



# 32x Zoom Thermal Camera With PTZ function

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Hot Stuff Intl. Co., Ltd.  
[www.hotstuff.com.tw](http://www.hotstuff.com.tw)





# HS-32x Thermal Camera

offers reliable thermal detection and visual identification with its 32x optical zoom which is ideal for perimeter surveillance.

## Key Features

- ✓ Thermal and visual camera in one
- ✓ 360° infinite pan
- ✓ Dual Electronic Image Stabilization
- ✓ Signed firmware, secure boot, and TPM 2.0
- ✓ Thermal palettes



**AXIS Fence Guard**  
For intrusion detection



**AXIS Loitering Guard**  
For detecting loiterers



**AXIS Motion Guard**  
Smart motion detection



**AXIS Speed Monitor**  
Visualize radar data and get actionable insights



**AXIS Video Motion Detection**



# Specification

Camera	
<b>Image sensor</b>	<b>Visual:</b> 1/2.8" progressive scan CMOS <b>Thermal:</b> Uncooled microbolometer 640x480 pixels, pixel size: 17 μm. Spectral range: 8–14 μm
<b>Lens</b>	<b>Visual:</b> Varifocal, 4.3–137.6 mm, F1.4–4.0 Horizontal field of view: 58.5°–2.4° Vertical field of view: 35°–1.3° Autofocus, auto-iris <b>Thermal:</b> <b>35 mm:</b> Athermalized 35 mm, F1.2 Near focus distance: 33 m (108 ft) Horizontal field of view: 17° Vertical field of view: 12.8° <b>Zoom:</b> Athermalized 35–105 mm, F1.6 Near focus distance: 22–195 m (72–640 ft) Near manual focus distance: 7 m (23 ft) Horizontal field of view: 18°–6° Vertical field of view: 13.5°–4.5°
<b>Day and night</b>	<b>Visual:</b> Automatically removable infrared-cut filter
<b>Minimum illumination</b>	<b>Visual:</b> <b>Color:</b> 0.09 lux at 30 IRE, F1.4 <b>B/W:</b> 0.008 lux at 30 IRE, F1.4 <b>Color:</b> 0.06 lux at 50 IRE, F1.4 <b>B/W:</b> 0.01 lux at 50 IRE, F1.4
<b>Sensitivity</b>	<b>Thermal:</b> NETD < 50 mK
<b>Shutter speed</b>	<b>Visual:</b> 1/66500 s to 2 s
<b>Pan/Tilt/Zoom</b>	Pan: 360° endless, 0.05°–120°/s Tilt: -90° to +45°, 0.05°–65°/s Jerk-free movements at low speed: ±0.01°/s (at 0.05°/s) Preset accuracy: 0.05° 256 preset positions, guard tour, control queue, focus window, on-screen directional indicator, de-icing control <sup>a</sup> , dynamic load balancing <sup>b</sup> <b>Visual:</b> 32x optical zoom, 12x digital zoom, total 384x zoom, focus recall <b>Thermal: Zoom:</b> 3x thermal zoom and 4x digital zoom, total 12x zoom



# Specification

Video	
<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>	<b>Visual:</b> 1920x1080 HDTV 1080p to 320x180 <b>Thermal:</b> Sensor is 640x480. Image can be scaled up to 800x600 (SVGA)
<b>Frame rate</b>	<b>Visual:</b> Up to 50/60 fps (50/60 Hz) in HDTV 1080p <b>Thermal:</b> Up to 8.3 fps and 30 fps
<b>Video streaming</b>	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
<b>Image settings</b>	<b>Visual:</b> Saturation, contrast, brightness, sharpness, Forensic WDR: up to 120 dB depending on scene, white balance, day/night threshold, tone mapping, exposure control, exposure zones, defogging, compression, dynamic text and image overlay, 32 individual polygon privacy masks, electronic image stabilization <b>Thermal:</b> Compression, brightness, sharpness, contrast, local contrast, exposure control, exposure zones, text and image overlay, electronic image stabilization
Audio	
<b>Audio streaming</b>	Audio in, simplex Echo cancellation and noise cancellation
<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>Audio input/output</b>	External microphone input or line input



# Specification

## System integration

### Application Programming Interface

Open API for software integration, including VAPIX® and AXIS Camera Application Platform; specifications at [axis.com](http://axis.com)  
ONVIF® Profile G, ONVIF® Profile M, ONVIF® Profile S, and ONVIF® Profile T, specification at [onvif.org](http://onvif.org)

