# AXIS P3245-LVE-3 License Plate Verifier Kit

## Easy, cost-effective vehicle access control

AXIS P3245-LVE-3 includes an HDTV 1080p fixed dome camera and comes with AXIS License Plate Verifier preinstalled. This easy-to-install kit verifies license plates against a list of authorized or unauthorized number plates stored in the camera. Processing and storage take place in the camera, so there's no need for expensive servers, and bandwidth requirements are reduced. This vandal-resistant camera includes shock detection, so it's safe to use even when installed at lower, more accessible heights. And Axis OptimizedIR ensures the ideal image settings for license plate reading 24/7. Furthermore, it offers integration with video management systems (VMS) for complex requirements.

- > All-in-one vehicle access control
- > Support for allow- and blocklist
- > Vandal- and weather-resistant
- > Built-in support for Axis Network Door Controllers
- > OptimizedIR for recognition in darkness

# AXIS License Plate Verifier

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| **Application** | |
| **Compute platform** | Edge |
| **Licenses** | AXIS License Plate Verifier license included. |
| **Configuration** | Web configuration included |
| **Settings** | Define area of interest in scene.<br>Allow- and blocklist logic.<br>Barrier mode: Open to all, open to allowlisted, open to all but blocklisted.<br>Minimum width: 130 pixels for one-row license plates; 70 pixels for two-row license plates.<br>FIFO event log entries including thumbnail image of license plate. Up to 1000 entries on camera storage. Up to 100 000 entries on AXIS Surveillance Cards.<br>Configurable retention time of stored events |
| **Detection range** | 2.0 to 7.0 m (6.6 to 23 ft) |
| **Vehicle speed** | Up to 30 km/h (19 mph) |
| **Detection time** | Less than 1 second. |
| **Scenarios** | |
| **Typical applications** | **Efficient vehicle access control**<br>Efficiently automates the entry and exit procedures for authorized vehicles at depots, service centers, lots, priority lanes, parking facilities, and various other locations.<br>Validates license plates against allowlists or blocklists for efficient, seamless access control.<br>Supports up to 10,000 license plates in each list.<br>**Adding more functionality**<br>Integrate with Axis network door controllers for increased options and functionality.<br>Axis network door controllers, in conjunction with AXIS Camera Station Secure Entry, support more advanced access rules, schedules, and detailed event logs.<br>Compatible with various partner software, offering diverse credential options and tailored features to meet specific needs.<br>**License plate recognition in slow traffic**<br>In slow traffic, the application can detect and read license plates in traffic at up to 30 km/h (19 mph) on access roads, in city centers and enclosed areas such as campuses, ports or airports. This allows for LPR-forensic search and LPR-triggered events in a VMS such as AXIS Camera Station. |
| **System integration** | |
| **Application Programming Interface** | Open API for software integration. |
| **Event streaming** | Integrates with camera event management system to enable event streaming to management software and camera actions such as I/O control, notification, and edge storage. |
| **Supported devices** | Direct integration with Axis network door controllers and Axis A91 Network I/O Relay Modules. |
| **General** | |
| **Supported countries** | For a complete list of supported countries, go to the product page at *axis.com* |
| **Languages** | English |

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## Camera

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| **Image sensor** | 1/2.8" progressive scan RGB CMOS |
| **Lens** | Varifocal, 3.4–8.9 mm, F1.8<br>Horizontal field of view: 100°–36°<br>Vertical field of view: 53°–20°<br>Remote zoom and focus, P-Iris control, IR corrected |
| **Day and night** | Automatically removable infrared-cut filter |
| **Minimum illumination** | **With Forensic WDR and Lightfinder 2.0:**<br>**Color:** 0.1 lux at 50 IRE, F1.8<br>**Color:** 0.1 lux at 50 IRE, F1.8/F1.6<br>**B/W:** 0.02 lux at 50 IRE, F1.8/F1.6; 0 lux with IR illumination on |
| **Shutter speed** | 1/66500 s to 2 s |
| **Camera adjustment** | Pan ±180°, tilt ±75°, rotation ±175° |

## System on chip (SoC)

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| **Model** | ARTPEC-7 |
| **Memory** | 1024 MB RAM, 512 MB Flash |
| **Compute capabilities** | Machine learning processing unit (MLPU) |

