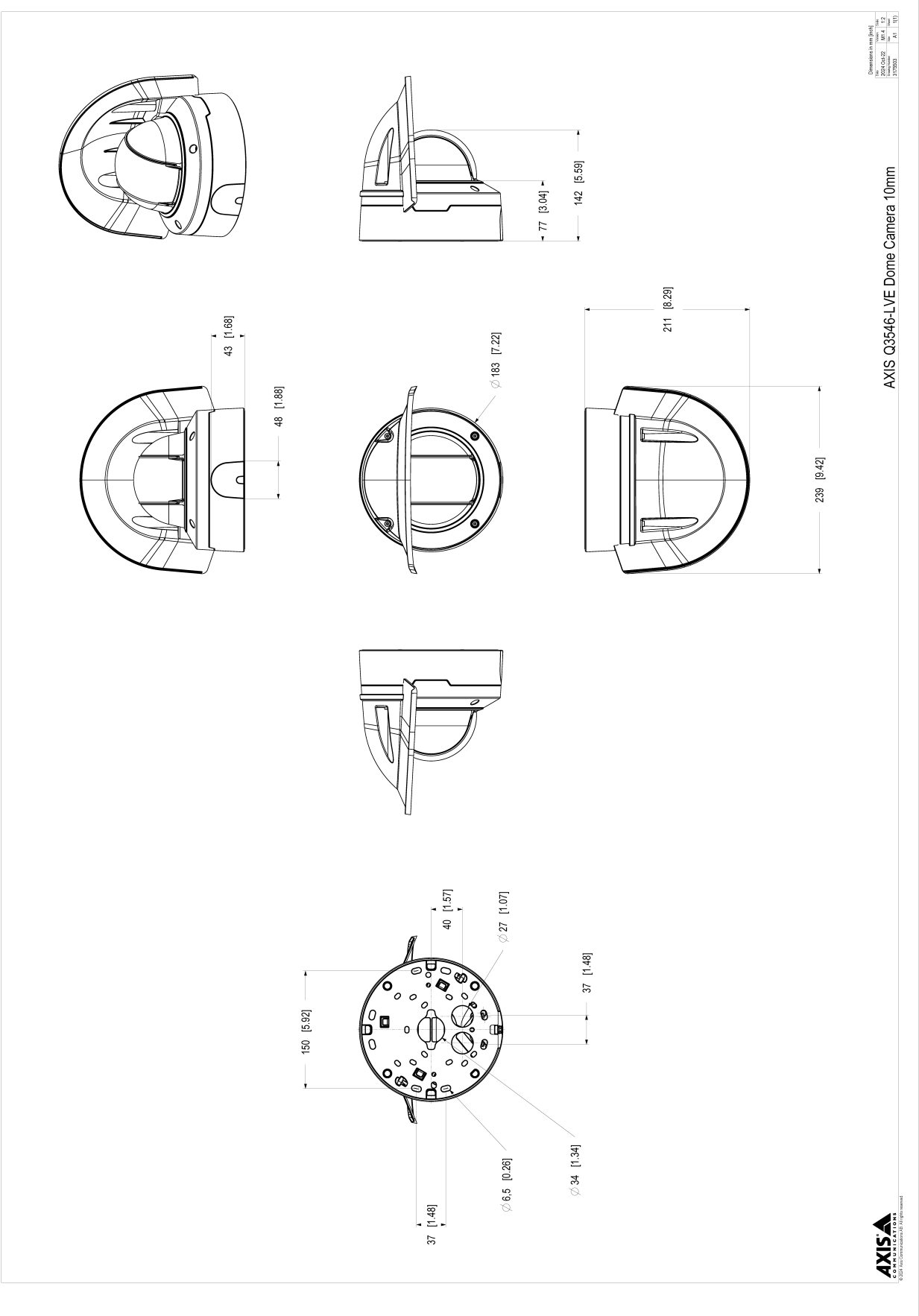
	DORI definition	Distance (wide)	Distance (tele)
Detect	25 px/m (8 px/ft)	65 m (213 ft)	141 m (463 ft)
Observe	63 px/m (19 px/ft)	26 m (85 ft)	56 m (184 ft)
Recognize	125 px/m (38 px/ft)	13 m (43 ft)	28 m (92 ft)
Identify	250 px/m (76 px/ft)	6.4 m (21 ft)	14 m (46 ft)

