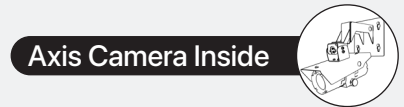


# Spectrum F101-Q1656-BD

Explosion-Proof 4MP Fixed Camera

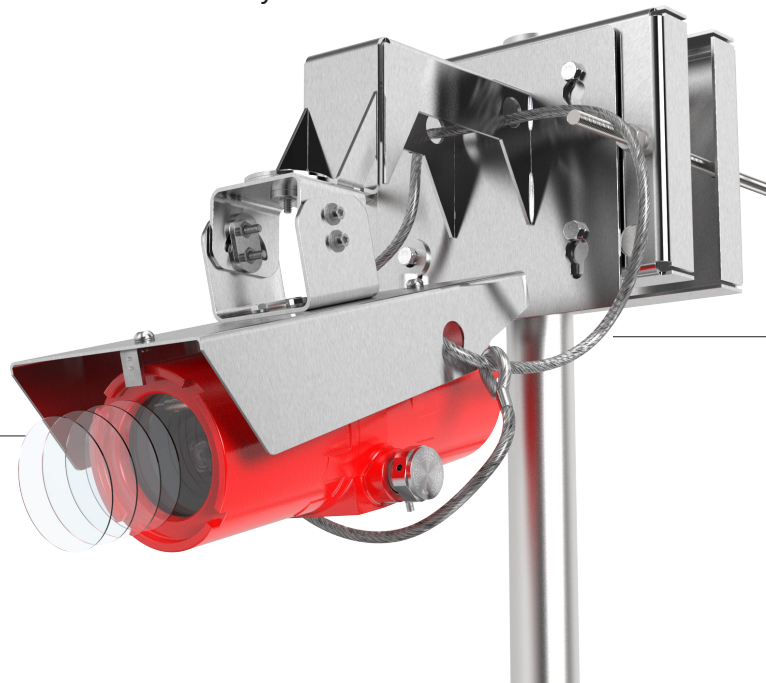
## Key Features

- Exceptional images with 1/1.8" sensor
- Support for analytics with deep learning
- Built-in cybersecurity features
- Remote zoom and focus
- Front Glass Protective Film (F1XX-TO) included
- Reliable Securing Kit included
- Made in USA
- NDAA-Compliant
- cFMus, Class I/II/III, Division 1, Zone 1/21, IECEx, ATEX, INMETRO and UKCA approved
- Operating Temperature:
  - Zone System: -50°C to +60°C
  - (USA) Class/Division System: -40°C to +60°C
- F1XX & SF-RSK Included



## Description

Spectrum F101-Q1656-BD explosion-proof network camera delivers exceptional quality in all conditions. Enclosed in a red aluminum explosion-proof housing, it's certified (cFMus, ATEX, IECEx, UKCA approved and INMETRO) for use in potentially combustible environments. The camera features a 4MP resolution at up to 60fps, a 1/1.8" sensor, and Axis Lightfinder 2.0. Based on the latest Axis-system-on-chip (SoC), it offers support for advanced features and powerful applications based on deep learning on the edge. Also, Axis Object Analytics offers highly nuanced object classification. This high-performance explosion-proof camera includes built-in cybersecurity features, such as Axis Edge Vault, signed firmware and secure boot, and FIPS-certified TPM, prevent unauthorized access and safeguard your system.



