

# ExCam XF Q1645 Explosion-Protected Network Camera

Zone-certified fixed camera with excellent light sensitivity

ExCam XF Q1645 Explosion-Protected Network Camera is an easy-to-install and easy-to-integrate fixed box camera. It delivers high-resolution video (2 MP) at full frame rate (up to 120 fps) for crystal-clear images. The electronic image stabilization greatly improves video quality where the camera is subject to vibrations. The camera is adapted for explosion-prone applications with ATEX, IECEx, EAC Ex, and IA certifications. With low weight, PoE support for plug-and-play installation, ExCam XF Q1645 offers significant savings. The camera helps detecting unauthorized individuals and monitor employee safety in hazardous areas. Suitable for onshore, offshore, marine, and heavy industrial environments.

- > **Certified for ATEX, IECEx, EAC Ex, and IA; Zones 1, 2, 21, and 22; Groups IIC and IIIC**
- > **Cost-efficient installation with PoE**
- > **HDTV 1080p at 100/120 fps**
- > **Unparalleled light sensitivity with 1/2" sensor**
- > **Electronic image stabilization (EIS) and low weight**



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## Camera

### Image sensor

1/2" progressive scan RGB CMOS

### Lens

IR corrected i-CS lens  
Varifocal 3.9–10.0 mm, F1.5  
Horizontal field of view: 85°–42°  
Vertical field of view: 47°–23°

### Day and night

Automatically removable infrared-cut filter

### Minimum illumination

HDTV 1080p 25/30 fps:  
Color: 0.03 lux, B/W: 0.01 lux, SNR: 0.03 lux, at 50 IRE F1.5  
HDTV 1080p 25/30 fps (WDR off):  
Color: 0.02 lux, SNR: 0.02 lux, at 50 IRE F1.5

### Shutter speed

1/100000 to 2 s

### Pan/Tilt/Zoom

Digital PTZ, uploadable PTZ driver (Pelco D pre-installed)

## System on chip (SoC)

### Model

ARTPEC-6

### Memory

1 GB RAM, 512 MB Flash

## Video

### Video compression

H.264 (MPEG-4 Part 10/AVC), Main, Baseline and High Profile  
Motion JPEG

### Resolution

1920x1080 to 320x180

### Frame rate

Up to 100/120 fps (50/60 Hz) in 1920x1080 (no WDR)

## Video streaming

Multiple, individually configurable streams in H.264 and Motion JPEG

Axis Zipstream technology in H.264

Controllable frame rate and bandwidth

VBR/MBR H.264

## Image settings

Saturation, contrast, brightness, sharpness, Forensic WDR – 120 dB, white balance, day/night threshold, exposure mode, exposure zones, compression, orientation: auto, 0°, 90°, 180°, 270° including Corridor Format, mirroring of images, text and image overlay, privacy masks, defogging, noise reduction, electronic image stabilization, barrel distortion correction, orientation aid, fine tuning of behavior at low light  
Scene profiles: forensic, live, traffic overview, backlit entrance

## Network

### Security

Password protection, IP address filtering, HTTPS<sup>1</sup> encryption, IEEE 802.1X<sup>1</sup> network access control, digest authentication, user access log, centralized certificate management, brute force delay protection

### Network protocols

IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTP/2, HTTPS<sup>1</sup>, TLS<sup>1</sup>, QoS Layer 3 DiffServ, FTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP<sup>TM</sup>, SNMPv1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, NTS, RTSP, RTP, SFTP, 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)

## System integration

### Application Programming Interface

Open API for software integration, including VAPIX<sup>®</sup> and AXIS Camera Application Platform; specifications at [axis.com/developer-community](http://axis.com/developer-community).

One-Click Cloud Connection

ONVIF Profile S and ONVIF Profile G, specifications at [onvif.org](http://onvif.org)

1. This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>), and cryptographic software written by Eric Young ([ey@cryptsoft.com](mailto:ey@cryptsoft.com)).

## Video management systems

Compatible with AXIS Camera Station Edge, AXIS Camera Station Pro, AXIS Camera Station 5, and video management software from Axis' partners available at [axis.com/vms](http://axis.com/vms).

### Event triggers

Analytics, external input, edge storage events  
Detectors: live stream accessed, video motion detection, shock detection  
Hardware: network, temperature  
Input Signal: manual trigger, virtual inputs  
MQTT subscribe  
PTZ: error, moving, preset reached, ready  
Storage: disruption, recording  
System: system ready  
Time: recurrence, use schedule

### Event actions

File upload: FTP, SFTP, HTTP, HTTPS, network share and email, send video clip  
Notification: email, HTTP, HTTPS and TCP  
Overlay text, Send SNMP Trap  
Video recording to edge storage  
Pre- and post-alarm video buffering  
External output activation, day/night vision mode, status LED, WDR mode, Defog mode, PTZ control  
MQTT publish

### Data streaming

Event data

### Built-in installation aids

Remote focus and zoom with supplied i-CS lens  
Traffic wizard, pixel counter, levelling assistant

## Analytics

### Applications

#### Included

AXIS Motion Guard, AXIS Fence Guard, AXIS Loitering Guard

AXIS Video Motion Detection, active tampering alarm

#### Supported

AXIS Perimeter Defender

Support for AXIS Camera Application Platform enabling installation of third-party applications, see [axis.com/acap](http://axis.com/acap)

## Approvals

### EMC

EN 55032 Class A, EN 61000-6-2, EN 61000-3-2, EN 61000-3-3, EN 62479, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-8, EN 61000-4-11

