SN-TPS6457ED-M

Bi-spectrum Radar-PTZ Linkage Speed Dome Camera

Key Features

- 640 × 512 (the resolution of output image is 1920 × 1080) resolution

- 12µm, VOx UFPA, NETD ≤ 40mK

- Thermal: 25mm motorized focus lens; Visible: 40x optical zoom module

- Support human/vehicle/ship, smoker, smoke & flame, fire point detection

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

- Radar-PTZ linkage solution: realize the perfect combination of the video and radar

- Smart tracking: Cold/hot spot tracking, human/vehicle and ship tracking

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

- Temperature monitoring & alarm: -20°C to 150°C (-4°F to 302°F), Accuracy: ±8°C

- Smart IR range up to 300m

- Smart Rain-Sensing Wiper, IP66

Specification

Camera	Thermal	Visible
Image Sensor	Vanadium Oxide Uncooled Focal Plane Arrays	1/1.8" STARVIS™ CMOS
Resolution	Sensor is 384×288. Image can be scaled up to 1280×720	2688 (H)×1520 (V), 4MP
Pixel Pitch	12μm	
Spectral Range	8 to 14μm	
NETD	≤ 40mK	
Min. Illumination		Color: 0.001 Lux @(F1.5, AGC ON), B/W: 0.0001 Lux (F1.5, AGC ON), 0 Lux with light
Shutter Speed		1/5 to 1/20,000s
Lens Type	Fixed lens	40x optical zoom
Focal Length	25 mm	6.27 to 251 mm
Max. Aperture	F1.0	F1.5
Focus Control	Motorized focal	Auto/Manual/Semi-automatic
Field of View (FOV)	H: 17°, V: 14°	H: 60.7° to 2.33°, V: 36.8° to 1.38°

IVS		
AI Multi-Target	Human / Vehicle / Ship detection	Human / Vehicle detection
Intelligent Analysis	Intrusion, Single Line Crossing, Double Line Crossing, Loitering, Wrong-Way Detection, Enter Area, Leave Area, Smart Motion Detection Support alarm triggering by specified target types (human and vehicle)	Intrusion, Single Line Crossing, Double Line Crossing, Loitering, Wrong-Way Detection, Enter Area, Leave Area, Smart Motion Detection Support alarm triggering by specified target types (human and vehicle)
Smoke and Flame Detection		Support
Smoker Detection	Support	
Fire Spot Detection	Support	
People Counting	Support	Support
Smart Tracking	Cold/hot spot tracking, human/vehicle/ship tracking	

Video and Audio		
Main Stream	1920×1080, 1280×1024, 1280×720, 640×512 @25fps	2688×1520, 2560×1440, 2304×1296, 1920×1080, 1280×720 @25/30fps
Sub Stream	D1, VGA, 640×512, CIF @25fps	D1, VGA @25/30fps
Bit Rate Control	CBR/VBR	CBR/VBR
Bit Rate	Main Stream: 100Kbps to 12Mbps, Sub Stream: 100Kbps to 6Mbps	Main Stream: 100Kbps to 16Mbps Sub Stream: 100Kbps to 6Mbps
Smart Encode	Support	Support
Audio Compression	G.711 A-law, G.711 μ-law, RAM PCM	G.711 A-law, G.711 μ-law, RAM PCM

Image		
Image Setting	Brightness, Contrast, Sharpness	Brightness, Saturation, Contrast, Sharpness
Mirror	Horizontal / Vertical / Horizontal+Vertical	Horizontal / Vertical / Horizontal+Vertical
Pseudo-color Setting	Up to 17 colors (White-hot / Black-hot / Rainbow / Iron red / HSV /Bone / Cool / Copper / Fire-hot / Pink / Spring / Summer / Autumn / Winter / Jet / Flame / Rose -Bengal)	
FFC Control	Auto / Manual	

Gain Control		Auto / Manual
White Balance		Auto / Tungsten / Fluorescent / Daylight / Shadow
Day/Night		Day mode / Night mode / Time
Noise Reduction	2D/3D DNR	2D/3D DNR
Image Enhancement		WDR, HLC, BLC
Wide Dynamic Range		True WDR 120dB
OSD	Up to 8 OSD	Up to 8 OSD
Privacy Masking	Up to 4 areas	Up to 4 areas
Illuminator		IR Range: - Up to 300m (984.25ft)

Thermal Function		
Temperature Range	-20°C to 150°C (-4°F to 302°F)	
Accuracy	±8°C	
Temperature Detection	3 temperature measurement rule types, 20 rules in total, 1 full screen, 19 others (spot, areas, line).	
Temperature Display	Display in the lower left corner; follow the cursor display of the highest temperature, lowest temperature or average temperature	
Image Fusion	Fusion view of thermal view and overlaid details of the optical channel	

