

# Spectrum D101-X-P3827-PVE-BD

Explosion-Proof Panoramic Camera

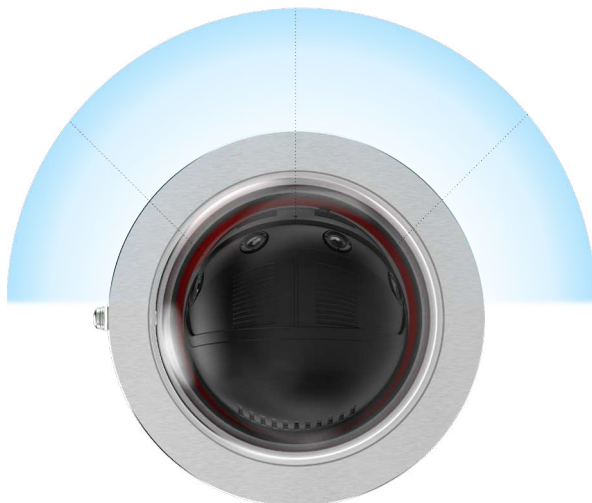
## Key Features

- 180° horizontal, 90° vertical coverage
- 7MP Multi-sensor Camera with 1 IP address
- Axis Forensic WDR, Lightfinder & Zipstream
- Axis Object Analytics
- Axis Edge Vault Cybersecurity
- Seamlessly stitched realistic images
- Horizon Straightening
- Reliable Securing Kit included
- Made in USA
- NDAA-Compliant
- cFMus, Class I/II/III, Division 1, Zone 1/21, IECEx, ATEX, INMETRO
- Operating Temperature: -20°C to +55°C



## Description

Spectrum D101-X-P3827-PVE-BD explosion-proof network camera is a panoramic dome camera with multiple sensors, providing an easy, reliable and cost-efficient single-camera installation, reducing down-time, cabling and VMS license costs. Enclosed in a patented stainless-steel or red aluminum explosion-proof housing, it's certified (cFMus, ATEX, IECEx and INMETRO) for use in potentially combustible environments. Thanks to its outstanding multi-sensors, combined with Axis Forensic WDR and Lightfinder technology, the D101-P3827-PVE-BD provides great clear video quality in any lighting conditions. Its four sensors provide a seamless 180° panoramic image, at up to 30 fps in 7 MP resolution. Additionally you can mount two D101-X-P3827-PVE-BD cameras back-to-back using SD-UM-SS Universal Mount and achieve complete 360° situational awareness.



