

HWT-M2181-10- ELI(8-32mm)

1T 8MP IR/White-Light AI Bullet Camera



Features

- ▶ 1TOPS computing power
- ▶ Supports multi-algorithm switchover, behavior analysis, crowd flow analysis, target detection, 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

Technical Specifications

Model		HWT-M2181-10-ELI(8-32mm)				
Major Specifications						
Main control	Computing power	1TOPS				
	Memory	DDR4 1.0 GB				
	Flash type	SPI NAND FLASH 512.0 MB				
	Max capacity	MicroSD card slot that supports microSDHC/microSDXC; maximum memory card capacity: 256 GB				
Camera	Focal length	8-32mm				
	Max Aperture	F1.6(W)-F1.7(T)				
	Image sensor	1/1.8" CMOS/8MP 3840(H)*2160(V)				
	Lens aperture type	P-iris (DC iris+Hall sensor)				
	Angle of view	Horizontal:15°(T) to 42°(W); Vertical:8.4°(T) to 22.8°(W)				
	IR range	50m				
	Illumination distance	30m				
	Digital zoom/Optical zoom	16X/4X				
	DORI (Complied to the EN 62676-4)		D(m)	O(m)	R(m)	I(m)
		W	160.0	64.5	32.0	16.0
		T	640.0	258.1	128.0	64.0

Intelligence		
Target/Body	Target	Target detection/Target attribute recognition
	Target recognition	Supported
	Person	Person detection
Vehicle	Vehicle analysis	Vehicle color/Vehicle type/Vehicle model
	Traffic flow statistics	Motor vehicle/Non-motorized vehicle/Pedestrian
Other intelligences	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		
Codec	Video encoding format	MJPEG/H.264/H.265
	Video encoding channels	Triple streams
	Intelligent encoding	Extra265/264

	Video frame rate	25 or 20 fps (configurable)
Image AI	Scene adaptation	Backlight adaptation/Overcast adaptation
	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 (IR enabled)
Image ISP	Day/Night mode	Supported; automatic (ICR), Color, B/W, and scheduled (default: automatic); sensitivity level: high (default), medium, and low; image triggering/internal triggering
	WDR	120db
	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 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	3840 x 2160 (4K), 3072 x 1728 (5MP), 2560 x 1440 (4MP), 2304 x 1296 (3MP), 1920 x 1080 (1080p), 1280 x 720 (720p)
	Secondary stream resolution	Secondary stream 1: 1920 x 1080 (1080p), 1280 x 720 (720p), 720 x 576 (PAL), 720 x 480 (NTSC); secondary stream 2: 720 x 576 (PAL), 720 x 480 (NTSC), 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 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)

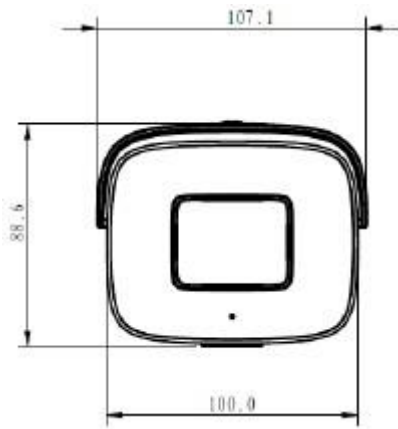
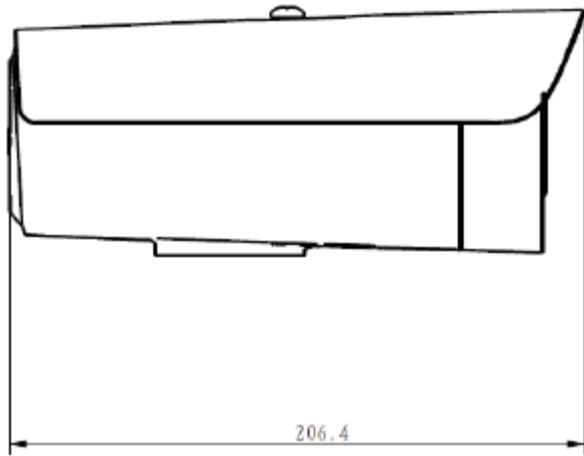
Networking		
Network transmission	Protocols supported by IPv4	TCP, UDP, IPv4, DHCP, DNS, ICMP, IGMP, HTTPS, FTP, SFTP, RTP, RTSP, RTCP, SIP, ARP, SSL, NTP, SNMP (V1/V2/V3), 802.1x, QoS, SMTP, and PPPoE. Note: The northbound protocol needs to adapt to the PPPoE dialup scenario.
	Protocols supported by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

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

Power type	DC12V,PoE(IEEE 802.3at)
Power consumption	Maximum:11.4W,typical:3.6W
Operating temperature	-30°C to +55°C (illuminator disabled) -30°C to +40°C (illuminator enabled)
Operating humidity	5% to 95%(non-condensing)
Surge protection	4kV
IP rating	IP67
Equipment Anti Corrosion	Class C corrosion resistance
Weight	Net weight 1005g;Gross weight 1196g
Dimensions	Device dimensions 206mm×108mm×89mm;Package dimensions 117mm×141mm×296mm

Dimensions



Recommended Accessories



ACC3217



ACC3285



ACC3233

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