AXIS D2110-VE Security Radar

Reliable area protection with 180° coverage 24/7

AXIS D2110-VE Security Radar is a smart network-based security device that uses advanced radar technology to deliver wide 180° coverage. Thanks to built-in analytics developed using machine learning and deep learning, it can accurately detect, classify and track people and vehicles with a low false alarm rate. Featuring PoE-out it's easy to connect and power an additional device, such as a camera for visual verification or a network horn speaker for deterrence. Furthermore, smart coexistence functionality allows the use of multiple radars close to each other. For instance, it's possible to mount two radars back-to-back for complete 360° coverage.

- > Extensive 180° area coverage
- > Built-in analytics
- > Low false alarm rate 24/7
- > Smart coexistence functionality
- > PoE-out to power additional devices



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Radar

Settings	Area Monitoring Profile Road Monitoring Profile
Sensor	Phased array FMCW (Frequency Modulated Continuous Wave)
Object data	Range, direction, velocity, object type
Frequency	24.05–24.25 GHz
RF transmit power	<100 mW (EIRP) License free. Unharmful radio-waves.
Recommended mounting height	3.5 m (11 ft)[a]
Detection range	**Area Monitoring Profile:** 3–60 m (10–200 ft) when detecting a person 3–85 m (10–280 ft) when detecting a vehicle **Road Monitoring Profile:** 30–60 m (98–197 ft) at 105 km/h (65 mph) Check the user manual for the recommended positioning
Radial speed	**Area Monitoring Profile**: up to 55 km/h (34 mph) **Road Monitoring Profile**: up to 105 km/h (65 mph)
Field of detection	Horizontal: 180°
Speed accuracy	+/- 2 km/h (1.25 mph)
Distance accuracy	0.7 m (2.3 ft)
Angle accuracy	1°
Spatial differentiation	3 m[b]
Data refresh rate	10 Hz
Coverage	5600 m^2 (61000 sq ft) for persons 11300 m^2 (122000 sq ft) for vehicles
Object classification	Humans, vehicles, unknown
Radar controls	Multiple detection zones, crossline detections, and exclude zones with filters for short-lived objects, object speed, and object type. Radar transmission on/off, coexistence, reference map with rotation and cropping, grid opacity, zone opacity, color scheme, trail lifetime, detection sensitivity, swaying object filter

System on chip (SoC)

Model	ARTPEC-7
Memory	1024 MB RAM, 512 MB Flash

Video

Video compression	H.264 (MPEG-4 Part 10/AVC) Baseline, Main and High Profiles H.265 (MPEG-H Part 2/HEVC) Main Profile Motion JPEG
Resolution	1920x1080 HDTV 1080p to 640x360
Frame rate	Up to 10 fps in all resolutions
Video streaming	Multiple, individually configurable streams in H.264, H.265 and Motion JPEG Controllable frame rate and bandwidth VBR/ABR/MBR H.264/H.265
Image settings	Compression, rotation: 0°, 90°, 180°, 270° including corridor format, dynamic text and image overlay

Audio

Audio streaming	Audio output via edge-to-edge technology
Audio input/output	Network speaker pairing

Network

Security	Password protection, IP address filtering, HTTPS[c] encryption, IEEE 802.1X (EAP-TLS)[c] network access control, digest authentication, user access log, centralized certificate management, brute force delay protection, signed firmware
Supported protocols	IPv4/v6, ICMPv4/ICMPv6, HTTP, HTTP/2, HTTPS[c], TLS[c], QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP™, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, RTSP, RTP, 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 G, ONVIF® Profile S, ONVIF® Profile T, and ONVIF® Profile M specification at *onvif.org*
Analytics	Radar Motion Detection (detect, track, and classify objects), Radar autotracking Support for AXIS Camera Application Platform enabling installation of third-party applications, see *axis.com/acap*
Event conditions	Analytics, object data, supervised external input, edge storage events, time scheduled Radar data failure Casing open, shock detected MQTT subscribe
Event actions	File upload: FTP, SFTP, HTTP, HTTPS, network share and email Notification: email, HTTP, HTTPS and TCP External output activation, relay activation MQTT publish Video recording to edge storage Pre- and post-alarm video buffering Overlay text Status LED activation Send SNMP trap
Data streaming	Event data Analytics data with object GPS[d] position and velocity
Built-in installation aids	Reference map calibration, sensor for tilt angle, GPS position[d]

General

Casing	IP66-, NEMA 4X- and IK08-rated Aluminum and plastic casing Color: White NCS S 1002-B
Sustainability	PVC free
Power	Power over Ethernet (PoE) IEEE 802.3at, Type 2 Class 4, typical 11 W, max 15 W Power over Ethernet (PoE) IEEE 802.3bt, Type 3 Class 5 or Axis Midspan 60 W required for PoE Out 8–28 V DC, typical 10 W, max 15 W
Connectors	DC input RJ45 10BASE-T/100BASE-TX/1000BASE-T PoE RJ45 10BASE-T/100BASE-TX/1000BASE-T PoE output to power an external PoE device Relay: 2-pin terminal block I/O: 6-pin 2.5 mm terminal block for four configurable inputs/outputs
Relays	1x 1 form A, 1 NO, max 5A, 24 V DC Expected lifetime 25,000 operations
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) Humidity 10–100% RH (condensing)
Storage conditions	-40 °C to 65 °C (-40 °F to 149 °F)
Approvals	**Radio** EN 300440, EN 301489-1, EN 301489-51, EN 62311, FCC Part 15 Subpart C **EMC** EN 55032 Class A, EN 55024, EN 61000-6-1, EN 61000-6-2, EN 61000-6-4, FCC Part 15 Subpart B Class A, ICES-3(A)/NMB-3(A), KC KN32 Class A, RCM AS/NZS CISPR 32 Class A, VCCI Class B, EAC **Safety** IEC/EN/UL 62368-1, IEC/EN/UL 60950-22 **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, IEC/EN 62262 IK08, NEMA 250 Type 4X

Dimensions	285 x 206 x 152 mm (11.2 x 8.1 x 6.0 in)
Weight	2.4 kg (5.3 lb)
Included accessories	Installation guide, connector kit, pipe adapters, cable gland, cable gaskets, Windows® decoder 1-user license
Optional accessories	AXIS T91R61 Wall Mount AXIS T91B47 Pole Mount AXIS T94R01B Corner Bracket AXIS T8415 Wireless Installation Tool For more accessories, see *axis.com*
Applications	Radar motion detection (detect, track, and classify objects) AXIS Speed Monitor Radar autotracking Support for AXIS Camera Application Platform enabling installation of third-party applications, see *axis.com/acap*
Supporting software	AXIS Radar Autotracking for PTZ (Slew to Cue) For supported cameras, see *axis.com/products/axis-radar-autotracking*
Video management software	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. *Mounting at another height affects the detection range. For more information, go to axis.com*
b. *Minimum distance between moving objects.*
c. *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).*
d. *Enter the radar's GPS position manually to get the objects' GPS position in the data stream.*

Environmental responsibility:

axis.com/environmental-responsibility

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