

## HWT-M2141-10-EL(2.8-12mm)

1T 4MP Softlight Al Bullet Camera



## **%**≣ Features

- ▶ 1TOPS 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
- ₱ 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
- Þ







Model	HWT-M2141-10-EL(2	2 8-12mm)
Major Specifications		
······································	Computing power	1TOPS
	Memory	DDR3 1.0 GB
Main control	Flash type	SPI NAND FLASH 512.0 MB
Main Control		MicroSD card slot that supports microSDHC/microSDXC; maximum
	Max capacity	memory card capacity: 256 GB
	Focal length	2.8-12mm
	Max Aperture	F1.9(W)-F2.8(T)
	Image sensor	1/1.8" CMOS/4MP 2560(H)*1440(V)
	Lens aperture type	Fixed iris
Camera	Angle of view	W:102°(Horizontal)*52.0°(Vertical) T:39°(Horizontal)*22°(Vertical)
	Illumination distance	15m
	Digital zoom/Optical zoom	16X/4X
	DORI	D(m) O(m) R(m) I(m)
	(Complied to the EN	W 37.3 15.1 7.5 3.7
	62676-4)	T 160.0 64.5 32.0 16.0
Intelligence	Target	Target detection/Target enhancement/Target attribute recognition
Target/Body	Target recognition	Supported
range (, body	Person	Person detection/Personal attribute recognition
	Vehicle analysis	Vehicle color/Vehicle type/Vehicle model
Vehicle	Traffic flow statistics	Motor vehicle/Non-motorized vehicle/Pedestrian
	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
Other intelligences	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/M
Image		
Codec	Video encoding format	MJPEG/H.264/H.265
	Video encoding channels	Triple streams
	Intelligent encoding	Extra265/264

