AXIS Q3556-LVE Dome Camera

Advanced 4 MP AI-powered dome with audio analytics

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 and AXIS Audio Analytics will notify you even when there's no visual indication. 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**
> **AXIS Audio Analytics preinstalled**
> **Built-in cybersecurity with Axis Edge Vault**

FIPS 140-3
FIPS-3 Inside 4679

AXIS Q3556-LVE Dome Camera

Camera

Variants
AXIS Q3556-LVE 10 mm
AXIS Q3556-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 lux at 50 IRE, F1.1
0 lux with IR illumination on
51mm lens
Color: 0.04 lux at 50 IRE, F1.7
B/W: 0 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 ±180°, tilt -42 to +80°, rotation ±180°
51 mm lens
Pan ±180°, tilt -42 to +89°, 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 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 streams[1]
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

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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)

Network

Network protocols
IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPS[2], HTTP/2, TLS[2], 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.*
One-click cloud connection
ONVIF® Profile G, ONVIF® Profile M, ONVIF® Profile S, and ONVIF® Profile T, specifications at *onvif.org*

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
Heater

Event conditions
Application
Audio analytics: audio level above threshold, glass break detected, scream detected, shout detected
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
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
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

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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 (eay@cryptsoft.com).*

Analytics

Applications

Included
AXIS Object Analytics, AXIS Image Health Analytics, AXIS Audio Analytics, AXIS Scene Metadata, AXIS Live Privacy Shield, AXIS Video Motion 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 Audio Analytics

Features: adaptive audio detection, audio classification
Audio classes: scream, shout, glass break
Event metadata: audio detections, classifications

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
Audio data: audio level

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

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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 (eay@cryptsoft.com).*

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)
¾" (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)

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

Sensor

Acoustic sensor

IR illumination

OptimizedIR with power-efficient, long-life 850 nm IR LEDs
10 mm lens
60 m (197 ft) or more depending on the scene
51 mm lens
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 m^2 (0.44 ft^2)

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-q3556-lve#part-numbers*

Optional accessories

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-q3556-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