### Event conditions

Device status: above operating temperature, above or below operating temperature, below operating temperature, IP address removed, network lost, new IP address, PTZ power failure, ring power overcurrent protection, storage failure, system ready, within operating temperature  
Digital audio input status  
Edge storage: recording ongoing, storage disruption, storage health issues detected  
PTZ: PTZ malfunctioning, PTZ movement, PTZ preset position reached, PTZ ready  
Scheduled and recurring: scheduled event  
Video: average bitrate degradation, day-night mode, live stream open

### Event actions

Day-night mode  
Guard tour  
I/O  
Images: FTP, HTTP, HTTPS, SFTP, email and network share  
IR illumination: turn on, use while the rule is active  
MQTT: publish  
Notification: HTTP, HTTPS, TCP and email  
Overlay text  
Preset positions  
PTZ Autotracking: start temporary detection, toggle autotracking  
Recordings  
SNMP trap messages: send messages  
Video clips: FTP, HTTP, HTTPS, SFTP, email and network share  
WDR mode  
Wiper

### Data streaming

Event data

### Built-in installation aids

Pixel counter, focus assistant



# Specification

## Network

**Security** IP address filtering, HTTPS<sup>c</sup> encryption, IEEE 802.1x (EAP-TLS)<sup>c</sup> network access control, user access log, centralized certificate management

**Network protocols** IPv4, IPv6 USGv6, ICMPv4/ICMPv6, HTTP, HTTPS<sup>c</sup>, HTTP/2, TLS<sup>c</sup>, QoS Layer 3 DiffServ, FTP, SFTP, CIFS/SMB, SMTP, mDNS (Bonjour), UPnP<sup>®</sup>, SNMP v1/v2c/v3 (MIB-II), DNS/DNSv6, DDNS, NTP, NTS, RTSP, RTP, SRTP/RTSPS, TCP, UDP, IGMP, RTCP, ICMP, DHCPv4/v6, ARP, SSH, NTCIP, LLDP, CDP, MQTT v3.1.1, Secure syslog (RFC 3164/5424, UDP/TCP/TLS), Link-Local address (ZeroConf)

## Analytics

**Applications** **Included**  
AXIS Motion Guard, AXIS Fence Guard, AXIS Loitering Guard  
AXIS Video Motion Detection, Orientation AID PTZ, audio detection, advanced gatekeeper  
Support for AXIS Camera Application Platform enabling installation of third-party applications, see [axis.com/acap](https://axis.com/acap)

## Cybersecurity

**Edge security** **Software:** 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  
**Hardware:** Axis Edge Vault cybersecurity platform  
TPM 2.0 (CC EAL4+, FIPS 140-2 Level 2), secure element (CC EAL 6+), Axis device ID, secure keystore, signed video, secure boot

**Network security** IEEE 802.1X (EAP-TLS, PEAP-MSCHAPv2)<sup>c</sup>, IEEE 802.1AE (MACsec PSK/EAP-TLS), IEEE 802.1AR, HTTPS/HSTS<sup>c</sup>, TLS v1.2/v1.3<sup>c</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)





# Specification

General	
<b>Casing</b>	IP66-, NEMA 4X- and IK10-rated <sup>d</sup> powder coated aluminum Color: white NCS S 1002-B Front window: <b>visual:</b> glass, <b>thermal:</b> germanium Long-life silicone wiper Weathershield: high-impact UV-stabilized thermoplastic
<b>Sustainability</b>	PVC free
<b>Memory</b>	2048 MB RAM, 512 MB Flash
<b>Power</b>	20–28 V AC/DC, typical 16 W, max 204 W Power loss recovery <sup>e</sup> TVS 2000V, surge protection, voltage transient protection <b>I/O connector:</b> output power 12 V DC, max load 50 mA
<b>Connectors</b>	SFP slot (SFP module not included) <sup>f</sup> Shielded RJ45 10BASE-T/100BASE-TX/1000BASE-T I/O: 6-pin 2.5 mm terminal block for 4 configurable inputs/outputs Power: terminal block Audio (in camera unit): 3.5 mm mic/line in Illumination (in upper part of positioning unit)
<b>Storage</b>	Support for microSD/microSDHC/microSDXC card and encryption Recording to network-attached storage (NAS) For SD card and NAS recommendations see <a href="http://axis.com">axis.com</a>
<b>Operating conditions</b>	-40 °C to 55 °C (-40 °F to 131 °F) Maximum temperature (intermittent): 65 °C (149 °F) Start-up temperature: -40 °C (-40 °F) Humidity 10–100% RH (condensing) <b>Wind load when PTZ operational</b> 37 m/s (83 mph) <sup>g</sup> , 45 m/s (100 mph) without weathershield With AXIS PT IR Illuminator Kit C: 40 m/s (90 mph), 52 m/s (116 mph) without weathershield Maximum effective projected area (EPA): 0.138 m <sup>2</sup>