### F1XX-TO

Front Glass Protective Film  
4-Layer peel off design

**SF-RSK**  
Reliable Securing Kit

# Specifications

## Spectrum F101-Q1656-BD

Camera		Network	
Image sensor	1/1.8" progressive scan RGB CMOS	Security	Password protection, IP address filtering, HTTPSa encryption, IEEE 802.1x (EAP-TLS)a network access control, digest authentication, user access log, centralized certificate management, brute force delay protection, signed firmware, secure boot, Axis Edge Vault, Axis device ID, secure keystore (CC EAL4 certified), TPM (FIPS 140-2 certified)
Lens	Varifocal, 3.9–10 mm, F1.5 Horizontal field of view: 120°–47° Vertical field of view: 63°–27° Autofocus, i-CS lens, IR corrected, remote zoom and focus, P-Iris control Minimum focus distance: 0.5 m (1.6 ft)	Supported protocols	IPv4, IPv6 USGv6, HTTP, HTTPSa, HTTP/2, TLSa, QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, Bonjour, UPnP®, SNMP v1/v2c/v3 (MIB-II), DNS, DynDNS, NTP, RTSP, RTP, SRTP, TCP, UDP, IGMPv1/v2/v3, RTCP, ICMP, DHCPv4/v6, ARP, SOCKS, SSH, LLDP, MQTT v3.1.1, Syslog
Day and night	Automatically removable infrared-cut filter	System integration	
Minimum illumination	4 MP 25/30 fps with Forensic WDR and Lightfinder 2.0 Color: 0.05 lux at 50 IRE, F1.5 B/W: 0.01 lux at 50 IRE, F1.5 4 MP 50/60 fps with Lightfinder 2.0 Color: 0.1 lux at 50 IRE, F1.5 B/W: 0.02 lux at 50 IRE, F1.5 4 MP 25/30 fps with Forensic WDR and Lightfinder 2.0 With optional F0.9 lens Color: 0.02 lux at 50 IRE, F0.9 B/W: 0.004 lux at 50 IRE, F0.9	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 M, ONVIF® Profile S, and ONVIF® Profile T, specification at onvif.org
Shutter speed	1/47500 s to 1 s	Onscreen controls	Electronic image stabilization Day/night shift Defogging Wide dynamic range Video streaming indicator
Sensor	Axis Q1656	Event conditions	Analytics, external input, supervised external input, edge storage events, virtual inputs through API Audio: audio detection Device status: above operating temperature, above or below operating temperature, below operating temperature, IP address removed, network lost, new IP address, shock detected, storage failure, system ready, within operating temperature Edge storage: recording ongoing, storage disruption I/O: digital input, manual trigger, virtual input PTZ: PTZ malfunctioning, PTZ movement, PTZ preset position reached, PTZ ready Scheduled and recurring: scheduled event Video: live stream open
System on chip (SoC)		Event actions	Record video: SD card and network share Upload of images or video clips: FTP, SFTP, HTTP, HTTPS, network share and email Pre- and post-alarm video or image buffering for recording or upload Notification: email, HTTP, HTTPS, TCP and SNMP trap PTZ: PTZ preset, start/stop guard tour Overlay text, external output activation, play audio clip, zoom preset
Model	ARTPEC-8	Data streaming	Event data
Memory	2048 MB RAM, 8194 MB Flash	Built-in installation aids	Remote zoom and focus, remote back focus, leveling assistant, pixel counter
Compute capabilities	Deep learning processing unit (DLPU)	Analytics	
Video		Axis Object Analytics	Object classes: humans, vehicles (types: cars, buses, trucks, bikes) Trigger conditions: line crossing, object in area Up to 10 scenarios Metadata visualized with color-coded bounding boxes Polygon include/exclude areas Perspective configuration ONVIF Motion Alarm event
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	16:9 2688x1512 Quad HD to 160x90 4:3 2016x1512 to 160x120		
Frame rate	No WDR: Up to 60/50 fps (60/50 Hz) in all resolutions WDR: Up to 30/25 fps (60/50 Hz) in all resolutions		
Video streaming	Multiple, individually configurable streams in H.264, H.265 and Motion JPEG Axis Zipstream technology in H.264 and H.265 Controllable frame rate and bandwidth VBR/ABR/MBR H.264/H.265 Video streaming indicator		
Multi-view streaming	Up to 8 individually cropped out view areas		
Image settings	Saturation, contrast, brightness, Forensic WDR: Up to 120 dB depending on scene, white balance, day/night threshold, tone mapping, exposure mode, exposure zones, defogging, barrel distortion correction, electronic image stabilization, compression, rotation: 0°, 90°, 180°, 270° including Corridor Format, mirroring, dynamic text and image overlay, polygon privacy mask		
Pan/tilt/zoom	Digital PTZ, 2.5x optical zoom, preset positions Uploadable PTZ driver (Pelco D pre-installed)		
Audio			
Audio streaming	Two-way, full duplex Noise reduction		
Audio encoding	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		
Audio input/output	External microphone input or line input, line output, built-in microphone (can be disabled), ring power, digital audio input, automatic gain control		