Image ISP   Day/Night mode   Day/Night		Video frame rate	Configurable (25 fps or 30 fps)
Image ISP   Day/Night mode   Day/Night	lmage Al	Scene adaptation	Backlight adaptation/Overcast adaptation
Day-Night mode   Sensitivity levels high (cefault), medium, and low Image triggering   WDR   1200b   White balance   Auto/Manual/OnePush   11LC/BLC   Supported Supported   Digital noise reduction   70793 noise reduction   70893 noise reduction		Min illumination	Color: 0.005 lux (F1.2, AGC ON, 1/30s shutter speed); B/W: 0.0025 lux (F1.2, AGC ON, 1/30s shutter speed)
Wink   120/bb   White balance   Auton/Manual/OnePush   11LC/BLC   Supported/Supported   20/30 noise reduction   11LC/BLC   Supported/Supported   20/30 noise reduction   11 he 1/3 s to 16820s drop-down list box is added. The time can be manually set to 1/3 J. 1/4 J. 1/9 J. 1/1 J. 1/15   Non-slow shatter level: 1/25 J. 1/10 J. 1/15		Day/Night mode	Sensitivity level: high (default), medium, and low Image triggering
Image ISP		WDR	
Digital noise reduction  The 1/35 to 1/687/505 drop-down list box is added. The time can be manually set to 1/3, 1/4, 1/9, 1/12, or 1/15.  Shutter speed  Shutter speed  Shutter speed  The 1/35 to 1/687/505 drop-down list box is added. The time can be manually set to 1/3, 1/4, 1/9, 1/12, or 1/15.  Shutter speed  Shutter speed  The 1/35 to 1/687/505 drop-down list box is added. The time can be manually set to 1/30 to 1/120, 1/120, 1/125, 1/180, 1/250, 1/500, 1/1000, 1/1000, 1/2000, 1	Image ISP		
The USIs to V6820s drop-down list box is added. The time can be manually set to 1/3 J/4 / 18 / 17.2 or 17.1s. Non-slow shutter level: 1/25,7/30.1/50.1/50.1/50.1/50.1/50.1/50.1/50.1/5	J		
Signal-1o-Noise Ratio(SNR): a5dB			The 1/3s to 1/68250s drop-down list box is added. The time can be manually set to 1/3, 1/4, 1/8, 1/12, or 1/15.  Non-slow shutter level: 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; The default value is 1/100 for face checkpoint mode, 1/250 for micro
Primary stream resolution Secondary stream resolution Secondary stream resolution Secondary stream 1:720 x 576 (PAI), 720 x 480 (NTSC), 352 x 288 (PAI), 352 x 240 (NTSC) Secondary stream 1:720 x 576 (PAI), 720 x 480 (NTSC), 352 x 288 (PAI), 352 x 240 (NTSC) Secondary stream 1:720 x 576 (PAI), 720 x 480 (NTSC), 352 x 288 (PAI), 352 x 240 (NTSC) Secondary stream 1:235 x 288 (PAI), 352 x 240 (NTSC) Only for II-264 and II-265 1080P-4K 512 kbps - 16Mbps 12-66 x - 4Mbps 12-66 x - 4Mbps 12-66 x - 4Mbps Smart Illumination Optical Defogging/Algorithm- assisted Defogging FIS Supported/Supported Supported Supported/Supported Audio Audio Encoding Format Audio Sampling rate OPUS-SK/12K/16K/24K/46K G.711a/G.711u/G.72-6.8K Audio Sampling rate OPUS-SK/12K/16K/24K/46K G.711a/G.711u/G.72-6.8K Audio bit rate G.781-6 kbtirs, 2 x kbtirs, 32 kbtirs, or 40 kbtirs 16/24/32/40/64/96/128/160/192/224/256/288Kbps: configurable Network support  1 + N Supported TCP, UDP, IPv4, DHCP, DNS, ICMP, IGMP, HTTPS, FTP, SFTP, RTP RTSP, RTCP, SIP, ARP, SSL, NTP, SNMP (VIVZ)/V3), 802.1X, QoS, SMTP, and PPpoC. Note: The northbound protocol needs to adapt to the PPPoC dialup scenario. Protocols supported by IPv6  Security  Security  Data security Data security Data security User rights Video digital watermark User rights User rights User rights User rights Service security Service ser		Signal-to-Noise Ratio(SNR)	
Pack			
Video bit rate  Smart Illumination Optical Detogging/Algorithm- assisted Defogging  EIS  Supported/Supported  Supported/Supported  Audio  Audio Encoding Format Audio Sampling rate Optical Audio sampling rate Optical Supported/Sensitivity levels are not supported.  Audio Sampling rate Optical Optical Optical Supported Sensitivity levels are not supported.  Audio Sampling rate Optical Opti			
Smart Illumination Optical Defogging/Algorithm-assisted Defogging   Supported   Supporte		Video bit rate	1080P-4K 512Kbps - 16Mbps 720P 384Kbps - 8Mbps D1 256K - 4Mbps
Defogging/Algorithm- assisted Defogging EIS  Supported; Sensitivity levels are not supported.  Audio  Audio Encoding Format Audio sampling rate  Audio sampling rate  Audio bit rate  Audio Audio bit rate  Audio Audio bit rate  Audio Algority Algord  Audio Algority Algord  Audio Algority			
Audio  Audio Encoding Format Audio Sampling rate  Audio sampling rate  Audio bit rate  Audio Alexiops Subbits		Defogging/Algorithm-	Supported/Supported
Audio Encoding Format Audio Sampling rate  Audio Sampling rate  Audio Sampling rate  Audio bit rate  Audio A			Supported: Sensitivity levels are not supported
Audio Encoding Format Audio sampling rate  Audio sampling rate  Audio sampling rate  Audio bit rate  Audio Audio bit rate  Audio Audio bit rate  Audio Audio Audio bit stelling rate bits, 24 kbits, 32 kbit		, 2.0	journey constant, reversible over supported.
Audio sampling rate  Audio bit rate  Audio held-y6/128/160/192/224/256/288Kbps: configurable  Tex. UDP, IPV4, DHCP, DNS, ICMP, IGMP, HTTPS, FTP, RTP  ATP, SNMP, (VIV2/V3), 802.1X, QoS, SMTP, and PPPoE. Note: The northbound protocol needs to adart to the PPPoE dialup scenario.  HTTPS, All P.	Audio		
Audio Sampling rate  Audio bit rate  Audio A		Audio Encoding Format	
Audio bit rate  Audio bit rate  Audio bit rate  Audio bit rate  G.711a/G.711u:64kbps G.726:16 kbit/s, 24 kbit/s, 32 kbit/s, or 40 kbit/s 16/24/32/40/64/96/128/160/192/224/256/288Kbps: configurable  Network support  1 + N  Supported  TCP, UDP, IPv4, DHCP, DNS, ICMP, IGMP, HTTPS, FTP, SFTP, RTP RTSP, RTCP, SIP, ARP, SSL, NTP, SNMP (VI/V2/V3), 802.1X, QoS, SMTP, and PPPoE. Note: The northbound protocol needs to adapt to the PPPoE dialup scenario.  Protocols supported by IPv6  Security  Supports web- or SDK-based media stream encryption; supports maximum of two channels of encrypted media streams; media stream encryption and full intelligence, target recognition, or imax upload through SFTP/FTP cannot be enabled at the same time; at the intelligent analysis function is enabled, only one-channel stream encryption is supported; supports encrypted data storage on SD cards.  Video digital watermark  User rights  Supported  Three user roles: administrator, advanced operator, and common operator  User name and password authentication, 802.1X authentication, at HTTPS digital certificate  Secure boot  Supported		Audio sampling rate	
