

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		Network protocols	IPv4/v6, ICMPv4/ICMPv6, HTTP, HTTP/2, HTTPS ^c , TLS ^c , QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP TM , SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, NTS, RTPSP, RTP, 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)
Settings	Area Monitoring Profile Road Monitoring Profile	System integration	
Sensor	Phased array FMCW (Frequency Modulated Continuous Wave)	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
Object data	Range, direction, velocity, object type	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
Frequency	24.05–24.25 GHz	Event conditions	Analytics, object data, supervised external input, edge storage events, time scheduled Radar data failure Casing open, shock detected MQTT subscribe
RF transmit power	<100 mW (EIRP) License free. Unharmful radio-waves.	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
Recommended mounting height	3.5 m (11 ft) ^a	Data streaming	Event data Analytics data with object GPS ^d position and velocity
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	Built-in installation aids	Reference map calibration, sensor for tilt angle, GPS position ^d
Radial speed	Area Monitoring Profile: up to 55 km/h (34 mph) Road Monitoring Profile: up to 105 km/h (65 mph)	General	
Field of detection	Horizontal: 180°	Casing	IP66-, NEMA 4X- and IK08-rated Aluminum and plastic casing Color: White NCS S 1002-B
Speed accuracy	+/- 2 km/h (1.25 mph)	Sustainability	PVC free
Distance accuracy	0.7 m (2.3 ft)	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
Angle accuracy	1°	Connectors	DC input RJ45 1000BASE-T PoE RJ45 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
Spatial differentiation	3 m (9 ft) ^b	Relays	1x 1 form A, 1 NO, max 5A, 24 V DC Expected lifetime 25,000 operations
Data refresh rate	10 Hz	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
Coverage	5600 m ² (61000 sq ft) for persons 11300 m ² (122000 sq ft) for vehicles	Operating conditions	-40 °C to 60 °C (-40 °F to 140 °F) Humidity 10–100% RH (condensing)
Coexistence zone	Frequency band: 24 GHz Radius: 350 m (1148 ft) Recommend number of radars: up to 6	Storage conditions	-40 °C to 65 °C (-40 °F to 149 °F)
Object classification	Humans, vehicles, unknown	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
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)	
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
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
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	
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		

	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 (eyay@cryptsoft.com).*
- d. *Enter the radar's GPS position manually to get the objects' GPS position in the data stream.*