# Specifications (continued)

Applications	Included AXIS Object Analytics AXIS Video Motion Detection Supported Support for AXIS Camera Application Platform enabling installation of third-party applications, see <a href="http://axis.com/acap">axis.com/acap</a>
<b>General</b>	
Casing	Aluminum
Weight	6.4 kg (14 lb)
Dimensions	13.85 x 7.20 x 6.01 in (352 x 183 x 153 mm)
Power	57 VDC 10.8W; 12-24 VAC/VDC 25W
Storage Conditions	-40°C to +65°C Humidity 5-95% RH (non-condensing)
Operating Conditions	Zone system: -50°C to +60°C (USA) Class/Division system: -40°C to +60°C Humidity 10-100% RH (condensing)
Warranty	5-year limited warranty, see <a href="http://spectrumcamera.com/warranty">spectrumcamera.com/warranty</a>
Approvals	<b>Hazardous Area</b> 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 <b>EMC</b> 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 <b>Safety</b> IEC/EN/UL 60950-22, IEC/EN/UL 62368-1, IS 13252 <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/IP67, IEC/EN 62262 IK10, NEMA 250 Type 4X, NEMA TS 2 (2.2.7-2.2.9) <b>Network</b> NIST SP500-267
Explosion-proof Certifications	<b>USA:</b> Class I Division 1 Groups BCD T6 Ta= -40°C to +60°C, Type 4X, IP66 Class II/III Division 1 Groups EFG Ta= -40°C to +60°C, Type 4X, IP66 Certificate: FM18US0262X <b>Canada:</b> Class I Division 1 Groups BCD T6 Ta= -50°C to +60°C, Type 4X, IP66 Class II/III Division 1 Groups EFG Ta= -50°C to +60°C, Type 4X, IP66 Class I, Zone 1, AEx/Ex db IIB+H2 T5 Gb Ta = -50°C to +60°C, Type 4X, IP66 Zone 21, AEx/Ex tb IIIC T85°C Db Ta = -50°C to +60°C, Type 4X, IP66 Certificate: FM18CA0126X <b>ATEX:</b> II 2 G Ex db IIB+H2 T5 Gb Ta = -50°C to +60°C, IP66 II 2 D Ex tb IIIC T85°C Db Ta = -50°C to +60°C, IP66 Certificate: FM18ATEX0073X <b>IECEX:</b> Ex db IIB+H2 T5 Gb Ta = -50°C to +60°C, IP66 Ex tb IIIC T85°C Db Ta = -50°C to +60°C, IP66 Certificate: IECEX FMG 18.0029X
Video Management Software	AXIS Companion, AXIS Camera Station, video management software from Axis Application Development Partners available at <a href="http://axis.com/vms">axis.com/          vms</a>
Languages (Camera)	English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Polish, Traditional Chinese