Network support  1 + N  Supported  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  Security  Supports web- or SDK-based media stream encryption; supports maximum of two channels of encrypted media streams; media stream encryption and full intelligence, target recognition, or imacupload through SFTP/FTP cannot be enabled at the same time; at the intelligent analysis function is enabled, only one-channel stream encryption is supported; supports encrypted data storage on SD cards.  Video digital watermark Image digital watermark Supported  User rights  Security mode  Security mode  Security mode  Security mode  Secure boot  Supported	Audio	Audio bit rate	G.711a/G.711u:64kbps G.726:16 kbit/s, 24 kbit/s, 32 kbit/s, or 40 kbit/s
Network support  1 + N  Supported 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  Security  Security  Media security  Data security  Supports web- or SDK-based media stream encryption; supports maximum of two channels of encrypted media streams; media stream encryption; supports supports and full intelligence, target recognition, or image upload through SFTP/FTP cannot be enabled at the same time; a the intelligent analysis function is enabled, only one-channel stream encryption is supported; supports encrypted data storage on SD cards.  Video digital watermark  Director supported  Data security  Data security  Data security  Supported  Data security  Data security  Data security  Data security  Supported  Data security  Data security  Supported  Data security  Supported  Data security  Supported  Data security  Data security  Data security  Supported  Data security  Dat			10/2 1/32/ 10/0 1/30/ 120/ 100/ 132/22 1/230/20010053. Confingulation
Network transmission  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  Security  Supports web- or SDK-based media stream encryption; supports 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; a the intelligent analysis function is enabled, only one-channel stream encryption is supported; supports encrypted data storage on SD cards.  Video digital watermark Image digital watermark User rights  Supported  Security mode  Security mode  Security mode  Security mode  Secure boot System intrusion Supported	<u> </u>		
Protocols supported by IPv4  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  Security  Supports web- or SDK-based media stream encryption; supports 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; at the intelligent analysis function is enabled, only one-channel stream encryption is supported; supports encrypted data storage on SD cards.  Video digital watermark   Supported    User rights   Supported    Three user roles: administrator, advanced operator, and common operator    Security mode   Supported    Security mode   Supported    Supported    Supported   Supported   Supported    Supported   Supported   Supported    Supported   Supported   Supported    Supported   Supported   Supported   Supported   Supported    Supported   Support	Network support	1+ N	
Security  Supports web- or SDK-based media stream encryption; supports 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; at 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  User rights Three user roles: administrator, advanced operator, and common operator  Security mode User name and password authentication, 802.1X authentication, an HTTPS digital certificate  Service security Secure boot Supported	Network transmission	1	RTSP, RTCP, SIP, ARP, SSL, NTP, SNMP (V1/V2/V3), 802.1X, QoS, SMTP, and PPPoE. Note: The northbound protocol needs to adapt
Supports web- or SDK-based media stream encryption; supports 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; at the intelligent analysis function is enabled, only one-channel streat encryption is supported; supports encrypted data storage on SD cards.  Video digital watermark  Supported  Image digital watermark  User rights  Security mode  Security mode  Security mode  Security mode  Security mode  Supported			HTTPS,RTP,RTCP,RTSP,Onvif,IPv6,ICMPv6,DHCPv6
Media security  Supported cards intervelop  Media security  Media security  Media security  Media security  Media security  Media security  Supported cards intervelop  Media security  Media security  Media security  Supported cards intervelop  Media security  Supported cards intervelop  Media streams; media s	Security		
Image digital watermark  User rights  Security mode  Service security  Security mode  Security m	Data security	Media security	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
Image digital watermark  User rights  Supported  Three user roles: administrator, advanced operator, and common operator  User name and password authentication, 802.1X authentication, and HTTPS digital certificate  Security  S		Video digital watermark	Supported
Service security  Operator  User name and password authentication, 802.1X authentication, and HTTPS digital certificate  Supported  Supported  System intrusion			
Security mode  Service security  Secure boot  Supported  Supported  Supported  Supported		User rights	Three user roles: administrator, advanced operator, and common operator
Service security  Secure boot Supported System intrusion		Security mode	User name and password authentication, 802.1X authentication, and HTTPS digital certificate
System intrusion	Service security	Secure boot	Supported
detection			Supported

Port	
Storage port	MicroSD card slot that supports microSDHC/microSDXC; maximum memory card capacity: 256 GB
Alarm port	2 input port 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 or one-channel external MIC)/Supported (one-channel LINE OUT)

General Specifications		
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	
IK rating	IK10 (except for the viewing window)	
Weight	Net weight 1005g;Gross weight 1196g	
Dimensions	Device dimensions 206mm×108mm×89mm;Package dimensions 117mm×141mm×296mm	



## © Dimensions 107.1 206.4 Recommended Accessories





ACC3233





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