HOLOWITS

HWT-M2241-10-QLI-E2(8-32mm)(4mm)

2T 4MP Dual-Lens AI Bullet Camera

⊟ Features

- 2 TOPS computing power

- Supports omni-data structuring, multi-algorithm switchover, behavior analysis, crowd flow analysis, target and person detection, object (motor vehicle, non-motorized vehicle, and pedestrian) classification, vehicle recognition, vehicle event detection, and traffic flow statistics

- Supports backlight adaptation and overcast adaptation

- 1/1.8" CMOS sensor

- Online loading and upgrade of algorithms

- 120 dB super wide dynamic range (WDR), ensuring that both foreground and background objects are clearly identified in environments with sharp light contrast

- Supports switchover among multiple algorithms

- Supports omni-data structuring

Model	HWT-M2241-10-QLI-E2(8-32mm)(4mm)				
Major Specifications					
Main control	Computing power	2 TOPS			
	Memory	DDR4 2.0 GB			
	Flash type	eMMC (secondary)+SPI NAND flash (primary) 8704.0 MB			
	Max capacity	MicroSD card slot that supports microSDHC/microSDXC; maximum memory card capacity: 256 GB			
Camera	Focal length	Primelens:4mm Zoomlens:8–32mm			
	Max Aperture	Prime lens: F1.0 (±10%) Zoom lens: F1.63 (W) to F1.68 (T)			
	Image sensor	1/1.8" CMOS/Wide-angle prime lens: 4MP: 2560(H)*1440(V) Zoom lens: 4MP: 2560(H)*1440(V)			
	Angle of view	Prime lens: 95° x 50° Zoom lens: Horizontal: 15.1° (T) to 39.9° (W); of view (FoV) deviation: ±5%			
	IR range	60m			
	Illumination distance	20m			
	Digital zoom/Optical zoom	16X/4X			

DORI (Complied to the EN 62676-4)	D(m)	O(m)	R(m)	I(m)
W(4mm)	55.2	22.2	11.0	5.5
W(8-32mm)	110.3	44.5	22.1	11.0
T	441.4	178.0	88.3	44.1

Intelligence		
Target/Body	Target	Target detection/Target enhancement/Target attribute recognition
	Target recognition	Supported
	Person	Person detection/Personal attribute recognition
Vehicle	Vehicle analysis	Vehicle color/Vehicle type/Vehicle model
	Traffic flow statistics	Motor vehicle/Non-motorized vehicle/Pedestrian
Other intelligences	Omni-Data Structuring	Supported
	Behavior analysis	Fast movement/Tripwire crossing/Intrusion/Area entry or exit /Loitering
	Crowd flow analysis	Queue length/Head counting/Crowd flow statistics
	Non-motorized vehicle	Supported
	Multi-algorithm switchover	Supported
	Defocus	Supported
	Alarm information	No SD card; SD card full; SD card error; Network disconnection; Defocus detection; IP Address Conflict Detection

Open ecosystem		
Algorithm openness	Open OS	Supported
Data openness	Data openness	SDK (proprietary protocol)/REST API (proprietary protocol)/GA/T 1400/GB/T 28181 (2011, 2016) /ONVIF Profile S/G/T

Image		
	Video encoding format	MJPEG/H.264/H.265

Codec	Video encoding channels	Triple streams
	Intelligent encoding	Extra265/264
	Video frame rate	Wide-angle prime lens: configurable (30 fps or 25 fps) Zoom lens: configurable (30 fps or 25 fps)
Image AI	Scene adaptation	Backlight adaptation/Overcast adaptation
Image ISP	Min illumination	Color: 0.0004 lux (F1.2, AGC ON, 1/30s shutter speed); B/W: 0.0001 lux (F1.2, AGC ON, 1/30s shutter speed) or 0 lux (infrared illuminator enabled)
	Day/Night mode	Supported; automatic (ICR), color (default), B/W, and scheduled Sensitivity level: high (default), medium, and low Image triggering /Internal triggering
	WDR	120 dB
	White balance	Auto/Manual/OnePush
	HLC/BLC	Supported/Supported
	Digital noise reduction	2D/3D noise reduction
	Shutter speed	Supports slow shutter. Slow shutter speed levels: 1/3, 1/4, 1/8, 1/12, 1/15 Non-slow shutter speed levels: 1/25, 1/30, 1/50, 1/60, 1/90, 1/100, 1/120, 1/125, 1/180, 1/250, 1/350, 1/500, 1/725, 1/1000, 1/1500, 1/2000, 1/3000, 1/4000, 1/6000, 1/10000, 1/30000, 1/100000, custom Non-slow shutter speed levels in full intelligence or face checkpoint mode: 1/25, 1/50, 1/60, 1/90, 1/100, 1/120, 1/125, 1/180, 1/250, 1/350, 1/500, 1/725, 1/1000, 1/1500, 1/2000, 1/3000, 1/4000, 1/6000, 1/10000, 1/30000, 1/100000, custom Non-slow shutter speed levels in full intelligence or micro checkpoint mode: 1/100, 1/120, 1/125, 1/180, 1/250, 1/350, 1/500, 1/725, 1/1000, 1/1500, 1/2000, 1/3000, 1/4000, 1/6000, 1/10000, 1/30000, 1/100000, custom Default: 1/25 Full intelligence mode: Slow shutter is not supported. Face checkpoint: 1/100; Micro checkpoint: 1/250. Face checkpoint: 1/100 Micro checkpoint: 1/250 Behavior analysis: 1/25
	Signal-to-Noise Ratio(SNR)	>45dB
	Primary stream resolution	Wide-angle prime lens: 2560 x 1440 (4MP), 2304 x 1296 (3MP), 1920 x 1080 (1080p), 1280 x 720 (720p) Zoom lens: 2560 x 1440 (4MP), 2304 x 1296 (3MP), 1920 x 1080 (1080p), 1280 x 720 (720p)
	Secondary stream resolution	Wide-angle prime lens: Secondary stream 1: 720 x 576 (PAL), 720 x 480 (NTSC), 352 x 288 (PAL), 352 x 240 (NTSC) Secondary stream 2: 352 x 288 (PAL), 352 x 240 (NTSC) Zoom lens: Secondary stream 1: 720 x 576 (PAL), 720 x 480 (NTSC), 352 x 288 (PAL), 352 x 240 (NTSC) Secondary stream 2: 352 x 288 (PAL), 352 x 240 (NTSC)
	Video bit rate	Only for H.264 and H.265: 1080P ~4K 512Kbps ~ 16Mbps 720P 384Kbps ~ 8Mbps D1 256K ~ 4Mbps CIF 32K ~ 1Mbps
	Smart Illumination	Not Supported
	Optical Defogging/Algorithm-assisted Defogging	Not Supported/Supported
	EIS	Supported. Sensitivity levels are not supported.