## Video

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| **Video compression** | H.264 (MPEG-4 Part 10/AVC) Baseline, Main and High Profiles<br>H.265 (MPEG-H Part 2/HEVC) Main Profile<br>Motion JPEG |
| **Resolution** | 1920x1080 to 160x90 |
| **Frame rate** | **With WDR:** 25/30 fps with power line frequency 50/60 Hz<br>**Without WDR:** 50/60 fps with power line frequency 50/60 Hz |
| **Video streaming** | Multiple, individually configurable streams in H.264, H.265, and Motion JPEG<br>Axis Zipstream technology for H.264 and H.265<br>Controllable frame rate and bandwidth<br>VBR/ABR/MBR H.264/H.265<br>Low latency mode |
| **Multi-view streaming** | Up to 2 individually cropped out view areas in full frame rate |
| **Image settings** | Compression, color saturation, brightness, sharpness, contrast, local contrast, white balance, day/night threshold, tone mapping, exposure control (including automatic gain control), exposure zones, defogging, Forensic WDR: up to 120 dB depending on scene, barrel distortion correction, fine tuning of low-light behavior, dynamic text and image overlay, privacy masks, mirroring, rotation: 0°, 90°, 180°, 270° |
| **Pan/Tilt/Zoom** | Digital PTZ, preset positions |

## Audio

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| **Audio streaming** | Full duplex |
| **Audio encoding** | 24bit LPCM, AAC-LC 8/16/32/44.1/48 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 kHz, Opus 8/16/48 kHz<br>Configurable bit rate |
| **Audio input/output** | External microphone input, line input, digital input with ring power, line output, automatic gain control<br>Two-way audio connectivity via optional AXIS T61 Audio and I/O Interfaces with portcast technology |

## Network

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| **Security** | IP address filtering, HTTPS[a] encryption, IEEE 802.1X (EAP-TLS)[a] network access control, user access log, centralized certificate management |
| **Network protocols** | IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTP/2, HTTPS[a], TLS[a], QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, 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, SIP, LLDP, CDP, MQTT v3.1.1, Secure syslog (RFC 3164/5424, UDP/TCP/TLS), Link-Local address (ZeroConf) |

## System integration

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| **Application Programming Interface** | Open API for software integration, including VAPIX® and AXIS Camera Application Platform; specifications at *axis.com/developer-community*.<br>One-click cloud connection<br>ONVIF® Profile G, ONVIF® Profile M, ONVIF® Profile S, and ONVIF® Profile T, specification at *onvif.org*<br>Support for Session Initiation Protocol (SIP) for integration with Voice over IP (VoIP) systems, peer to peer or integrated with SIP/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*. |
| **Event conditions** | Analytics, external input, supervision of input, edge storage events, virtual inputs through API, MQTT subscribe |
| **Event actions** | Record video: SD card and network share<br>Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share, and email<br>Pre- and post-alarm video or image buffering for recording or upload<br>Notification: email, HTTP, HTTPS, TCP, and SNMP trap<br>MQTT publish<br>Overlay text, external output activation, play audio clip, make call |
| **Data streaming** | Event data |
| **Built-in installation aids** | Pixel counter, remote focus, remote zoom<br>OptimizedIR with adjustable IR illumination intensity |

## Analytics

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| **Applications** | **Included**<br>AXIS License Plate Verifier, AXIS Video Motion Detection, active tampering alarm, audio detection<br>Support for AXIS Camera Application Platform enabling installation of third-party applications, see *axis.com/acap*. |

## Approvals

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| **EMC** | CISPR 24, CISPR 35, CISPR 32 Class A, EN 55032 Class A, EN 50121-4, EN 55024, EN 61000-6-1, EN 61000-6-2<br>**Australia/New Zealand:** RCM AS/NZS CISPR 32 Class A<br>**Canada:** ICES-3(A)/NMB-3(A)<br>**Japan:** VCCI Class A<br>**Korea:** KC KN32 Class A, KC KN35<br>**USA:** FCC Part 15 Subpart B Class A<br>**Railway:** IEC 62236-4 |
| **Safety** | IEC/EN/UL 62368-1, IEC/EN/UL 60950-22, IS 13252, IEC/EN 62471 |
| **Environment** | IEC 60068-2-1, IEC 60068-2-14, IEC 60068-2-2, IEC 60068-2-27, IEC 60068-2-6, IEC 60068-2-78, IEC/EN 60529 IP66, IEC/EN 62262 IK10, NEMA 250 Type 4X,NEMA TS 2 (2.2.7-2.2.9) |
| **Network** | NIST SP500-267 |