# Specification

General	
Storage conditions	-40 °C to 70 °C (-40 °F to 158 °F)
Dimensions	244 x 360 x 582 mm (9.5 x 14 x 23 in)
Weight	35 mm: 14.7 kg (32.4 lb) Zoom: 15.1 kg (33.3 lb)
Included accessories	Installation guide, Windows® decoder 1-user license, connector kit, Torx® T20 bit, Torx® T30 bit, connector guard
Optional accessories	AXIS Surveillance Cards, AXIS T94J01A Wall Mount, AXIS T94N01G Pole Mount, AXIS T95A64 Corner Bracket, AXIS Washer Kit B, AXIS Cable 24 V DC/24-240 V AC 22 m <sup>h</sup> , AXIS T8611 SFP Module LC.LX, AXIS T8612 SFP Module LC.SX, AXIS T8613 SFP Module 1000BASE-T, AXIS PT IR Illuminator Kit C, AXIS T99 Illuminator Bracket Kit A, Power supply DIN PS24 480 W, AXIS T61 Audio and I/O Interface Series For more accessories, see <a href="http://axis.com">axis.com</a>
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	English, German, French, Spanish, Italian, Russian, Simplified Chinese, Japanese, Korean, Portuguese, Polish, Traditional Chinese, Dutch, Czech, Swedish, Finnish, Turkish, Thai, Vietnamese
Warranty	5-year warranty, see <a href="http://axis.com/warranty">axis.com/warranty</a>
Export control	The product contains U.S.-origin controlled technology/component, the US Export Administration Regulations (EAR) are always applicable to the product. You should comply at all times with all applicable national and international (re-) export control regulations.





# Specification

## Approvals

### EMC

EN 55032 Class A, EN 55024, EN 61000-6-1, EN 61000-6-2, CISPR 35, EN 50121-4, EN 50498

**Australia/New Zealand:** RCM AS/NZS CISPR 32 Class A

**Canada:** ICES-3(A)/NMB-3(A)

**Japan:** VCCI Class A ITE

**Korea:** KC KN32 Class A, KC KN35

**USA:** FCC Part 15 Subpart B Class A

**Railway:** IEC 62236-4

### Safety

IEC/EN/UL 62368-1, IEC/EN/UL 60950-22, CAN/CSA C22.2 No. 62368-1, CAN/CSA-C22.2 No. 60950-22

### Environment

IEC/EN 60529 IP66, IEC 62262 IK10<sup>d</sup>, NEMA 250 Type 4x, NEMA TS 2 (2.2.7-2.2.9), ISO 21207 (Method B), IEC/EN 60068-2-1, IEC/EN 60068-2-2, IEC 60068-2-6, IEC/EN 60068-2-14, IEC 60068-2-27, IEC/EN 60068-2-78, MIL-STD-810G (Method 501.5, 502.5, 505.5, 506.5, 507.5, 509.5)



## Note

- a. Internal heaters to defrost ice build-up, activated by HTTP API (VAPIX).
- b. Pan and tilt motors actively compensate for changes in load conditions induced by external forces such as high winds. This allows minimum power consumption at low wind.
- 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 ([eay@cryptsoft.com](mailto:eay@cryptsoft.com)).
- d. Excluding front window.
- e. IP data and home position retained, and guard tour and other events resumed.
- f. If a network link is established via both the SFP slot and the RJ45 connector, the former acts as the primary link and the latter as the fail-over link.
- g. The values shown are based on results from actual wind tunnel testing. For drag force calculations, use maximum effective projected area (EPA).
- h. When using the 22 m (72 ft) AXIS Cable 24 V DC/24–240 V AC, a power supply capable of delivering 300 W is required to compensate for the power loss in the cable.



Live image



One bispectral camera with two videostreams

\*\*Order Information: Please contact us **BEFORE** place an order

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