51 mm lens

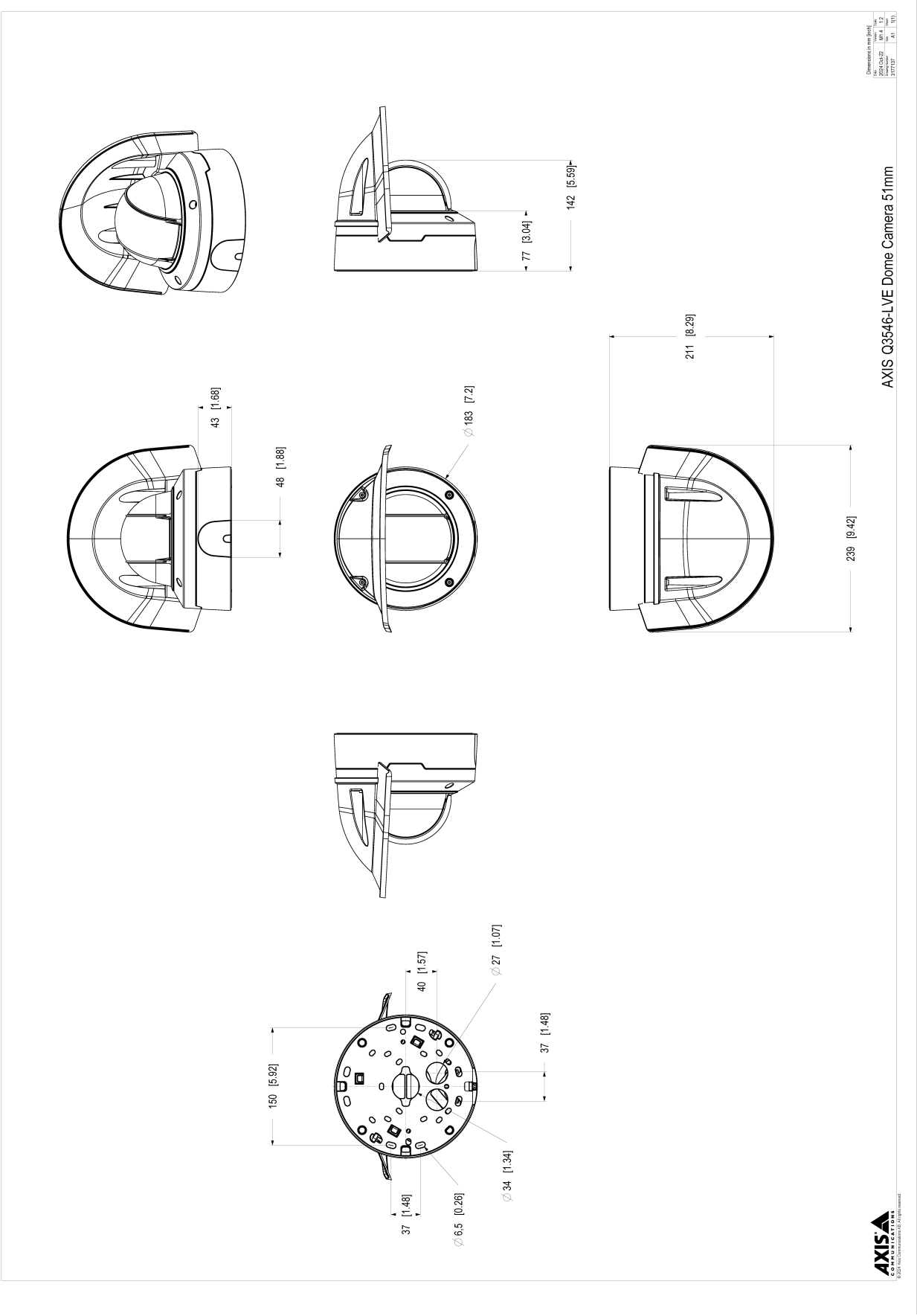
	DORI definition	Distance (wide)	Distance (tele)
Detect	25 px/m (8 px/ft)	183 m (600 ft)	698 m (2290 ft)
Observe	63 px/m (19 px/ft)	73 m (240 ft)	277 m (909 ft)
Recognize	125 px/m (38 px/ft)	37 m (121 ft)	140 m (459 ft)
Identify	250 px/m (76 px/ft)	18 m (59 ft)	70 m (230 ft)

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



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.

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.