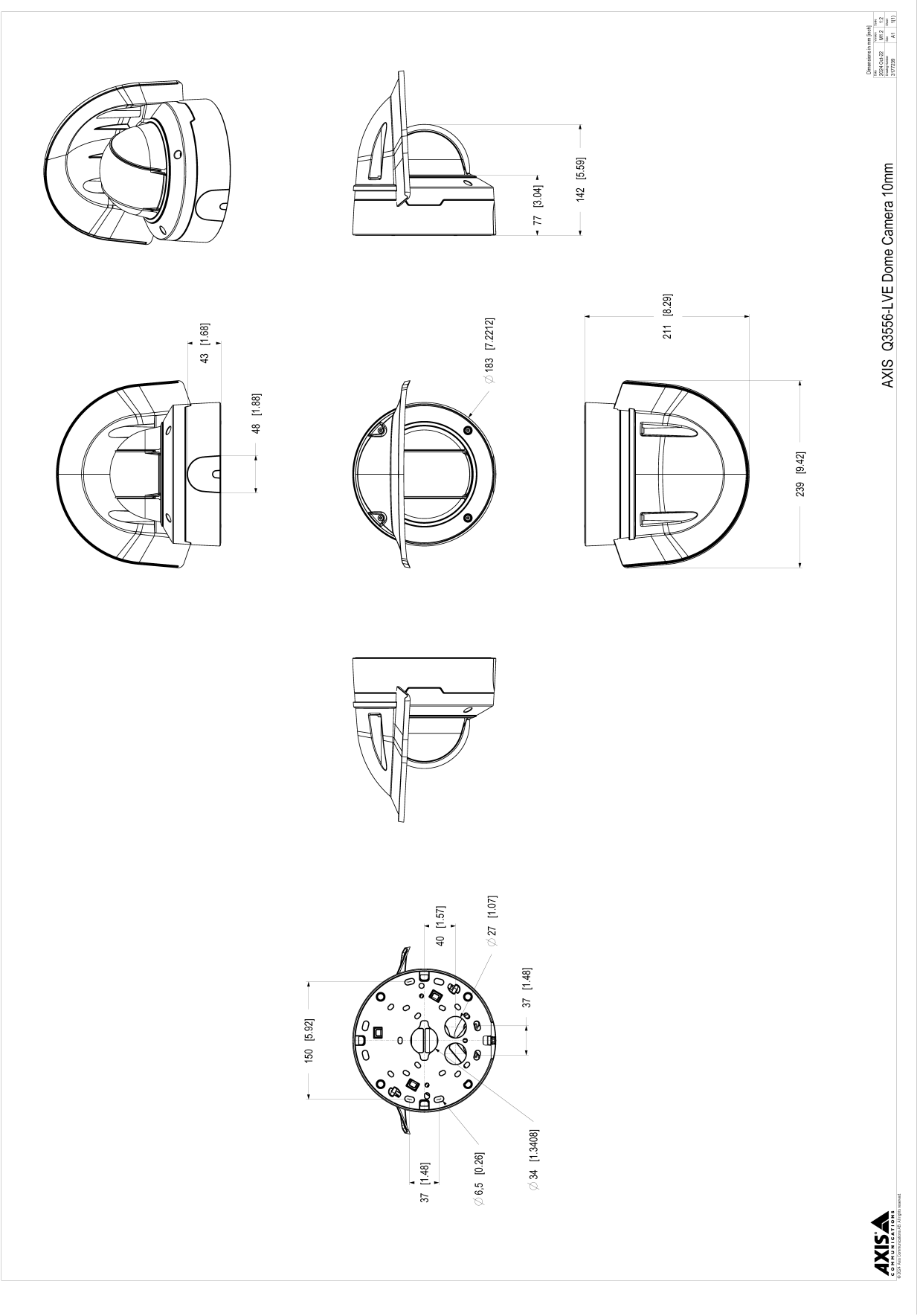|	DORI definition	Distance (wide)	Distance (tele)
Detect	25 px/m (8 px/ft)	65 m (213 ft)	141 m (463 ft)
Observe	63 px/m (19 px/ft)	26 m (85 ft)	56 m (184 ft)
Recognize	125 px/m (38 px/ft)	13 m (43 ft)	28 m (92 ft)
Identify	250 px/m (76 px/ft)	6.4 m (21 ft)	14 m (46 ft)

