AXIS Q1700-LE License Plate Camera

Dedicated camera for sharp images at high speeds

AXIS Q1700-LE License Plate Camera delivers clear and sharp license plate images from vehicles moving at speeds of up to 130 km/h (81 mph) day and night. Thanks to a built-in license plate capture assistant, the camera is easy to setup and image settings are automatically adjusted to fit speed, installation height and vehicle distance in a specific traffic scene. A robust design ensures reliable operation in extreme weather conditions and in wind forces up to hurricane level. The camera is designed for usage with third-party edge or server-based software to perform license plate recognition and trigger actions.

- > Sharp license plates in HDTV 1080p / 2 MP
- > OptimizedIR range up to 50 m (164 ft)
- > 8x optical zoom
- > Horizontal field of view of 16° - 2.3°
- > Designed for third-party software

AXIS Q1700-LE License Plate Camera

Camera

Image sensor	1/2.8" progressive scan RGB CMOS
Lens	18–137 mm, F2.9–4.0 Horizontal field of view: 16°–2.3° Vertical field of view: 9.6°–1.3° Installation focus, auto-iris, automatic day/night Thread for 62 mm filters, max filter thickness: 5 mm
Day and night	Automatically removable infrared-cut filter in day mode and infrared-pass filter 720 nm in night mode
Minimum illumination	**Color:** 0.16 lux at 50 IRE F1.4 **B/W:** 0.03 lux at 50 IRE F1.4, 0 lux with IR illumination on
Shutter speed	1/66500 s to 1 s

License Plate Capture

Detection range	**Day**: 20–100 m (66–328 ft) **Night**: 20–50 m (66–164 ft) Night detection range up to 100 m (328 ft) with optional accessory AXIS T90D20 IR-LED Illuminator
IR illumination	OptimizedIR with power-efficient, long-life 850 nm IR LED's with adjustable angle of illumination and intensity. Range of reach 40 m (131 ft) in wide field of view and 50 m (164 ft) in full tele view, or more depending on the scene
Vehicle speed	Up to 130 km/h (81 mph) with optional edge analytics Up to 250 km/h (155 mph) with server based analytics
Coverage	Single lane with optional edge analytics Two lanes with server based analytics
Installation	Mounting height: Up to 10 m (33 ft) Distance from road: Up to 10 m (33 ft) Camera detects tilt and roll angle automatically Built-in licence plate capture assistant optimizes video settings based on mounting height, distance to vehicle, and expected vehicle speed

System on chip (SoC)

Model	ARTPEC-6
Memory	1024 MB RAM, 512 MB Flash

Video

Video compression	H.264 (MPEG-4 Part 10/AVC) Baseline, Main and High Profiles Motion JPEG
Resolution	1920x1080 HDTV 1080p to 160x120 **Maximum pixel density with 8x optical zoom:** **25 m (82 ft):** 1912 px/m **50 m (164 ft):** 956 px/m **250 m (820 ft):** 191 px/m
Frame rate	**With WDR:** Up to 25/30 fps (50/60 Hz) in all resolutions **Without WDR:** Up to 50/60 fps (50/60 Hz) in all resolutions
Video streaming	Multiple, individually configurable streams in H.264 and Motion JPEG Axis Zipstream technology in H.264 Controllable frame rate and bandwidth VBR/ABR/MBR H.264
Image settings	Saturation, contrast, brightness, sharpness, Forensic WDR: Up to 120 dB depending on scene, defogging, white balance, day/night threshold, exposure mode, exposure zones, compression, mirroring of images, electronic image stabilization, barrel distortion correction, text and image overlay, dynamic text and image overlay, privacy masks Rotation: auto, 0°, 180° Scene profiles: license plate, forensic, vivid, traffic overview
Pan/Tilt/Zoom	8x optical zoom, preset positions

Audio

Audio streaming	Audio in, simplex
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 Configurable bit rate
Audio input/output	Automatic gain control External microphone input, line input, digital input with ring power, balanced microphone, balanced input

Network

Security	Password protection, IP address filtering, HTTPS[a] encryption, IEEE 802.1x (EAP-TLS)[a] network access control, digest authentication, user access log, centralized certificate management, signed firmware, brute force delay protection
Supported protocols	IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTP/2, HTTPS[a], SSL/TLS[a], QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, RTSP, RTP, SRTP, TCP, UDP, IGMPv1/v2/v3, RTCP, ICMP, DHCPv4/v6, ARP, SOCKS, SSH, LLDP, CDP, MQTT v3.1.1, Syslog, Link-Local address (ZeroConf)