# Approvals & Dimensions

**SPECTRUM**  
CAMERA SOLUTIONS

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

SERIAL: \_\_\_\_\_

**UK CA**  
1725

**FM US**  
APPROVED

MADE IN USA

CERT NO. FM18US0262X & FM18CA0126X  
MODEL: F101-Q1656-BD  
INPUT: 57VDC, 8.2 W;  
HEATER: 12-24VDC/VAC, 25 W

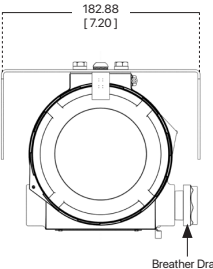
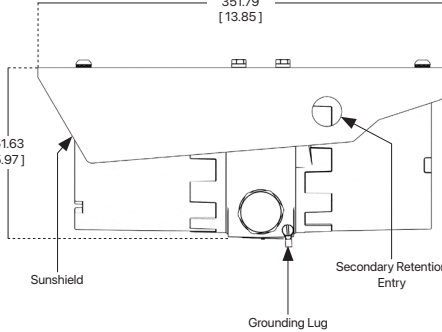
CE 2809

US: Class I Division 1 Groups BCD T6 Ta = -40°C to +60°C, Type 4X, IP66  
Class II/III Division 1 Groups EFG T6 Ta = -40°C to +60°C, Type 4X, IP66  
Canada: Class I Division 1 Groups BCD T6 Ta = -50°C to +60°C, Type 4X, IP66  
Class II/III Division 1 Groups EFG T6 Ta = -50°C to +60°C, Type 4X, IP66  
Class I, Zone 1, AEx/Ex db IIB+H2 Gb Ta = -50°C to +60°C, Type 4X, IP66  
Zone 21, AEx/Ex tb IIIC T85°C Db Ta = -50°C to +60°C, Type 4X, IP66  
Zone 21, AEx/Ex db IIB+H2 Gb Ta = -50°C to +60°C, IP66  
II 2 D Ex tb IIIC T85°C Db Ta = -50°C to +60°C, IP66

CODE	CONFIGURATION
T5	WITH BREATHER/RAIN
T6	WITHOUT BREATHER/RAIN

WARNING: DO NOT OPEN WHEN ENERGIZED OR WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT. Install seal within 18 inches. For Zones, install seal at entry. WARNING - POTENTIAL ELECTROSTATIC CHARGING HAZARD - SEE INSTRUCTION. USE 80°C OR HIGHER RATED CONDUCTORS.

AVERTISSEMENT: NE PAS OUVRIER LORSQU' ENERGISE OU QUAND UNE ATMOSPHERE EXPLOSIVE PEUT ETRE PRESENTE. Les joints de fermeture sont obligatoires dans une distance de 18 pouces. Pour les zones, installez un sceau à l'entrée. AVERTISSEMENT - RISQUE DE CHARGE ELECTROSTATIQUE POTENTIEL - VOIR LES INSTRUCTIONS. UTILISEZ DES CONDUCTEURS COTES DE 80 °C OU PLUS.

**SPECTRUM**  
CAMERA SOLUTIONS

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

No. DE SÉRIE: \_\_\_\_\_

**Segurança**

**INMETRO**  
DGP 0034

FABRICADO NO EUA

CERT NO. NCC 20.0084 X  
MODELO: F101-Q1656-BD  
ALIMENTAÇÃO: 57 VDC, 8.2W;  
12-24 VAC/VDC, 25W

NCC 20.0084 X  
Ex db IIB+H2 T5 Gb Ta = -50°C to +60°C, IP66  
Ex tb IIIC T85°C Db Ta = -50°C to +60°C, IP66

ATENÇÃO: NÃO ABRA ENQUANTO ENERGIZADO OU QUANDO ATMOSFERA EXPLOSIVA PUDE ESTAR PRESENTES. INSTALAR O ANEL DE VEDAÇÃO DA ENTRADA. ATENÇÃO - RISCO POTENCIAL DE CARGAS ELETROSTÁTICAS - VER INSTRUÇÕES. USAR CONDUCTORES ADEQUADOS PARA TEMPERATURAS ATÉ 80°C. ATENÇÃO - NÃO ABRIR QUANDO ENERGIZADO. ATENÇÃO - RISCO POTENCIAL DE CARGA ELETROSTÁTICA - VER INSTRUÇÕES