Event		
Alarm Triggers	IVS, Temperature anomaly, Motion detection, Alarm Input, Disk alarm, Network alarm, Abnormal sound detection	
Event Actions	Alarm out, Alarm record, SMTP, FTP upload, Audible alarm output	

PTZ		
Pan/Tilt Range	Pan: 0° to 360° endless, Tilt: -10° to 90° (auto-flip)	
Pan Speed	Pan: 0.01° to 300°/s, preset speed: 300°/s	
Tilt Speed	Tilt: 0.01° to 240°/s, preset speed: 240°/s	
Wiper	Support	
Preset Accuracy	≤ 0.2°	
Presets	400	
Scan	12 scans	
Patrol	12 patrols, up to 32 presets per patrol	
Track	6 tracks	
3D Positioning	Support	
Speed Setup	Auto/Manual (0-8)	
Power Off Memory	Support	
Idle Motion	The time can be set (1-240 minutes), and functions such as preset positions, patrols, scans, and tracks can be run.	

Network		
Protocols	IPv4/IPv6, HTTP/HTTPS, DNS, DDNS, DHCP, PPPOE, RTSP/RTP/RTCP, TCP/UDP, NTP, ARP, UPnP, FTP, SMTP, QoS, 802.1x, SNMP, Multicast	
Compatible Integration	ONVIF (Profile S/T/G/M), CGI, SDK	
Max Concurrent Streams	10 channels	
User/Host Level	Up to 98 users, 3 levels: Administrator, Operator, Media user	
Security	IP address filter, encrypted HTTPS, Illegal login lock, IEEE 802.1x	

Web Viewer	<IE11, Chrome, Firefox, Microsoft Edge

Interface	
Network Interface	1 Ethernet (10/100 Base-T) RJ-45 Connector
Audio Interface	1ch Audio In, 1ch Audio Out
Alarm Interface	7ch Alarm In, 2ch Alarm Out
RS-485	Support
BNC Interface	1 (CVBS output for visible)
SD Card Slot	Built-in, up to 1TB

General	
Web Language	English, Chinese, Polish, Italian, Portuguese, Spanish, Russian, French, Czech, Hungarian, Japanese, Korean. Default: English
Power Supply	24VAC/36VDC/PoE++ (802.3bt), Standard Equipped: 36VDC
Power Consumption	Max 45 W
Working Temperature and Humidity	-40°C to 60°C (-40°F to 140°F) Less than 90% RH
Certifications	CE-EMC (EN 55032:2015+A1:2020, EN 55035:2017+A11:2020, EN 50130-4:2011+A1:2014, EN 61000-6-3:2007+A1:2011+AC:2012, EN IEC 61000-3-2:2019, EN 61000-3-3:2013+A1:2019) CE-LVD (EN 62368-1:2014+A11:2017) FCC (FCC 47 CFR 15, Subpart B, ANSI C63.4-2014)
Ingress Protection	IP66
Material	Metal
Dimensions	φ226 × 363 mm (φ8.9 × 14.29 inch)
Net Weight	6 kg (13.2 lb)

Ordering Information	
Model	**Description**
SN-TPS6457ED-M25-ZSD40	Thermal Focal Length: 25mm Optical Focal Length: 6.27 to 251mm, 40x optical zoom

Thermal DRI Range Table

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

Note: 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.

DRI Distance Table	
Focal Length	**25 mm**
Detection Distance (Human: 1.8×0.5m)	1,042 m (3,418.6 ft)
Detection Distance (Vehicle: 4×1.5m)	3,194 m (10,479 ft)
Recognition Distance (Human: 1.8×0.5m)	260 m (853 ft)

Recognition Distance (Vehicle: 4×1.5m)	799 m (2,621.4 ft)
Identification Distance (Humans: 1.8×0.5m)	130 m (426.5 ft)
Identification Range (Vehicles: 4×1.5m)	399 m (1,309 ft)

Thermal Smart Detection Range Table

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.

