SN-TPC2553DRT-F

Thermal & Optical Bi-spectrum Network Bullet Camera

Key Features

- Uncooled VOx Micro bolometer with 256×192 resolution

- Thermal: 3.5/7/10mm fixed lens, Visible: 4/8mm fixed lens

- Support human and vehicle detection

- Support smoker detection, smoke & fire detection and fire point detection

- Intelligent analysis: intrusion, single line crossing, double line crossing, loitering, wrong-way, people counting, enter area, leave area and smart motion detection

- Support 3 temperature measurement rule types (spot, line, area)

- Temperature monitoring and exception alarm, -20°C to 150°C (-4°F to 302°F)

- Support sound-light alarm

- Smart IR distance up to 50m

- Support I/O alarm, RS485, built-in SD card slot
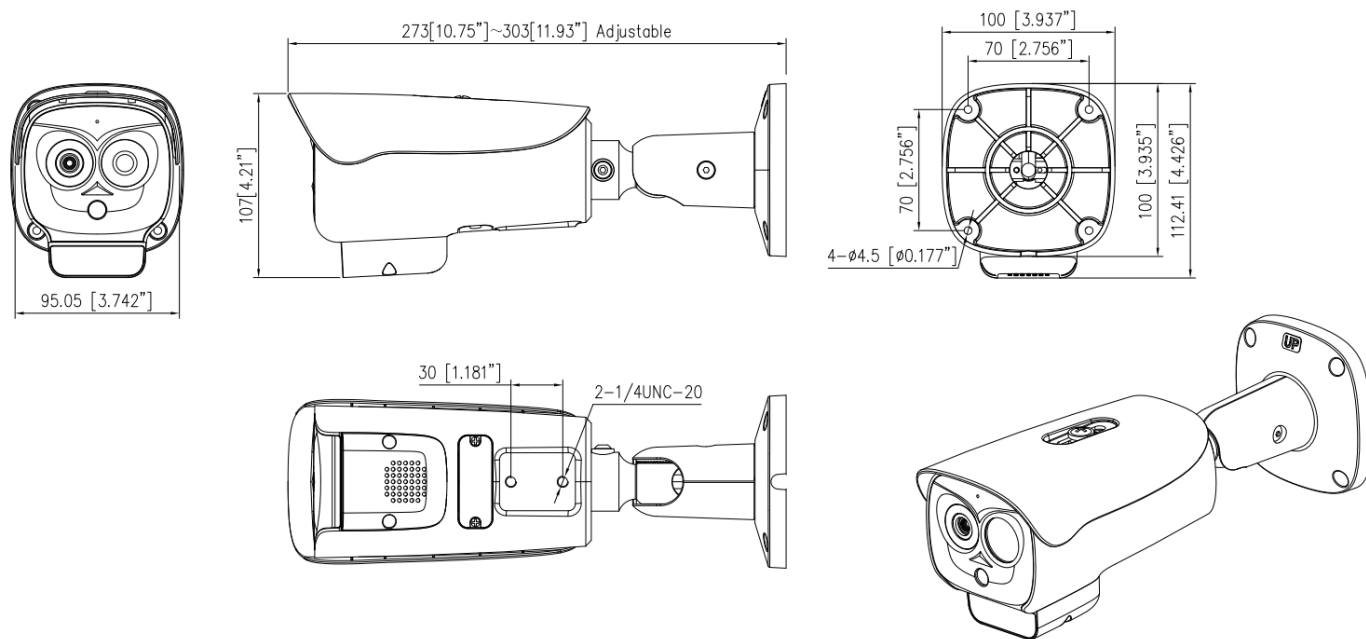
- DC12V/DC24V, PoE power supply

Specification

Thermal Camera

Image Sensor	Vanadium Oxide Uncooled Focal Plane Arrays		
Resolution	256×192, Image can be scaled up to 704×576		
Pixel Pitch	12um		
Spectral Range	8 to 14um		
Thermal Sensitivity (NETD)	≤ 50mK		
Lens Type	Fixed, F1.0		
Focus Control	Free focus		
Focal Length	3.5mm	7mm	10mm
Angle of View	H: 48°, V: 36°	H: 24°, V: 18°	H: 17°, V: 13°
Detection Distance (Humans: 1.8×0.5m)	146m (479.0ft)	291m (954.7ft)	416m (1,364.8ft)
Detection Distance (Vehicles: 4×1.5m)	447m (1,466.5ft)	894m (2,933..ft)	1278m (4,192.9ft)
Recognition Distance (Human: 1.8×0.5m)	36m (118.1ft)	73m (239.5ft)	104m (341.2ft)
Recognition Distance (Vehicle: 4×1.5m)	112m (367.5ft)	224m (734.9ft)	319m (1,046.5ft)
Identification Distance (Human: 1.8×0.5m)	18m (59ft)	36m (118.1ft)	52m (170.6ft)
Identification Distance (Vehicle: 4×1.5m)	56m (183.7ft)	112m (367.5ft)	160m (524.9ft)

* The table is only for reference and the performance may vary according to different environment.

* 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.

