

## Thermal & Optical Bi-spectrum Network Bullet Camera CY-TPC-4M400-F6T10



### Features

- Thermal & Optical dual-spectrum image, dual video with single ip address, adaptable to more various scenes.
- The thermal imaging channel adopt instant image super-resolution.
- Original resolution is 400 × 300 .
- 1/2.7" CMOS, high sensitivity sensor, satisfy the need of starlight image.
- Thermal module support reliable fire detection and fire shield area .
- Thermal module supports temperature detection and cold&hot spot tracking,supports abnormal temperature alarm.
- Thermal & Optical dual-spectrum smart intrusion prevention: cross line, enter area, leave area, intrusion.
- Optical module supports smog recognition, which can help with fire alarm reconfirm.
- Support picture-in-picture mode, real-time contrast live, more convenient and clear .
- Support audio and light alarm, with red and blue warning lights built in.
- Ultra 265, H.265, H.264, MJPEG.
- Max 2688 × 1520@30fps in the optical module and max 1080P@30 fps in the thermal module.
- DC12 V±25% or PoE (IEEE802.3 at ) power supply.
- Alarm 3 in and 2 out, audio 2 in and 1 out, micro ad, up to 512 GB.
- Anti-corrosion design for stable protection (NEMA 4X).

## Specifications

Channel	Optical	Thermal
<b>Camera</b>		
Max Resolution	4 MP	1080P
Original Resolution	N/A	400 × 300
Sensor	1/2.7" CMOS	Vanadium oxide uncooled focal plane arrays
Min. Illumination	Colour: 0.005 lux (F1.6, AGC ON) B/W: 0.003 lux(F1.6,AGC ON) 0 lux with IR	N/A
Day/Night	IR-cut filter with auto switch (ICR)	N/A
Pixel Size	N/A	12 um
NETD	< 30 mk@F1.0@25 °C	
Shutter	Auto/Manual, 1 to 1/100000 s	
WDR	120 dB	
S/N	>56 dB	
Case Type	Bullet	
<b>Lens</b>		
Focal Length	6mm	10mm
Iris	F1.6	F1.0
Field of View (H)	49.4°	30.0°
Field of View (V)	27.2°	22.9°
Field of View (D)	60.5°	36.9°
<b>DORI</b>		
DORI Distance (Detect)	135.0 m( 442.9 ft )	N/A
DORI Distance (Observe)	54.0 m( 177.2 ft )	N/A
DORI Distance (Recognize)	27 m( 88.6 ft )	N/A
DORI Distance (Identify)	13.5 m( 44.3 ft )	N/A
<b>Illuminator</b>		
Wavelength	750 nm	N/A
Illumination Distance (IR)	50m	N/A
Light On/Off Control	Auto/Manual	N/A
<b>Video</b>		
Frame Rate	4MP(2688*1520), Max 30fps	1080P(1920*1080), Max 30fps
Video Compression	Ultra 265, H.265, H.264, MJPEG	
Video Bit Rate	128 Kbps to 16 Mbps	
U-code	Support	
ROI	Support	
Video Stream	Five streams	
OSD	Up to 10 OSDs	
Privacy Mask	Up to 8 areas (8 blacks/ 8 mosaics)	N/A
<b>Image</b>		
White Balance	Auto, Outdoor, Fine tune, Sodium lamp,	N/A

	Locked, Auto2	
Digital Noise Reduction	2D/3D DNR	
Flip	Normal, Flip vertical, Flip horizontal, 180°	
HLC	Support	N/A
BLC	Support	N/A
Defog	Digital defog	N/A
Palette	N/A	lava, medical, fusion, arctic, mazarine, rain, puce, white hot, iron oxide red, hot iron, rainbow 1, rainbow 2, rainbow 3, depict hot, ice hot, black hot, red hot, green hot, color 1, color 2
Low Illumination Characteristics	LightHunter	
<b>Intelligent</b>		
Smart Intrusion Prevention	Cross line detection, intrusion detection, enter area detection, leave area detection (support false alarm filtering and the classification of human, non-motor vehicle and vehicle)	Cross line detection, intrusion detection, enter area detection, leave area detection (support false alarm filtering and the classification of human and vehicle)
Temperature Range	Selectable between -20 °C to 150 °C (-4 °F to 302 °F) and 100 °C to 550 °C (212 °F to 1022 °F)	
Detection distance for personnel (1.8 × 0.5 meters)	N/A	100m
Detection distance for vehicles (4 × 1.4 meters)	N/A	200m
<b>Events</b>		
Fire Detection	N/A	Support
Basic Detection	Motion detection, Tampering alarm, Audio detection	N/A
General Function	Watermark, IP address filtering, Access policy, ARP protection, RTSP authentication, User authentication, HTTP authentication, Alarm input, Alarm output	
Detection distance for temperature (0.1 × 0.1 meters)	N/A	20m
Detection distance for fire (0.1 × 0.1 meters)	N/A	105m
<b>Audio</b>		
Audio Compression	G.711U, G.711A	
Audio Bitrate	128 Kbps	
Two-way Audio	Support	
Suppression	Support	
Sampling Rate	16KHZ	
<b>Storage</b>		
Edge Storage	MicroSD, up to 512 GB	
Network Storage	ANR	
<b>Network</b>		