# Specifications

## Spectrum D101-X-P3827-PVE-BD

<b>Camera</b>		<b>System integration</b>	
<b>Image sensor</b>	4 x 1/2.8" progressive scan RGB CMOS Pixel size 2.9 µm	<b>Application Programming Interface</b>	Open API for software integration, including VAPIX®, metadata and AXIS Camera Application Platform (ACAP) One-click cloud connection ONVIF® Profile G, ONVIF® Profile M, ONVIF® Profile S, and ONVIF® Profile T
<b>Lens</b>	Fixed 3.3 mm, F2.0 Horizontal field of view: 180° Vertical field of view: 90°	<b>Video management systems</b>	Compatible with AXIS Companion, AXIS Camera Station, video management software from Axis' Application Development
<b>Day and night</b>	Automatic IR-cut filter Hybrid IR filter	<b>Onscreen controls</b>	Privacy masks Media clip
<b>Minimum illumination</b>	<b>Color:</b> 0.15 lux at 50 IRE, F2.0 <b>B/W:</b> 0.05 lux at 50 IRE, F2.0	<b>Event conditions</b>	Device status: above operating temperature, above or below operating temperature, below operating temperature, within operating temperature, IP address removed, new IP address, network lost, system ready, ring power overcurrent protection, live stream active, casing open Digital audio input status Edge storage: recording ongoing, storage disruption, storage health issues detected I/O: digital input, manual trigger, virtual input MQTT: subscribe Scheduled and recurring: schedule Video: average bitrate degradation, day-night mode, live stream, tampering
<b>Shutter speed</b>	1/31500 s to 1.5 s	<b>Event actions</b>	Audio clips: play, stop Day-night mode I/O: toggle I/O once, toggle I/O while the rule is active MQTT: publish Notification: HTTP, HTTPS, TCP and email Overlay text Recordings: SD card and network share SNMP traps: send, send while the rule is active Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share and email
<b>Camera angle adjustment</b>	Pan ±180° Tilt 0° to 50° Roll ±5°	<b>Built-in installation aids</b>	Pixel counter, level grid
<b>System on chip (SoC)</b>		<b>Analytics</b>	
<b>Model</b>	ARTPEC-8	<b>AXIS Object Analytics</b>	<b>Object classes:</b> humans, vehicles (types: cars, buses, trucks, bikes) <b>Scenarios:</b> line crossing, object in area, crossline counting Up to 10 scenarios Metadata visualized with trajectories, color-coded bounding boxes and tables Polygon include/exclude areas Perspective configuration ONVIF Motion Alarm event
<b>Memory</b>	2048 MB RAM, 8192 MB Flash	<b>Metadata</b>	<b>Object data:</b> Classes: humans, faces, vehicles (types: cars, buses, trucks, bikes), license plates <b>Attributes:</b> Vehicle color, upper/lower clothing color, confidence, position <b>Event data:</b> Producer reference, scenarios, trigger conditions
<b>Compute capabilities</b>	Deep learning processing unit (DLPU)	<b>Cybersecurity</b>	
<b>Video</b>		<b>Edge security</b>	<b>Software:</b> Signed firmware, 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 <b>Hardware:</b> Secure boot, Axis Edge Vault with Axis device ID, signed video, secure keystore (CC EAL4+, FIPS 140-2 level 2 certified hardware protection of cryptographic operations and keys)
<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>Network security</b>	IEEE 802.1X (EAP-TLS, PEAP-MSCHAPv2), IEEE 802.1AR, HTTPS/HSTS, TLS v1.2/v1.3, Network Time Security (NTS), X.509 Certificate PKI, IP address filtering
<b>Resolution</b>	3712x1856 to 640x320	<b>General</b>	
<b>Frame rate</b>	Up to 25/30 fps (50/60 Hz) in all resolutions	<b>Casing (X)</b>	A = Aluminum S = Stainless Steel
<b>Video streaming</b>	Up to 20 unique and configurable video streams Axis Zipstream technology in H.264 and H.265 Controllable frame rate and bandwidth VBR/ABR/MBR H.264/H.265 Low latency mode Video streaming indicator	<b>Weight</b>	A = 25.6 lbs (11,612 g) S = 52.7 lbs (23,905 g)
<b>Signal-to-noise ratio</b>	>55 dB	<b>Dimensions</b>	Height: 11.5 in (292 mm) ø 8.6 in (218 mm)
<b>WDR</b>	Forensic WDR: Up to 120 dB depending on scene	<b>Power</b>	44-57 Vdc 18W MAX
<b>Multi-view streaming</b>	Up to 8 individually cropped out view areas	<b>Storage conditions</b>	-40 °C to 65 °C (-40 °F to 149 °F) Humidity 5-95% RH (non-condensing)
<b>Noise reduction</b>	Spatial filter (2D noise reduction) Temporal filter (3D noise reduction)	<b>Operating conditions</b>	-20 °C to 55 °C
<b>Image settings</b>	Horizon straightening, saturation, contrast, brightness, sharpness, white balance, day/night threshold, local contrast, tone mapping, exposure mode, compression, dynamic text and image overlay, polygon privacy masks	<b>Warranty</b>	5-year warranty, see <a href="https://www.spectrumcamera.com/warranty">https://www.spectrumcamera.com/warranty</a>
<b>Image processing</b>	Axis Zipstream, Forensic WDR, Lightfinder		
<b>Pan/Tilt/Zoom</b>	Digital PTZ		
<b>Audio</b>			
<b>Audio features</b>	AGC automatic gain control Network speaker pairing		
<b>Audio streaming</b>	Configurable duplex: One-way (simplex, half duplex) Two-way (half duplex, full duplex)		
<b>Audio input</b>	Input for external unbalanced microphone, optional 5 V microphone power Digital input, optional 12 V ring power Unbalanced line input		
<b>Audio output</b>	Output via network speaker pairing		
<b>Audio encoding</b>	24bit LPCM, AAC-LC 8/16/32/48 kHz, G.711 PCM 8 kHz, G.726 ADPCM 8 kHz, Opus 8/16/48 kHz Configurable bit rate		
<b>Network</b>			
<b>Network protocols</b>	IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPS, HTTP/2, TLS, QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, NTS, RTSP, RTP, SRTP, 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), IEEE 802.1X (EAP-TLS), IEEE 802.1AR IEC/EN 62262 IK10, NEMA 250 Type 4X, NEMA TS 2 (2.2.7-2.2.9), MIL-STD-810H (Method 501.7, 502.7, 505.7, 506.6, 507.6, 509.7, 512.6)		
<b>Network</b>	NIST SP500-267		