Audio

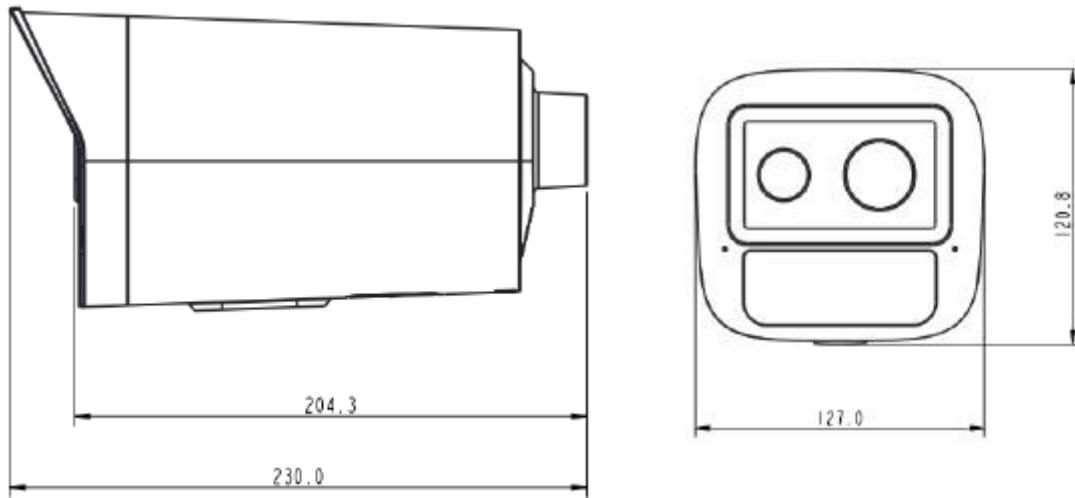| Audio		
	Audio Encoding Format	G.711a/G.711u/G.726/OPUS
Audio	Audio sampling rate	G.711a/G.711u/G.726: 8 kHz OPUS: 8/12/16/24/48 kHz
	Audio bit rate	G.711a/G.711u: 64 kbit/s G.726: configurable (16/24/32/40 kbit/s) OPUS: configurable (16/24/32/40/64/96/128/160/192/224/256/288 kbit/s)

Networking

Network transmission		
	Protocols supported by IPv4	TCP, IPv4, UDP, DHCP, DNS, ICMP, IGMP, HTTPS, FTP, SFTP, RTP, RTSP, RTCP, SIP, ARP, SSL, NTP, SNMP (V1/V2/V3), 802.1X, QoS, SMTP, and PPPOE; Note: The northbound protocol needs to adapt to the PPPoE dialup scenario.
	Protocols supported by IPv6	HTTPS,RTP,RTCP,Onvif,RTSP,IPv6,ICMPv6,DHCPv6

Security

Data security		
	Media security	Supports web- or SDK-based media stream encryption; supports a maximum of two channels of encrypted media streams; media stream encryption and full intelligence, target recognition, or image upload through SFTP/FTP cannot be enabled at the same time; after the intelligent analysis function is enabled, only one-channel stream encryption is supported; supports encrypted data storage on SD cards.
	Video digital watermark	Supported
	Image digital watermark	Supported
Service security	User rights	Three user roles: administrator, advanced operator, and common operator
	Security mode	User name and password authentication, 802.1X authentication, and HTTPS digital certificate
	Secure boot	Supported

Port

Storage port	MicroSD card slot that supports microSDHC/microSDXC; maximum memory card capacity: 256 GB
Alarm port	2 input ports and 1output port
Network port	One RJ45 10M/100M adaptive Ethernet port
Communication serial port	RS-485 port
Audio port	Supported (one-channel LINE IN and two-channel built-in MIC)/Supported (one-channel LINE OUT or one-channel speaker)

General Specifications

Power type	24 V AC and PoE (IEEE 802.3at)
Power consumption	Maximum:14.5W,typical7W
Operating temperature	−30°C to +60°C
Operating humidity	5% to 95% (non-condensing)
Surge protection	4 kV
IP rating	IP67
Equipment Anti Corrosion	Class C corrosion resistance
IK rating	IK10
Weight	Net weight 2.0 kg;Gross weight 2.3 kg
Dimensions	Device dimensions 176.3 mm x 127 mm x 119.3 mm;Package dimensions 285 mm x 184 mm x 156 mm

⬡ Dimensions

204.3

230.0

120.8

127.0

✪ Recommended Accessories

ACC3211

ACC3282

ACC3231

ACC3280

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