



Network

TNU-C3032A1WT1-M

QVGA AI Explosion-proof Camera



Key Features

- ATEX, IECEx and Zone 1 certified
- Temperature alarm option
- Electro-polished 316L stainless steel on all welded assemblies
- Standard stainless steel 316L mirror finish

TNU-C3032A1WT1-M

QVGA AI Explosion-proof Camera



Specifications

Video		
Imaging Device	Type	Uncooled micro bolometer (384x288)
Resolution		768x576, 384x288
Max. Framerate	H.265/H.264	8fps
	MJPEG	8fps
Spectral Range		8~14 μ m
NETD		$\leq$ 30mK
Pixel Size		17 μ m
Video Out		USB: Micro USB Type B
Lens		
Focal Length (mm)		9.7
Max Aperture Ratio (F number)	Wide	1.0
Angular Field of View	Horizontal	38
	Vertical	29
	Diagonal	47
iFoV		1.8 mRad
Min. Object Distance		2.8m(9.19ft)
Focus Control		Fixed
Pan / Tilt / Rotate		
Pan / Tilt / Rotate Range	Pan	0°~350°
	Tilt	0°~90°
	Rotate	0°~350°
Operational		
Motion Detection	Quantity	8ea
	Shape	8point Polygonal zones

Operational

Privacy Masking	Quantity	6ea
	Shape	Rectangular zones
	Color / Option	Gray, Black, White
Video Rotation		Flip, Mirror, Hallway view(90°/270°)
Serial Interface		RS-485
Alarm Interface	In/Out	2 configurable I/O ports
Alarm Triggers		Analytics, Network disconnect, Alarm input, Time schedule, MQTT subscription
Alarm Events When Alarm Trigger Occurred		File upload(image): e-mail/FTP, Notification: e-mail, Recording: SD/SDHC/SDXC or NAS recording at event triggers,Alarm output, Handover: PTZ preset, MQTT: publication
Audio In		Selectable(mic in/line in)
Audio Out		Line out
Color Palettes		Whitehot, Blackhot, Rainbow, Rainbow2, Sepia, Red, Iron, Custom

Analytics

Classified Object Type		Person, Vehicle
Thumbnail		BestShot
Analytics Events	Based on AI Engine	Object detection, Virtual line(Crossing/Direction), Virtual area(Loitering/Intrusion/Enter/Exit), Motion detection
	Normal	Motion detection, Tampering, Audio detection, Sound classification, Shock detection, Virtual area(Appear/Disappear), Temperature detection, Tank level detection, Temperature change detection

Radiometry

Temperature Detect Range		-40°C~550°C
Temperature Accuracy		±2°C(≤150°C), ±15%(>150°C)
Temperature Detection ROI Zones	Quantity	10ea
	Shape / Option	Polygonal
Hybrid Palettes		Support
Spot Temperature Reading		Support
ROI Condition Monitoring		Above, Below, Increase, Decrease

Network

Ethernet		Metal shielded RJ-45(10/100/1000BASE-T)
Video Compression		H.265/H.264: Main/Baseline/High, MJPEG
Audio Compression		G.711 u-law /G.726 selectable,G.726(ADPCM) 8kHz,G.711 8kHz, G.726: 16kbps,24kbps,32kbps,40kbps, AAC-LC: 48kbps at 16kHz
Smart Codec		Manual, WiseStreamIII
Bitrate Control		H.265/H.264: CBR or VBR, MJPEG: VBR

Network

Streaming	Unicast	Up to 20 users
	Multicast	Support
	Multiple Streaming	Up to 10 profiles
Protocol		IPv4, IPv6, TCP/IP, UDP/IP, RTP(UDP), RTP(TCP), RTCP, RTSP, NTP, HTTP, HTTPS, SSL/TLS, DHCP, FTP, SMTP, ICMP, IGMP, SNMPv1/v2c/v3(MIB-2), ARP, DNS, DDNS, QoS, UPnP, Bonjour, LLDP, CDP, SRTP(TCP, UDP Unicast), MQTT
Application Programming Interface	ONVIF	S, G, T, M
	Others	SUNAPI(HTTP API), Hanwha Vision Open Platform
Direct Cloud Connection		Support

Security

OS / Firmware Protect	Encrypted firmware, Secure boot, Signed firmware	
User authentication	Digest authentication, Prevent brute-force attack	
Network authentication	IEEE 802.1X(EAP-TLS, EAP-LEAP, EAP-PEAP, MSCHAPv2)	
Secure Communication	HTTPS, WSS(WebSocket Secure), SRTP	
Access Control	IP-based access control	
Data Protect	Encryption credentials	
Audit	Access / System / Event Log management	
Device ID	Device certificate(Hanwha Vision Root CA)	
Secure Storage	TPM(Trusted platform module), SDcard partition encrypt(AES-256)	
Security Certificate	TPM 2.0 with FIPS 140-2 level2	

General

Memory	RAM	2GB
	Flash	512MB
Edge Storage	Micro SD/SDHC/SDXC	Max. 1TB x 1slot

Environmental & Electrical

Operating Condition	Temperature	-40°C~+60°C(-40°F~+140°F)
Input Voltage		24VAC

Mechanical

Color	Silver	
Material	Stainless(STS316L)	
Product Dimensions	480xØ176	
Compatible Conduit Hole	12.7mm(1/2")(M20)	

Certifications & Standards

Environment	IEC 60529 IP66, IEC 60529 IP67, II 2 G Ex db IIB+H2 II, 2 D Ex tb IIIC IECEX ATEX certified, INMETRO, Class I II III Division 1 Groups B, C, D, E, F, G, cFMus Approved	
-------------	---	--