

## 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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<b>Radar</b>		<b>Network protocols</b>	IPv4/v6, ICMPv4/ICMPv6, HTTP, HTTP/2, HTTPS <sup>c</sup> , TLS <sup>c</sup> , QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP <sup>TM</sup> , 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)
<b>Settings</b>	Area Monitoring Profile Road Monitoring Profile	<b>System integration</b>	
<b>Sensor</b>	Phased array FMCW (Frequency Modulated Continuous Wave)	<b>Application Programming Interface</b>	Open API for software integration, including VAPIX <sup>®</sup> and AXIS Camera Application Platform; specifications at <a href="http://axis.com">axis.com</a> One-click cloud connection ONVIF <sup>®</sup> Profile G, ONVIF <sup>®</sup> Profile S, ONVIF <sup>®</sup> Profile T, and ONVIF <sup>®</sup> Profile M specification at <a href="http://onvif.org">onvif.org</a>
<b>Object data</b>	Range, direction, velocity, object type	<b>Analytics</b>	Radar Motion Detection (detect, track, and classify objects), Radar autotracking Support for AXIS Camera Application Platform enabling installation of third-party applications, see <a href="http://axis.com/acap">axis.com/acap</a>
<b>Frequency</b>	24.05–24.25 GHz	<b>Event conditions</b>	Analytics, object data, supervised external input, edge storage events, time scheduled Radar data failure Casing open, shock detected MQTT subscribe
<b>RF transmit power</b>	<100 mW (EIRP) License free. Unharmful radio-waves.	<b>Event actions</b>	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
<b>Recommended mounting height</b>	3.5 m (11 ft) <sup>a</sup>	<b>Data streaming</b>	Event data Analytics data with object GPS <sup>d</sup> position and velocity
<b>Detection range</b>	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	<b>Built-in installation aids</b>	Reference map calibration, sensor for tilt angle, GPS position <sup>d</sup>
<b>Radial speed</b>	Area Monitoring Profile: up to 55 km/h (34 mph) Road Monitoring Profile: up to 105 km/h (65 mph)	<b>General</b>	
<b>Field of detection</b>	Horizontal: 180°	<b>Casing</b>	IP66-, NEMA 4X- and IK08-rated Aluminum and plastic casing Color: White NCS S 1002-B
<b>Speed accuracy</b>	+/- 2 km/h (1.25 mph)	<b>Sustainability</b>	PVC free
<b>Distance accuracy</b>	0.7 m (2.3 ft)	<b>Power</b>	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
<b>Angle accuracy</b>	1°	<b>Connectors</b>	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
<b>Spatial differentiation</b>	3 m (9 ft) <sup>b</sup>	<b>Relays</b>	1x 1 form A, 1 NO, max 5A, 24 V DC Expected lifetime 25,000 operations
<b>Data refresh rate</b>	10 Hz	<b>Storage</b>	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 <a href="http://axis.com">axis.com</a>
<b>Coverage</b>	5600 m <sup>2</sup> (61000 sq ft) for persons 11300 m <sup>2</sup> (122000 sq ft) for vehicles	<b>Operating conditions</b>	-40 °C to 60 °C (-40 °F to 140 °F) Humidity 10–100% RH (condensing)
<b>Coexistence zone</b>	Frequency band: 24 GHz Radius: 350 m (1148 ft) Recommend number of radars: up to 6	<b>Storage conditions</b>	-40 °C to 65 °C (-40 °F to 149 °F)
<b>Object classification</b>	Humans, vehicles, unknown	<b>Approvals</b>	<b>Radio</b> EN 300440, EN 301489-1, EN 301489-51, EN 62311, FCC Part 15 Subpart C <b>EMC</b> 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 <b>Safety</b> IEC/EN/UL 62368-1, IEC/EN/UL 60950-22
<b>Radar controls</b>	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	<b>System on chip (SoC)</b>	
<b>System on chip (SoC)</b>		<b>Model</b>	ARTPEC-7
<b>Memory</b>	1024 MB RAM, 512 MB Flash	<b>Video</b>	
<b>Video compression</b>	H.264 (MPEG-4 Part 10/AVC) Baseline, Main and High Profiles H.265 (MPEG-H Part 2/HEVC) Main Profile Motion JPEG	<b>Resolution</b>	1920x1080 HDTV 1080p to 640x360
<b>Resolution</b>	1920x1080 HDTV 1080p to 640x360	<b>Frame rate</b>	Up to 10 fps in all resolutions
<b>Video streaming</b>	Multiple, individually configurable streams in H.264, H.265 and Motion JPEG Controllable frame rate and bandwidth VBR/ABR/MBR H.264/H.265	<b>Image settings</b>	Compression, rotation: 0°, 90°, 180°, 270° including corridor format, dynamic text and image overlay
<b>Image settings</b>	Compression, rotation: 0°, 90°, 180°, 270° including corridor format, dynamic text and image overlay	<b>Audio</b>	
<b>Audio streaming</b>	Audio output via edge-to-edge technology	<b>Audio input/output</b>	Network speaker pairing
<b>Network</b>		<b>Security</b>	
<b>Security</b>	Password protection, IP address filtering, HTTPS <sup>c</sup> encryption, IEEE 802.1X (EAP-TLS) <sup>c</sup> network access control, digest authentication, user access log, centralized certificate management, brute force delay protection, signed firmware		

	<b>Environment</b> 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		
<b>Dimensions</b>	285 x 206 x 152 mm (11.2 x 8.1 x 6.0 in)	<b>Supporting software</b>	AXIS Radar Autotracking for PTZ (Slew to Cue) For supported cameras, see <a href="https://axis.com/products/axis-radar-autotracking">axis.com/products/axis-radar-autotracking</a>
<b>Weight</b>	2.4 kg (5.3 lb)	<b>Video management software</b>	AXIS Camera Station, video management software from Axis Application Development Partners available at <a href="https://axis.com/vms">axis.com/vms</a>
<b>Included accessories</b>	Installation guide, connector kit, pipe adapters, cable gland, cable gaskets, Windows® decoder 1-user license	<b>Languages</b>	English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Traditional Chinese, Dutch, Czech, Swedish, Finnish, Turkish, Thai, Vietnamese
<b>Optional accessories</b>	AXIS T91R61 Wall Mount AXIS T91B47 Pole Mount AXIS T94R01B Corner Bracket AXIS T8415 Wireless Installation Tool For more accessories, see <a href="https://axis.com">axis.com</a>	<b>Warranty</b>	5-year warranty, see <a href="https://axis.com/warranty">axis.com/warranty</a>
<b>Applications</b>	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 <a href="https://axis.com/acap">axis.com/acap</a>		a. <i>Mounting at another height affects the detection range. For more information, go to <a href="https://axis.com">axis.com</a></i> b. <i>Minimum distance between moving objects.</i> c. <i>This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (<a href="https://openssl.org">openssl.org</a>), and cryptographic software written by Eric Young (<a href="mailto:eyay@cryptsoft.com">eyay@cryptsoft.com</a>).</i> d. <i>Enter the radar's GPS position manually to get the objects' GPS position in the data stream.</i>