51 mm lens

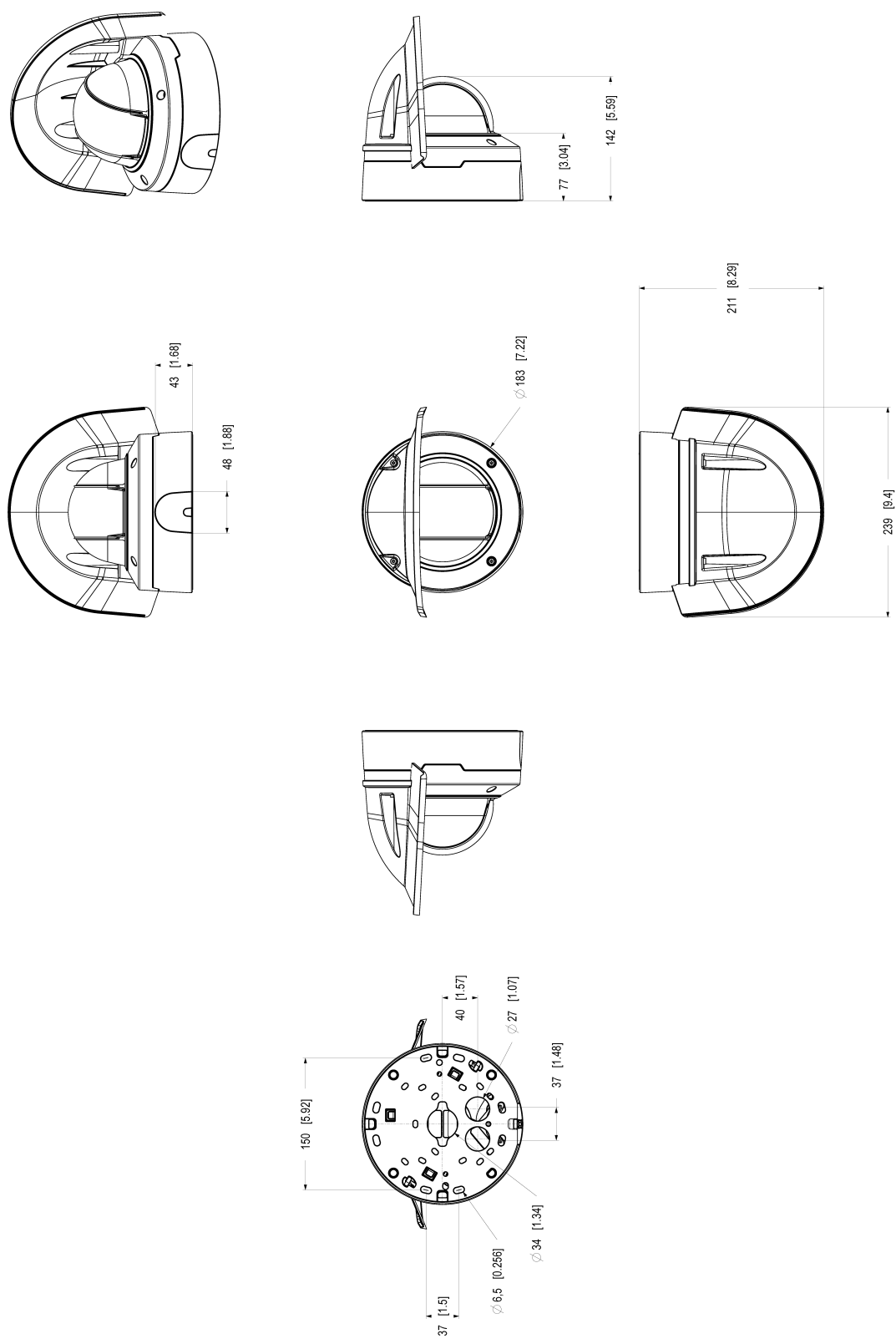|	DORI definition	Distance (wide)	Distance (tele)
Detect	25 px/m (8 px/ft)	183 m (600 ft)	698 m (2290 ft)
Observe	63 px/m (19 px/ft)	73 m (240 ft)	277 m (909 ft)
Recognize	125 px/m (38 px/ft)	37 m (121 ft)	140 m (459 ft)
Identify	250 px/m (76 px/ft)	18 m (59 ft)	70 m (230 ft)

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

142 [5.59]

77 [3.04]

43 [1.68]

48 [1.88]

⌀ 183 [7.2212]

211 [8.29]

239 [9.42]

40 [1.57]

⌀ 27 [1.07]

37 [1.48]

150 [5.92]

37 [1.48]

⌀ 6.5 [0.26]

⌀ 34 [1.3408]

Dimensions in mm [inch]

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AXIS Q3556-LVE Dome Camera 10mm

Dimension drawing

142 [5.59]

77 [3.04]

43 [1.68]

48 [1.88]

∅ 183 [7.22]

211 [8.29]

239 [9.4]

40 [1.57]

∅ 27 [1.07]

37 [1.48]

150 [5.92]

∅ 34 [1.34]

∅ 6,5 [0.256]

37 [1.5]

AXIS Q3556-LVE Dome Camera 51mm

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 Audio Analytics

AXIS Audio Analytics uses adaptive audio detection to generate alarms on sudden increases in sound volume. With AI-based classifiers, it can detect screaming and shouting. You can also get extra confirmation by combining AXIS Audio Analytics with video analytics. This smart application only transmits metadata, ensuring privacy is safeguarded. A core feature of AXIS OS, AXIS Audio Analytics comes preinstalled at no extra cost.

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.