

### **Multi-Sensor Mini Specs**

Protection: IP66-, IP67-, IK10, IEC62262 - and NEMA 4X-rated casing; water, corrosion and dust

Resolution: Minimum 3840x2160 (4K)

Video compression: H.264(MPEG-4Part10/AVC), H.265

Framerate: Minimum 10-30 fps

Noise Reduction Filter

Day/Night Control: Automatic, Manual

IR Illumination: Minimum 30m (98ft)

Dynamic Range: WDR (or Similar)

Optical Zoom

Backlight Compensation: Adjustable

Motion Detection: Selectable sensitivity and threshold

Streaming: Multi-stream H.264, Multi-stream H.265, Motion JPEG, Motion JPEG

Controllable frame rate and bandwidth

Security: Password protection, HTTPS encryption, digest authentication, WS authentication, user access log, 802.1x port based authentication, TLS1.3, FIPS140-2 Level 1

Protocol: IPv4, IPv6, HTTP, HTTPS, SOAP, DNS, NPT, RTSP, RTCP, RTP, TCP, UDP, IGMPv2, ICMP, DHCP, Zeroconf, ARP, HSTS

Streaming Protocols: RTP/UDP, RTP/UDP multicast, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/RTSP/HTTPS/TCP, HTTP

Application Programming Interface: ONVIF® compliance Profile S, T and G

Device Management Protocols: SNMP v2c, SNMP v3

Onboard Storage: MicroSD/microSDHC/microSDXC slot - Class V10 or better recommended.

External I/O Terminals: Alarm In, Alarm Out

Operating conditions

-40°C to 60°C (-40°F to 140°F)

Power Source

24 VAC; 20 to 32 VAC; 24 VAC nominal

48 VDC; 42 to 53 VDC; 48 VDC nominal

(PoE) PoE+, PoE++, (802.3bt)

Power redundancy

### **VARIFOCAL CAMERA MINIMUM SPECFS**

Protection: IP66-, IP67-, IK10, IEC62262 - and NEMA 4X-rated casing; water, corrosion and dust

Framerate: 25/30fps

Video compression: H.264(MPEG-4Part10/AVC), H.265  
Motion JPEG Controllable frame rate and bandwidth

#### Video Streaming

Multiple, individually configurable streams in H.264,H.265,and Motion JPEG  
Controllable framerate and bandwidth  
VBR/ABR/MBRH.264/H.265  
Video streaming indicator

#### Resolution

Minimum 3840x2160 (4K)

#### Pan/Tilt/Zoom

Digital PTZ

Lens: CS-mount lens,

Ranges of:

9-50 mm F/1.5 8 MP,

4.7–84.6MM 8 MP,

22-55mm

70-200mm,f/2.8,

55-250mm,f/4-5.6

Iris Control: P-Iris

Day and night: Automatically removable infrared-cut filter

WDR or similar

IR illumination Range: 50m(164ft) or more

#### Event Triggers

Analytics, shock detection, open casing, edge storage events, supervised external input, audio level,  
time scheduled MQTT subscribe

#### Onscreen controls

Electronic image stabilization Day/nightshift Defogging Wide dynamic range

#### Event Actions

File upload: FTP, SFTP, HTTP, HTTPS, network share and email.

Notification: email, HTTP, HTTPS and TCP

External output activation

Video recording to edge storage, Play audio clip

Pre-and post-alarm video buffering,

PTZ preset, Guard tour, Overlay text

Day/Night switching, Status LED activation

MQTT publish Send SNMP trap

#### Object Analytics

Object classes: humans actions, vehicles w/sub-types

Trigger conditions: line crossing, object in area, loitering

Up to 10 scenarios

Metadata visualized with trajectories and color-coded bounding boxes

Polygon include/exclude areas

Perspective configuration  
ONVIF Motion Alarm event

### Security

Password protection, IP address filtering, HTTPS encryption, IEEE802.1X(EAP-TLS) network access control, digest authentication, user access log, centralized certificate management, brute force delay protection, signed firmware, secure boot

### Supported protocols

IPv4,IPv6USGv6,ICMPv4/ICMPv6,HTTP,HTTPSa,HTTP/2,TLsa, QoSLayer3DiffServ,FTP,CIFS/SMB, SMTP, mDNS(Bonjour), UPnP™,SNMPv1/v2c/v3(MIB-II),DNS/DNSv6,DDNS,NTP,RTSP, RTP,SFTP,SRTP,TCP,UDP,IGMP,RTCP,ICMP,DHCPv4/v6,ARP, SOCKS,SSH,LLDP,CDP,MQTTv3.1.1, Syslog, Link-Local address (ZeroConf)

