

DS-2TD8166-1x0ZE2F/V2

Thermal and Optical Bi-Spectrum Network Stable PTZ Camera

DeepinView



Hikvision DS-2TD8166-1x0ZE2F/V2 Thermal and Optical Bi-Spectrum Network Stable PTZ Camera is equipped with a built-in GPU, which supports an intelligent behavior analysis algorithm and can realize high precision VCA detection and real-time alarms. It is applied to frontier defense occasions, maritime defense occasions, port monitoring, airport perimeter security, etc. The pre-alarm system discovers unexpected events immediately to protect against property loss.

Smart Functions

- Adaptive AGC, DDE, 3D DNR, NETD < 40 mk (@25° C, F#=1.0)
- Smart Tracking: Panorama, Event, and Multi-Scene Patrol
- Smart Tracking Linkage: Thermal and Optical Views
- Line Crossing, Intrusion, Region Entrance/Exit
- Temperature Exception Alarm
- Advanced Fire Detection

Thermal Imaging Module Functions

- 640*512 Resolution, High Sensitivity Sensor, Contrast Adjustment
- Shutter Adjustment in Various Modes
- 3D DNR, 15 Adjustable Color Palettes, Image Detail Enhancement

Available Models:

DS-2TD8166-150ZE2F/V2

DS-2TD8166-180ZE2F/V2



Specifications

	DS-2TD8166-150ZE2F/V2	DS-2TD8166-180ZE2F/V2
Thermal Module		
Image Sensor	Vanadium oxide uncooled focal plane arrays	
Maximum Resolution	640 × 512	
Detector Pitch	17 μm	
Response Waveband	8 μm to 14 μm	
NETD	<40 mk (@ 25° C, F#=1.0)	
Lens (Focal Length)	30 mm to 150 mm	45 mm to 180 mm
MRAD	0.57 to 0.11 mrad	0.38 to 0.09 mrad
Field of View	Wide: 20.56° × 16.51°; tele: 4.15° × 3.32°	Wide: 13.8° × 11°; tele: 3.46° × 2.77°
Minimum Focusing Distance	6.56 ft (2 m)	16.4 ft (5 m)
f/ Number	1.2	
Optical Camera		
Image Sensor	1/1.8" progressive scan CMOS	
Minimum Illumination	Color: 0.005 lux @ (f/3.5, AGC on) B/W: 0.0005 lux @ (f/3.5, AGC on)	
Focal Length	12.5–775 mm, 62 x	
Field of View	20.56° × 4.15° to 16.51° × 3.32° (wide–tele)	31.5° × 23.9° to 0.51° × 0.39° (wide–tele)
Minimum Working Distance	16.4 ft (5 m)	
Aperture Range	f/3.5 to closed	
Focus Mode	Auto/semiautomatic/manual	
WDR	Digital	
Shutter Speed	1–1/30,000s	
White Balance	Auto/ manual/ATW/indoor/outdoor/daylight lamp/sodium lamp	
Day/Night	IR cut filter	
Privacy Mask	24 privacy masks programmable; optional multiple colors and mosaics	
Optical Defog	Yes	
Smart Functions		
Enhancement	3D DNR	
VCA	4 VCA rule types (line crossing, intrusion, region entrance, and region exiting), 10 scenes and 8 VCA rules for each scene	
Temperature Measurement	3 temperature measurement rule types, 273 presets as scene, 21 rules of each scene (10 points, 10 areas, and 1 line)	
Temperature Range	-4° to 302° F (-20° to 150° C)	
Temperature Accuracy	±14.4° F (±8° C)	
Fire Detection	Supports 10 fire points	
PTZ		
Movement Range	Pan: 360° continuous rotate; tilt: from -45° to + 45° (auto flip)	
Pan Speed	Configurable, from 0.01°/s to 40°/s	
Tilt Speed	Configurable, from 0.01°/s to 20°/s	
Proportional Zoom	Yes	
Presets	300	
Patrol Scan	8; up to 32 presets per patrol	
Pattern Scan	4; more than 10 minutes per pattern	
Power Off Memory	Yes	
Park	Preset/pattern scan/patrol scan/auto scan/tilt scan/random scan/frame scan/panorama scan	
PT Status	Turn on/turn off	
Scheduled Task	Preset/pattern scan/patrol scan/auto scan/tilt scan/random scan/frame scan/panorama scan/dome reboot/dome adjust/aux output	
Network		
Main Stream	Optical light: 60 Hz: 30 fps (1920×1080), 30 fps (1280×960), 30 fps (1280×720); thermal: 50 fps (640 × 512)	
Sub Stream	60 Hz:30 fps (704 × 480), 30 fps (352 × 240), 30 fps (176 × 120); thermal: 50 fps (640 × 512)	
Video Compression	H.265+/H.264+/H.265/H.264/MJPEG, H.264 encoding with Baseline/Main/High Profile	
Audio Compression	G.711u/G.711a/G.722.1/MP2L2/G.726/PCM	
Protocols	IPv4/IPv6, HTTP, HTTPS, 802.1x, QoS, FTP, SMTp, UPnP, SNMP, DNS, DDNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMP, ICMP, DHCP, PPPoE, Bonjour	
Simultaneous Live View	Up to 20-ch	
User/Host Level	Up to 32 users, 3 levels: administrator, operator, user	
Security Measures	User authentication (ID and PW), MAC address binding, HTTPS encryption, IEEE 802.1x access control, IP address filtering	
Integration		
Alarm Input	Up to 7-ch relay input (0–5 VDC)	
Alarm Output	Up to 2-ch; supports alarm linkage	
Alarm Action	Preset/patrol scan/pattern scan/SD card record/relay output/smart capture/FTP upload/e-mail linkage	
Audio Input	LINE_IN input/MIC input; peak: from 2 to 2.4 V [p-p]; output impedance: 1K Ω ±10%	
Audio Output	Linear level; impedance: 600 Ω	
Communication Interface	Built-in RJ-45; 10M/100M Ethernet interface	
Onboard Storage	Built-in 128 GB SD card slot; supports manual/alarm recording	
Analog Video Output	1.0 V [p-p]/75 Ω, PAL/NTSC/BNC	
RS-485	Half-duplex; HIKVISION, PELCO-P and PELCO-D self-adaptive	
API	Open-ended API, supports ISAPI; supports HIKVISION SDK and third-party management platform	
Client	iVMS-4200	
Web Browser	IE 7+, Chrome 18+, Firefox 5.0+, Safari 5.02+; multiple languages	
General		
Menu	English	
Wiper	Yes	
Power	48 VDC/5 A, 220 W	
Work Temperature/Humidity	-40° to 140° F (-40° to 60° C); humidity: 90% or less (non-condensing)	
Protection Level	IP66 standard; TVS 6000 V lightning protection, surge protection, and voltage transient protection	
Dimension	25.56" × 17.24" × 10.29" (649.2 mm × 438 mm × 261.3 mm)	
Weight	Approximately 132.3 lb (60 kg)	