System integration

Application Programming Interface	Open API for software integration, including VAPIX® and AXIS Camera Application Platform; specifications at *axis.com* One-click cloud connection ONVIF® Profile S and ONVIF® Profile G, specification at *onvif.org*
Event conditions	Analytics, edge storage events MQTT subscribe Supervised external input, virtual inputs through API, shock detection, video motion detection, audio detection, active tampering
Event actions	Pre- and post-alarm video buffering File upload: FTP, SFTP, HTTP, HTTPS, network share and email MQTT publish Notification: email, HTTP, HTTPS, TCP and SNMP trap
Data streaming	Event data
Built-in installation aids	License plate capture assistant, remote zoom, pixel counter, leveling assistant, autorotation

Analytics

Applications	**Included** AXIS Motion Guard, AXIS Fence Guard, AXIS Loitering Guard Gatekeeper Support for AXIS Camera Application Platform enabling installation of third-party applications, see *axis.com/acap*

General

Casing	IP66- and NEMA 4X-rated, IK10 impact-resistant aluminum enclosure with integrated dehumidifying membrane, IK08 impact-resistant glass front window, weathershield with black anti-glare coating Wind survivability 60 m/s (134 mph) Color: Dark Gray NCS S 5502-B (Weathershield: Black)
Sustainability	PVC free, 5% recycled plastic
Power	Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 1 Class 3 Typical 7.7 W, max 12.95 W 20–28 V DC, typical 7.8 W, max 13.5 W 20–24 V AC, typical 12.4 V A, max 20 V A
Connectors	Shielded RJ45 10BASE-T/100BASE-TX PoE IDC punchdown connector DC Power connector Terminal block for two configurable supervised inputs / digital outputs (12 V DC output, max. load 50 mA) 3.5 mm mic/line in
IR illumination	OptimizedIR with power-efficient, long-life 850 nm IR LED's with adjustable angle of illumination and intensity. Range of reach 40 m (131 ft) in wide field of view and 50 m (164 ft) in full tele view, 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	-40 °C to 60 °C (-40 °F to 140 °F) Maximum temperature according to NEMA TS 2 (2.2.7): 74 °C (165 °F) Humidity 10-100% RH (condensing)
Storage conditions	-40 °C to 65 °C (-40 °F to 149 °F) Humidity 5-95% RH (non-condensing)
Approvals	EMC EN 55032 Class A, EN 50121-4, IEC 62236-4, EN 55024, EN 61000-6-1, EN 61000-6-2, FCC Part 15 Subpart B Class A, ICES-003 Class A, VCCI Class A, RCM AS/NZS CISPR 32 Class A, KCC KN32 Class A, KN35, EAC

	Safety IEC/EN/UL 62368-1, IEC/EN/UL 60950-22, EN/IEC 62471, IS 13252 **Environment** EN 50581, 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, IEC/EN 62262 IK10 body, IK08 glass, NEMA 250 Type 4X, NEMA TS 2 (2.2.7-2.2.9) **Network** NIST SP500–267
Dimensions	Length: 439 mm (17.3 in) ø 147 mm (5.8 in)
Weight	2.4 kg (5.3 lb)
Included accessories	Installation Guide, Windows® decoder 1-user license, connector kit, Resistorx® L-key RJ45 patch cable
Optional accessories	AXIS T90D20 IR-LED Illuminator - for night time capture range at up to 100 m (328 ft) AXIS T8604 Media Converter Switch AXIS T91A47 Pole Mount, AXIS T94P01B Corner Bracket For more accessories, see *axis.com*
Video management software	AXIS Companion, AXIS Camera Station, video management software from Axis' Application Development Partners available at *axis.com/vms*
Languages	English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Traditional Chinese
Warranty	5-year warranty, see *axis.com/warranty*

a. *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).*

Environmental responsibility:

axis.com/environmental-responsibility

©2019 - 2021 Axis Communications AB. AXIS COMMUNICATIONS, AXIS, ARTPEC and VAPIX are registered trademarks of Axis AB in various jurisdictions. All other trademarks are the property of their respective owners. We reserve the right to introduce modifications without notice.