Detection Range Table

VCA Detection Distance (Human: 1.8×0.5m)	30m (98.4ft)	65m (213.3ft)	103m (337.9ft)
VCA Detection Distance (Vehicle: 4×1.5m)	90m (295.3ft)	144m (472.4ft)	230m (754.6ft)
Temperature Measurement (Object: 1 × 1m)	58.3m (191.3ft)	116.7m (382.9ft)	166.7m (546.9ft)
Temperature Measurement (Object: 0.2 × 0.2m)	11.7m (38.4ft)	23.3m (76.4ft)	33.3m (109.3ft)
Fire Detection (Object: 0.2×0.2m)	41.7m (136.8ft)	83.3m (273.3ft)	119m (390.4ft)
Smoking Detection	13m (42.7ft)	25m (82ft)	40m (131.2ft)

Note: The table is for reference only. The distances within it are subject to actual conditions including atmospheric conditions, target size, the installation site, and more.

Visible Camera

Image Sensor	1/2.7" CMOS
Effective Resolution	2880(H)×1620(V)

Shutter Speed	1/5 to 1/20,000s		
Wide Dynamic Range	True WDR 120dB		
Min. Illumination	Color: 0.05Lux @(F1.6, AGC ON), B/W: 0.005Lux @(F1.6, AGC ON), 0Lux with IR		
S/N Ratio	More than 55dB		
White Balance	Auto/Manual		
Day & Night Mode	IR Cut Filter with Auto Switch		
Focal Length	4mm, F1.6	8mm, F2.0	8mm, F2.0
Angle of View	H: 92°, V: 46°	H: 40°, V: 20°	H: 40°, V: 20°

Illuminator

IR Distance	Up to 35 m (114.8 ft)	Up to 50 m (164.0 ft)	Up to 50 m (164.0 ft)
White Light	Strobe light		

Video and Audio

Main Stream	Thermal: D1 (704×576) @25/30fps Optical: 2880×1620, 2560×1440, 2304×1296, 1920×1080, 1280×720 @25fps
Sub Stream	Thermal: D1, CIF, 256×192 @25/30fps Optical: D1, VGA @25fps
Bit Rate Control	CBR/VBR
Bit Rate	Main Stream: Thermal: 100Kbps to 3Mbps, Optical: 100Kbps to 12Mbps Sub Stream: Thermal: 10Kbps to 3Mbps, Optical: 10Kbps to 6Mbps
Region of Interest	Off/On (8 Zone, Rectangle)
Smart Encode	Support
Audio Compression	G.711: 64Kbps, RAW_PCM: 128Kbps

Image

Image Setting	Brightness, Sharpness, Contrast, Saturation
Mirror	Support
Pseudo-color Setting	White-hot/Black-hot/Rainbow/Ironbow etc. up to 17 modes (Thermal)
DVE Image Enhance	Support (Thermal)
Noise Reduction	2D/3D DNR
Privacy Masking	Support
Bi-Spectrum Image Fusion	Support

Smart Function

Smart Function	Temperature measurement, human detection and vehicle detection
Advanced Intelligence Analysis	Smoker detection, Smoke and Flame detection, fire point detection
Intelligent Analysis	Intrusion, Single line crossing, Double line crossing, Loitering, Wrong-way, Enter area, Leave area, smart motion detection (these function support accurate detection of human or vehicles) , People counting
Sound-light Alarm	Support white light flashing and horn warning
Temperature Measurement	3 temperature measurement rule types, 20 rules in total, 1 full screen, 19 others (spot, areas, line).

Temperature Alarm	Over temperature alarm, Temperature difference alarm
Accuracy	±2℃ / ±2%
Response Time	≤ 30ms
Temperature Range	-20°C to 150°C (-4°F to 302°F)
Network	
Protocols	IPv4/IPv6, HTTP, RTSP/RTP/RTCP, TCP/UDP, DHCP, DNS, PPPOE, SMTP, 802.1x
Interoperability	ONVIF
Max. User Access	10 Users
Web Viewer	<IE11, Chrome, Firefox, Microsoft Edge
Web Language	English, Chinese, Polish, Italian, Portuguese, Spanish, Russian, French, Czech, Hungarian. Default: English
Interface	
Network Interface	1 Ethernet (10/100 Base-T) RJ-45 Connector
Audio Interface	1ch input, 1ch output
Built-in Speaker	Support
Alarm Interface	2ch input, 2ch output
RS-485	Support
Reset Button	Support
SD Card Slot	Support, up to 256GB
Electrical	
Power Supply	12DCV/24VDC/PoE (IEEE 802.3af)
Power Consumption	Max. 12W
Working Temperature	-40°C to 60°C (-40°F to 140°F)
Storage Conditions	Less than 90% RH
Certifications	CE /FCC
Ingress Protection	IP66
Casing	Metal
Dimensions	303 × 95 × 107mm (11.93 × 3.74× 4.21 inch)
Net Weight	1.35Kg (2.98lb)
Ordering Information	
Model	Description
SN-TPC2553DRT-F3.5	Thermal Focal Length: 3.5mm, Optical Focal Length: 4mm
SN-TPC2553DRT-F7	Thermal Focal Length: 7mm, Optical Focal Length: 8mm
SN-TPC2553DRT-F10	Thermal Focal Length: 10mm, Optical Focal Length: 8mm

Dimensions (mm)

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107[4.21"]

95.05 [3.742"]

100 [3.937"]

70 [2.756"]

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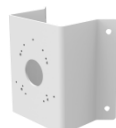
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2-1/4UNC-20

Accessories

Optional：

SN-CBK645G
Junction Box

SN-CBK101A
Pole Mount

SN-CBK102A
Corner Mount

SN-CBK627D
Pole Mount