Wide Range Coverage for Different Specifications

NOTE: The table below is only for reference, the performance varies from model to model, and the specific data is based on 17 μ m detector pitch.

Model	Detection Range (Vehicles: 1.4×4.0m)	Detection Range (Humans: 1.8×0.5m)	Recognition Range (Vehicles: 1.4×4.0m)	Recognition Range (Humans: 1.8×0.5m)	Identification Range (Vehicles: 1.4×4.0m)	Identification Range (Humans: 1.8×0.5m)
150ZE2F/V2	13529 m	4412 m	3382 m	1103 m	1691 m	551 m
180ZE2F/V2	16235 m	5294 m	4059 m	1324 m	2029 m	662 m

Smart Functions Range Table

NOTE: The table below is only for reference, the performance varies from model to model, and the specific data is based on 17 μ m detector pitch.

Model	VCA Range (Vehicles: 1.4×4.0m)	VCA Range (Humans: 1.8×0.5m)	Temperature Measurement (Object:2×2 m)	Temperature Measurement (Object:1×1 m)	Fire Detection (Object:2×2 m)	Fire Detection (Object:1×1 m)
150ZE2F/V2	4500 m	1500 m	3510 m	1770 m	8820 m	4410 m
180ZE2F/V2	5400 m	1800 m	4212 m	2124 m	10584 m	5292 m

Dimensions