## Cybersecurity

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| **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, AES-XTS-Plain64 256bit SD card encryption<br>**Hardware:** Secure boot |
| **Network security** | IEEE 802.1X (EAP-TLS, PEAP-MSCHAPv2)[a], IEEE 802.1AE (MACsec PSK/EAP-TLS), HTTPS/HSTS[a], TLS v1.2/v1.3[a], Network Time Security (NTS), X.509 Certificate PKI, host-based firewall |
| **Documentation** | *AXIS OS Hardening Guide*<br>*Axis Vulnerability Management Policy*<br>*Axis Security Development Model*<br>AXIS OS Software Bill of Material (SBOM)<br>To download documents, go to *axis.com/support/cybersecurity/resources*<br>To read more about Axis cybersecurity support, go to *axis.com/cybersecurity* |

## General

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| **Casing** | IP66- and NEMA 4X-rated, IK10 impact-resistant polycarbonate casing with hard-coated dome and dehumidifying membrane<br>Encapsulated electronics and captive screws<br>Color: white NCS S 1002-B<br>For repainting instructions and impact on warranty, contact your Axis partner. |
| **Mounting** | Mounting bracket with holes for junction box (double-gang, single-gang, and 4" octagon) and for wall or ceiling mount<br>¼"-20 UNC tripod screw thread |

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| **Power** | Power over Ethernet (PoE) IEEE 802.3af/802.3at Type 1 Class 3<br>Typical 6.4 W, max 11.3 W |
| **Connectors** | RJ45 10BASE-T/100BASE-TX PoE<br>I/O: 4-pin 2.5 mm (0.098 in) terminal block for 1 supervised digital input and 1 digital output (12 V DC output, max. load 25 mA)<br>Audio: 4-pin 2.5 mm (0.098 in) terminal block for audio in and out<br>Audio and I/O connectivity via AXIS T61 Audio and I/O Interfaces with portcast technology |
| **IR illumination** | OptimizedIR with power-efficient, long-life 850 nm IR LEDs<br>Range of reach 15 m (50 ft) or more depending on the scene |
| **Storage** | Support for microSD/microSDHC/microSDXC card<br>Support for SD card encryption (AES-XTS-Plain64 256bit)<br>Recording to network-attached storage (NAS)<br>For SD card and NAS recommendations see *axis.com* |
| **Operating conditions** | 0 °C to 50 °C (32 °F to 122 °F)<br>Maximum temperature according to NEMA TS2 (2.2.7): 74 °C (165 °F)<br>-40 °C to 50 °C (-40 °F to 122 °F)<br>Maximum temperature (intermittent): 55 °C (131 °F)<br>Start-up temperature: -30 °C to 50 °C (-22 °F to 122 °F)<br>Humidity 10–85% RH (non-condensing)<br>Humidity 10–100% RH (condensing) |
| **Storage conditions** | -40 °C to 65 °C (-40 °F to 149 °F)<br>Humidity 5–95% RH (non-condensing) |
| **Dimensions** | **Without weathershield:**<br>Height: 104 mm (4.09 in)<br>ø 149 mm (5.87 in) |
| **Weight** | **With weathershield:**800 g (1.8 lb) |
| **Included accessories** | Installation guide, Windows® decoder 1-user license, drill template, Resistorx® T20 L-key, terminal block connectors, cable gaskets, connector guard, weathershield |
| **Optional accessories** | AXIS T94M02L Recessed Mount, AXIS T94T01D Pendant Kit, AXIS T94M01D Pendant Kit, AXIS Dome Intrusion Switch C, AXIS TP3804-E Metal Casing White, AXIS T6101 Audio and I/O Interface, AXIS T6112 Audio and I/O Interface, AXIS ACI Conduit Adapters, Axis mounts and microphones, smoked dome, black casing<br>For more accessories, see *axis.com*. |
| **Languages** | English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Traditional Chinese<br>English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Traditional Chinese, Dutch, Czech, Swedish, Finnish, Turkish, Thai, Vietnamese |
| **Warranty** | 5-year warranty, see *axis.com/warranty*. |

## Sustainability

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| **Substance control** | PVC free<br>RoHS in accordance with EU RoHS Directive 2011/65/EU/ and EN 63000:2018<br>REACH in accordance with (EC) No 1907/2006. For SCIP UUID, see *echa.europa.eu* |
| **Environmental responsibility** | *axis.com/environmental-responsibility*<br>Axis Communications is a signatory of the UN Global Compact, read more at *unglobalcompact.org* |

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).*