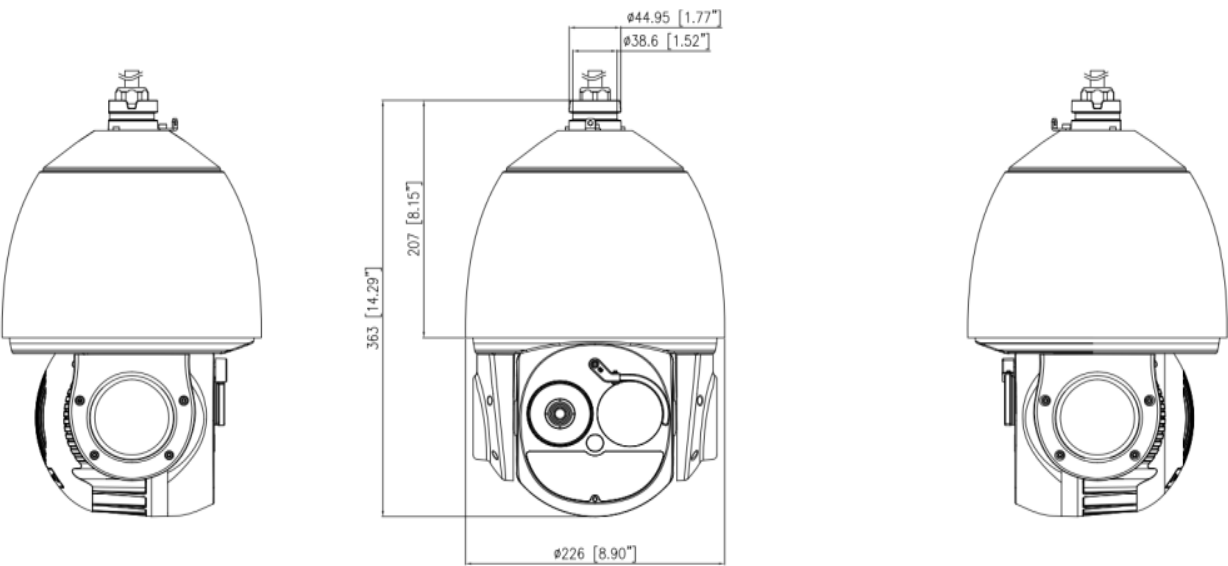| Detection Range Table	
Focal Length	**25 mm**
VCA Detection Distance (Human: 1.8 × 0.5 m)	205 m (672.6 ft)
VCA Detection Distance (Front/Rear of Vehicle: 4×1.5 m)	300 m (984.3 ft)
Temperature Measurement (Object: 1 × 1m)	417 m (1,368.1 ft)
Temperature Measurement (Object: 0.2 × 0.2m)	83 m (272.3 ft)
Fire Detection (Object: 1 × 1m)	1,042 m (3,418.6 ft)
Fire Detection (Object: 0.2 × 0.2m)	208 m (682.4 ft)

Visible DORI Range Table

Note: DORI (Detect, Observe, Recognize, and Identify) is a standard system (EN-62676-4) for defining the ability of a person viewing the video to distinguish persons or objects within a covered area. The numbers in this table do not reflect intelligent function distances. For intelligent function distances, refer to installation and commissioning manual/project design tool.

DORI Distance	
Lens	**6.27 to 251 mm**
Detection	95 to 3,515 m (311.68 to 11,532.15 ft)
Observe	38 to 1,406 m (124.67 to 4,612.86 ft)
Recognize	19 to 703 m (62.34 to 2,306.43 ft)
Identify	9.5 to 351.5 m (31.17 to 1,153.22 ft)

Radar (optional)

Radar		
Model	SN-SMWR02A	SN-SMWR03A
Picture		
Working Frequency	24GHz K-Band	24.00 to 24.1GHz
Modulation Waveform	FMCW (Frequency-Modulated Continuous-Wave)	FMCW (Frequency-Modulated Continuous-Wave)
Scan Frequency	8 Hz	8 Hz
Horizontal Detection Angle	90°	90°
Vertical Detection Angle	13°	13°
Max. Detectable Targets	Up to 32 targets	Up to 32 targets
Detection Target Type	Human, Vehicle	Human, Vehicle
Detection Distance	Human: Up to 150 m (492.1 ft), Vehicle: Up to 180 m (590.6 ft)	Human: Up to 450 m (1476.4 ft), Vehicle: Up to 600 m (1968.5 ft)
Distance Resolution	1 m (3.28 ft)	1.5 m (4.92 ft)
Distance Measurement Accuracy	± 0.5 m (1.64 ft)	± 0.75 m (2.46 ft)
Angle Accuracy	± 1°	± 1°
Speed Measuring Range	0.5 to 30 m/s	0.5 to 30 m/s
Speed Measuring Accuracy	0.03 m/s	0.006 m/s
Speed Resolution	0.06 m/s	0.003 m/s
EIRP	22 dBm	37 dBm
Network Interface	1 RJ45 10M/100M (PoE)	1 RJ45 10M/100M (PoE)
Alarm Interface	2ch output, 1ch input	1ch output
RS485	Support	Support
Relay	2ch output	-
Power Consumption	9W	17W
Power Supply	12VDC/PoE (802.3af)	12VDC/PoE+ (802.3at)
Dimension	194 × 158 × 49 mm	235 × 175 × 47.5 mm

Dimensions (mm)

Accessories

Optional：

SN-CBK506B Wall Bracket	SN-BK348A Ceiling Bracket	SN-BK605 Corner Mount	SN-BK604B Pole Mount
SN-BK367 Junction Box	SN-BK355 Wall Bracket	SN-BK358 Corner Mount	SN-BK359 Pole Mount