Protocols	IGMP, RTP, SMTP, IPv4, IPv6, ICMP, ARP, TCP, UDP, DHCP, PPPoE, RTSP, RTCP, RTMP, DNS, DDNS, NTP, FTP, UPnP, HTTP, HTTPS, 802.1x, SNMP, QoS, SSL/TLS, SSH	
Compatible Integration	ONVIF (Profile S, Profile G, Profile M), SDK, API	
User/Host	Up to 32 users. 3 user levels: administrator, common user and operator	
Web Browser	Plug-in required live view: IE 10+, Chrome 45+, Firefox 52+, Edge 79+	
<b>Interface</b>		
Built-in Mic	Support	
Built-in Speaker	Support	
Audio I/O	2 Input: impedance 1 k $\Omega$ , amplitude 2.5 V [p-p], 1 Output: impedance 600 $\Omega$ , amplitude 2 V [p-p]	
Alarm I/O	3/2	
Serial Port	1 $\times$ RS485	
Network	1 $\times$ RJ45 10 M/100 M Base-TX Ethernet	
Video Output	N/A	1 BNC (for debugging)
<b>Certification</b>		
EMC	CE-EMC (EN 55032, EN 61000-3-3, EN IEC 61000-3-2, EN 50130-4) FCC (FCC CFR 47 part15 B, ANSI C63.4-2014)	
Safety	CE LVD (EN IEC 62368-1) UL (UL 62368-1)	
Environment	CE-RoHS (2011/65/EU; (EU)2015/863); WEEE (2012/19/EU); Reach (Regulation (EC) No 1907/2006)	
Protection	IP67 (IEC 60529:1989+AMD1:1999+AMD2:2013)	
<b>General</b>		
Power	DC12V ( $\pm$ 25% ), PoE (IEEE802.3 at )	
Power Consumption	22.4W	
Power Interface	$\varnothing$ 5.5 mm coaxial power plug	
Dimensions	406.0 $\times$ 130.0 $\times$ 130.0 mm (16.0" $\times$ 5.1" $\times$ 5.1")(L $\times$ W $\times$ H)	
Weight	2.14 kg	
Working Environment	-40 $^{\circ}$ C to 70 $^{\circ}$ C (-40 $^{\circ}$ F to 158 $^{\circ}$ F), Humidity: $\leq$ 95% RH (non-condensing)	
Storage Environment	-40 $^{\circ}$ C to 70 $^{\circ}$ C (-40 $^{\circ}$ F to 158 $^{\circ}$ F), Humidity: $\leq$ 95% RH (non-condensing)	
Surge Protection	6 KV	
Reset Button	Support	
RTC	Support	
Web Client Language	22 Languages: Traditional Chinese, English, Simplified Chinese, Polish, German, Russian, French, Korean, Dutch, Czech, Portuguese (Europe), Portuguese (Brazil), Japanese, Thai, Turkish, Spanish (Latin America), Spanish (Europe), Hungarian, Italian, Vietnamese, Arabic, Slovak	
<b>Live View</b>		
Maximum Bitstream	35	
Maximum Bandwidth	50 Mbps	
Plugin Free	Support	
OSD Font	Vector	
OSD Color	Support	
OSD Character Number	40	

3D Privacy Mask	N/A
Other	
Corridor Mode	Support

## DRI Description

The optimal detection, recognition, and identification distances are calculated according to Johnson's Criteria.

Detection Range: In order to distinguish an object from the background, the object must be covered by 1.5 or more pixels.

Recognition Range: In order to classify the object (animal, human, vehicle, etc), the object must be covered by 6 or more pixels.

Identification Range: In order to identify the object and describe it in details, the object must be covered by 12 or more pixels.

Lens	Detection Range (Vehicles: 4.0 × 1.4 m)	Detection Range (Humans: 1.8 × 0.5 m)	Recognition Range (Vehicles: 4.0 × 1.4 m)	Recognition Range (Humans: 1.8 × 0.5 m)	Identification Range (Vehicles: 1.4 × 4.0 m)	Identification Range (Humans: 1.8 × 0.5 m)
10mm	750m	370m	200m	100m	130m	60m
25mm	1900m	950m	490m	240m	330m	160m
35mm	2500m	1250m	690m	340m	460m	230m

## Dimensions