# Specifications (Cont....)

## Spectrum D101-X-P3827-PVE-BD

### Approvals

**Hazardous Area**

FM3600, FM3615, ANSI/ISA/EN/IEC/CAN/CSA-C22.2 60079-0, ANSI/UL/EN/IEC/CAN/CSA-C22.2 60079-1, ANSI/UL/EN/IEC/CAN/CSA-C22.2 60079-31

**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, KC KN32 Class A, KC KN35

**Safety**

IEC/EN/UL 60950-22, IEC/EN/UL 62368-1, IS 13252

**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/IP67, IEC/EN 62262 IK10, NEMA 250 Type 4X, NEMA TS 2 (2.2.7-2.2.9)

**Network**

NIST SP500-267

### Explosion-proof Certifications

**USA (Divisions):**

Class I Division 1 Groups B,C,D T6, type 4X, IP66/67

Class II/III, Division 1, Groups E,F,G T6

Ta = -20°C to +55°C

Certificate: FM17US0156X

**USA and Canada (Zones):**

Class I, Zone 1, AEx/Ex db IIB+H2 T6 Gb Ta

-20°C to +55°C, Type 4X, IP66/67

Zone 21, AEx/Ex tb IIIC T85 °C Db Ta = -20°C to

+55°C, Type 4X, IP66/67

Certificate: FM17US0156X and FM18CA0103X

**ATEX:**

II 2 G Ex db IIB+H2 T6 Gb Ta = -20°C to +55°C, IP66/67

II 2 D Ex tb IIIC T85 °C Db Ta = -20°C to +55°C, IP66/67

Certificate: FM18ATEX0057X

**IECEx:**

Ex db IIB+H2 T6 Gb Ta = -20°C to +55°C, IP66/67

Ex tb IIIC T85 °C Db Ta = -20°C to +55°C, IP66/67

Certificate: FMG 18.0020X

**INMETRO:**

Ex db IIB+H2 T6 Gb Ta = -20°C to +55°C, IP66/67

Ex tb IIIC Db T85 °C Ta = -20°C to +55°C, IP66/67

Certificate number: NCC 20.0083 X

### Languages (Camera)

English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Traditional Chinese

# Approvals



8935 ALMEDA GENOA RD.  
HOUSTON, TEXAS 77075  
USA

CERT NO. FM17US0156X

SPECIALIZING IN EXPLOSION PROOF TECHNOLOGY

INPUT: IEEE 802.3at 18W MAX

MODEL NUMBER: D101-A-P3827-PVE-BD

SERIAL:

Class I Division 1 Groups B,C,D T6, Type 4X, IP66

Class II/III, Division 1, Groups E,F,G T6

-WARNINGS: Ta = -20°C to +55°C

-NOT INCLUDING KETONE OR ESTER ATMOSPHERES

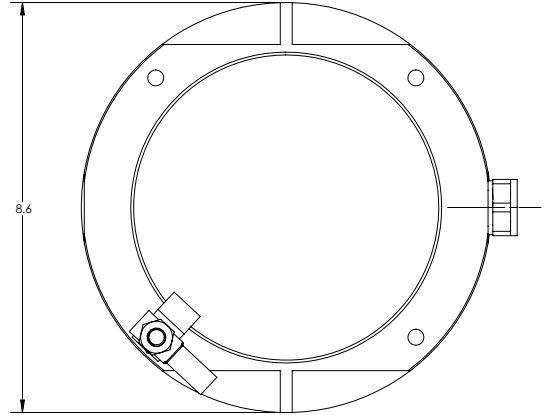
-CONDUIT ENTRIES ARE M20 X 1.5

-DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT

-INSTALL SEAL AT ENCLOSURE ENTRY

US Patent 9917428

US Patent D858611



MADE IN USA  
CERT NO.  
FM17US0156X  
FM18CA0103X



SPECIALIZING IN EXPLOSION PROOF TECHNOLOGY  
8935 ALMEDA GENOA RD. HOUSTON, TEXAS 77075 USA

**MODEL: D101-A-P3827-PVE-BD SERIAL:**

INPUT: IEEE 802.3at 18W MAX

Class I, Zone 1, AEx/Ex db IIB+H2 T6 Gb Ta = -20°C to +55°C, Type 4X, IP66

Zone 21, AEx/Ex tb IIIC T85°C Db Ta = -20°C to +55°C, Type 4X, IP66

II 2 G Ex db IIB+H2 T6 Gb Ta = -20°C to +55°C, IP66

II 2 D Ex tb IIIC T85°C Db Ta = -20°C to +55°C, IP66



CERT NO. FM18ATEX0057X, IECEx FMG 18.0020X, FM22UKEX0028X

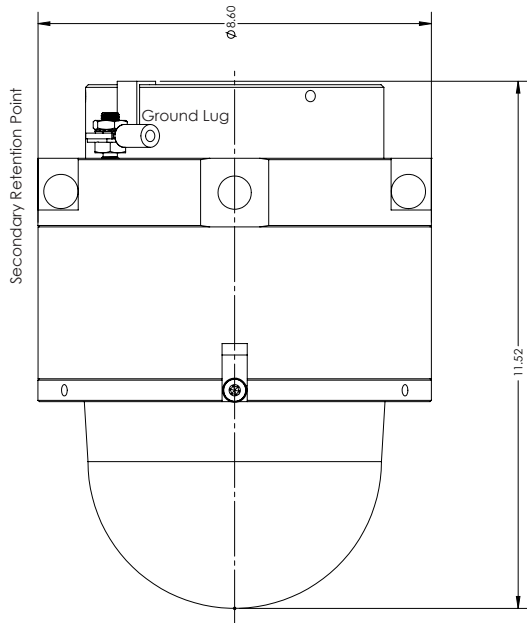
WARNING: DO NOT OPEN WHEN ENERGIZED OR WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT

INSTALL SEAL AT ENCLOSURE ENTRY

US Patent 9917428

www.spectrumcamera.com

US Patent D858611



SPECIALIZING IN EXPLOSION PROOF TECHNOLOGY  
8935 ALMEDA GENOA RD. HOUSTON, TEXAS 77075 USA  
No. SERIE: TIME-DY-MN-YEAR

FABRICADO NO EUA

CERT NO. NCC 20.0083 X

MODELO: D101-A-P3827-PVE-BD

ALIMENTAÇÃO: IEEE 802.3at 18W



NCC 20.0083 X

Ex db IIB+H2 T6 Gb Ta = -20°C to +55°C

Ex tb IIIC T85°C Db Ta = -20°C to +55°C

IP66



ATENÇÃO:

- ENTRADAS DE CABOS M20 X 1.5

- NÃO ABRA ENQUANTO UMA ATMOSFERA EXPLOSIVA PUDE ESTAR PRESENTE

- INSTALAR ANEL DE VEDAÇÃO NAS ENTRADAS

- NÃO ABRIR QUANDO ENERGIZADO

- RISCO POTENCIAL DE CARGA ELETROSTÁTICA - VER INSTRUÇÕES

-Patente EUA 9917428

-Patente EUA D858611