### Safety

IS 13252

### Environment

IEC/EN 60529 IP68, IEC/EN 62262 IK10

### Network

NIST SP500-267

### Explosion

DIN EN/IEC 60079-0, DIN EN/IEC 60079-1, DIN EN/IEC 60079-7, DIN EN/IEC 60079-31, TR CU 012/2011, GOST R IEC 60079-0, GOST IEC 60079-1, GOST R IEC 60079-7, GOST R IEC 60079-31

### Certifications

#### Camera:

Model key: T08-VA2.3.K3.B0R2-LL.H-005.A-T

ATEX: II 2 G Ex db IIC T5 Gb,

Ex II 2 D Ex tb IIIC T95°C Db, I M2 Ex db I Mb

Certificate: TÜV 18 ATEX 8218X

IECEx: Ex db IIC T5 Gb, Ex tb IIIC T95°C Db, Ex d I Mb

Certificate: IECEx TUR 18.0023X

IA: Ex db IIC T5 Gb, Ex tb IIIC T95°C Db, Ex d I Mb

Certificate: MASC MS/18-3256X

EAC Ex: 1Ex db IIC T5 Gb, Ex tb IIIC T95°C Db, PB db I Mb

Series: T08, Model: T08-VA2.3.

Certificate: RU C-DE.AB61.B.00381/19

EXTB-3 Junction Box ExCam: (to be removed if the camera is installed in mines)

Model key: T12-3M20

ATEX: II 2 G Ex eb IIC T5 Gb, II 2 D Ex tb IIIC T95°C Db IP66, -50°C < Tamb < +55°C

Certificate: PTB 99 ATEX 3103

IECEx: Ex e IIC T5 Gb, Ex IIIC T95°C Db IP66, -50°C < Tamb < +55°C

Certificate: IECEx PTB 06.0026

EAC Ex: 1Ex e IIC T5 Gb X, Ex tb IIIC T95°C Db X

Certificate: RU C-DE.AA71.B.00120

PESO: Ex db IIC T6 Gb

Certificate: A/P/HQ/KA/104/5735

## Cybersecurity

### Edge security

**Software:** Signed OS, brute force delay protection, digest authentication and OAuth 2.0 RFC6749 Client Credential Flow/OpenID Authorization Code Flow for centralized ADFS account management, password protection

### Network security

IEEE 802.1X (EAP-TLS, PEAP-MSCHAPv2)<sup>2</sup>, IEEE 802.1AE (MACsec PSK/EAP-TLS), HTTPS/HSTS<sup>2</sup>, TLS v1.2/v1.3<sup>2</sup>, Network Time Security (NTS), X.509 Certificate PKI, host-based firewall

### Documentation

*Axis OS Hardening Guide*

*Axis Vulnerability Management Policy*

*Axis Security Development Model*

Axis OS Software Bill of Material (SBOM)

To download documents, go to [axis.com/support/cybersecurity/resources](https://axis.com/support/cybersecurity/resources)

To read more about Axis cybersecurity support, go to [axis.com/cybersecurity](https://axis.com/cybersecurity)

## General

### Casing

IP68-rated, SS 1.4404 (ASTM 316L) stainless steel casing for maximum corrosion protection. Casing manufactured and certified by Samcon Prozessleittechnik GmbH, [www.samcon.eu](https://www.samcon.eu)

### Sustainability

PVC free

### Power

**Camera:** Power over Ethernet (PoE)

IEEE 802.3af/802.3at Type 1 Class 3

Typical 4.5 W, max 9.1 W

**Heater:** 24 V DC, max 40 W

24 V DC is required for operating at temperatures below 0 °C (32 °F).

### Connectors

EXTB-3 Junction Box ExCam:

10 terminal clamp UT 2.5

2 conductor terminal USLKG 5

### Storage

Pre-installed AXIS Surveillance microSDXC Card 128 GB  
Support for SD card encryption (AES-XTS-Plain64 256bit)

Support for recording to network-attached storage (NAS)

For SD card and NAS recommendations see [axis.com](https://axis.com)

### Operating conditions

-60 °C to 60 °C (-76 °F to 140 °F)

Humidity 10-100% RH (condensing)

### Storage conditions

-40 °C to 65 °C (-40 °F to 149 °F)

### Dimensions

357 x 113 x 139 mm (14.06 x 4.45 x 5.5 in)

### Weight

10.8 kg (23.8 lb)

### Included accessories

Weathershield ExCam XF, Installation Guide, Windows decoder 1-user license,

ASKDP03-T Cable ExCam 5 m (16 ft),

EXTB-3 Junction Box ExCam,

AXIS Surveillance microSDXC Card 128 GB

### Optional accessories

Wall Mount ExCam XF, Pole Mount ExCam XF

Non-armored cables ExCam, 10, 25,

95 m (33, 82, 312 ft), Armored cables ExCam, 10, 25,

95 m (33, 82, 312 ft)

Ex Connection Rail 4-port PoE PS 24,

Ex Connection Rail 8-port PoE PS 24

For more accessories, see [axis.com](https://axis.com)

### Languages

English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Traditional Chinese, Dutch, Czech, Swedish, Finnish, Turkish, Thai, Vietnamese

### Warranty

5-year warranty, see [axis.com/warranty](https://axis.com/warranty)

2. This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. ([openssl.org](https://openssl.org)), and cryptographic software written by Eric Young ([ey@cryptsoft.com](mailto:ey@cryptsoft.com)).