Application Programming Interface: Open API for software integration, ONVIF® Profile G, ONVIF® Profile M, ONVIF® Profile S and ONVIF® Profile T,

### Storage

Support for microSD/microSDHC/microSDXC card  
SD/SDHC/SDXC slot–video speed class card  
Support for SD card encryption(AES-XTS-Plain64256bit)  
Support for recording to network-attached storage(NAS)

### Connectors

RJ45 10BASE-T/100BASE-TX/1000BASE-T  
I/O: 6-pin 2.5mm terminal block, for 2 supervised alarm inputs and 2 outputs RS485/RS422, 2pcs, 2pos, full duplex, terminal block  
DC input, terminal block 3.5mm mic/line in, 3.5mm line out

### Operating conditions

-40°C to +60°C  
Maximum temperature according to NEMA TS2(2.2.7): 74°C(165°F)

### Power

12–28VDC, 20–28VDC,  
Power over Ethernet (PoE) IEEE802.3af/802.3at Type2 Class4  
Power over Ethernet (PoE) IEEE802.3af/802.3at Type1 Class3  
Power redundancy

### **Pan Tilt Zoom (PTZ) Minimum Specs.**

Protection: IP66-, IP67-, IK10, IEC62262 - and NEMA 4X-rated casing; water, corrosion and dust

Optical Zoom: Minimum 20/30X Zoom

Digital Zoom: Minimum 12X

Proportional pan/tilt

Resolution: Minimum 3840x2160 (4K)

Framerate: Minimum 15 FPS@4k

Iris control: Auto, manual override, Open, Closed

Day/Night Control/Capabilities: Automatic, Manual/ Yes

White Balance

Privacy Zones

Presets

Audio Compression

Video Analytic Capable

3D Noise Reduction Filter

Image Stabilization

IR Illumination: IR illumination with proportional brightness based upon zoom/Adaptive IR/Integrated IR

Dynamic Range: WDR (or Similar)

Backlight Compensation: Adjustable/Yes

Motion Detection: Selectable sensitivity and threshold, Classified object detection

Video snapshot: JPEG capture at the same resolution as the highest stream configured

Video overlay

Video compression: H.265 Main, H.264 High, Main profiles and MJPEG

Streaming: Multi-stream H.264, Multi-stream H.265, Motion JPEG, Motion JPEG  
Controllable frame rate and bandwidth

Security: Password protection, credential setup for device access, authentication, Https using TLS1.2, AES encryption with 256 bit keys, digital signature for firmware upload, denial of access to shell, 802.1X, camera firewall with whitelist/blacklist address support, digital certificate support, TLS 1.2 2048 RSA key pairs, and X.509 v3 digital certificates with SHA256 signature hash.

Protocol: IPv4, IPv6\*, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTCP, RTP, TCP/IP, UDP/IP, IGMP, ICMP, DHCP, Zeroconf, ARP, HSTS

Streaming Protocols: (Unicast, Multicast IGMP), UPnP, DHCP, SNMP v2c/v3, QoS, SSH, TLS, SMTP, FTP, 802.1x (EAP), and NTCIP 1205, RTP/UDP, RTP/UDP multicast, RTP/RTSP/TCP, RTP/RTSP/HTTP/TCP, RTP/RTSP/HTTPS/TCP, HTTP

Device Management Protocols: SNMPv2c, SNMPv3

Application Programming Interface: ONVIF® compliance Profile S, T and G; (Open API capable of transmitting behaviour alarm data to third party applications)

Ports: RJ-45 connector for 100Base-TX and 1000Base-TX Auto MDI/MDI-X Auto negotiate/manual setting

Cabling Type: Cat5e or better

SFP/FSFP Interface

On-board Storage: MicroSD/microSDHC/microSDXC slot - video speed class card required. Class V10 or better recommended.

External I/O Terminals: Alarm In, Alarm Out

Operating conditions

-40°C to 60°C (-40°F to 140°F)

Power Source

24 VAC; 20 to 32 VAC; 24 VAC nominal

48 VDC; 42 to 53 VDC; 48 VDC nominal

(PoE) PoE+, PoE++, (802.3bt)

Power redundancy