

## DS-2TD8166-180ZE2F/V2

### Thermal & Optical Bi-spectrum Network Stable PTZ Camera

DeepinView<sup>series</sup>



Hikvision DS-2TD8166-180ZE2F/V2 Thermal & Optical Bi-spectrum Network Stable PTZ Camera equipped with built-in GPU which support intelligent behavior analysis algorithm, can realize high precision VCA detection and real-time alarm. It is applied to frontier defense occasions, maritime defense occasions, port monitoring, airport perimeter security, and so on. The pre-alarm system helps you discover unexpected events immediately and protects you from property loss.

#### Smart Function (Thermal Imaging)

- Leading image processing technology: Adaptive AGC, DDE, 3D DNR, NETD < 40mk (0.05 °C/32.09 °F)
- Smart tracking: Panorama tracking, Event tracking and Multi-scene patrol tracking
- Smart tracking linkage: thermal view and optical view
- Powerful behavior analysis algorithm: Line crossing, Intrusion, Region Entrance & Exit
- Reliable temperature exception alarm function
- Advanced fire detection algorithm

#### Thermal Imaging Module Function

- 640\*512 resolution, high sensitivity sensor, support contrast adjustment
- Support shutter adjustment in various modes
- 3D DNR, 15 palettes of color adjustable, image detail enhancement



## Specifications

Parameter		Model	DS-2TD8166-180ZE2F/V2
		Thermal & Optical Bi-spectrum Network Stable PTZ Camera	
<b>Thermal module</b>	Image sensor	Vanadium Oxide Uncooled Focal Plane Arrays	
	Max. Resolution	640 × 512	
	Detector Pitch	17μm	
	Response waveband	8μm to 14μm	
	NETD	< 40mk (@25 °C, F#=1.0)	
	Lens (focal length)	45 mm to 180 mm	
	MRAD	0.38 to 0.09 mrad	
	Field of View	WIDE: 13.8 ° × 11 °; TELE: 3.46 ° × 2.77 °	
	Min. Focusing Distance	5 m	
	Aperture	F 1.2	
<b>Optical camera</b>	Image Sensor	1/1.8" Progressive Scan CMOS	
	Min. Illumination	Color : 0.005 Lux @ (F3.5, AGC ON) B/W : 0.0005 Lux @ (F3.5, AGC ON)	
	Focal Length	12.5-775 mm, 62 x	
	Field of View	31.5 ° × 23.9 ° to 0.51 ° × 0.39 ° (Wide-Tele)	
	Min. Working Distance	5 m (Wide-Tele)	
	Aperture Range	F3.5 to Close	
	Focus Mode	Auto / Semiautomatic / Manual	
	WDR	Digital	
	Shutter Time	PAL: 1-1/30,000s / NTSC: 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	
	Enhancement	3D DNR	
<b>Smart function</b>	VCA	Support 4 VCA rule types (Line Crossing, Intrusion, Region Entrance, and Region Exiting), 10 scenes and 8 VCA rules for each scene.	
	Temperature Measurement	Support 3 temperature measurement rule types, 273 presets as scene, 21 rules of each scene (10 points, 10 areas, and 1 line)	
	Temperature range	-20 °C to 150 °C (-4 °C to 302 °F)	
	Temperature accuracy	± 8 °C (14.4 °F)	
	Fire detection	Support 10 fire points	
<b>PTZ</b>	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/Doom Reboot/Doom Adjust/Aux Output	
<b>Network</b>	Main Stream	Optical Light: 50Hz:25fps(1920×1080), 25fps(1280×960), 25fps(1280×720) Optical Light: 60Hz:30fps(1920×1080), 30fps(1280×960), 30fps(1280×720) Thermal: 50fps (640 × 512)	
	Sub stream	50Hz:25fps (704 × 576), 25fps (352 × 288), 25fps (176 × 144) 60Hz:30fps (704 × 480), 30fps (352 × 240), 30fps (176 × 120) Thermal: 50fps (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
<b>Integration</b>	Alarm Input	Up to 7-ch Relay Input (0-5V DC)
	Alarm Output	Up to 2-ch; Support Alarm Linkage
	Alarm Action	Preset/Patrol Scan/Pattern Scan/SD Card Record/Relay Output/Smart capture/FTP upload/Email linkage
	Audio Input	LINE_IN Input/MIC Input; Peak: From 2 to 2.4V[p-p]; Output Impedance: 1KΩ±10%
	Audio Output	Linear Level; Impedance: 600Ω
	Communication Interface	Built-in RJ45; 10M/100M Ethernet Interface
	Onboard Storage	Built-in 64GB SD Card, Support Manual/Alarm Recording
	Analog Video Output	1.0V [p-p]/75Ω, PAL/NTSC/BNC
	RS485	Half-Duplex; HIKVISION, PELCO-P and PELCO-D Self-adaptive
	API	Open-ended API, support ISAPI; Support HIKVISION SDK and Third-party Management Platform
	Client	iVMS-4200
	Web Browser	IE 7+, Chrome 18+, Firefox 5.0+, Safari 5.02+; Multiple Languages
	<b>General</b>	Menu
Wiper		Yes
Power		48V DC/5A, 220W
Work Temperature/Humidity		From -40 °C to 60 °C (-40 °F to 140 °F); Humidity: 90% or Less
Protection Level		IP66 Standard; TVS 6000V Lightning Protection, Surge Protection and Voltage Transient Protection
Dimension		649.2 mm × 438 mm × 261.3 mm (25.56" × 17.24" × 10.29")
Weight		Approx. 60kg (132.3 lb)

## 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 μm detector pitch.

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)
16235 m	5294 m	4059 m	1324 m	2029 m	662 m

## Smart functions Range Table

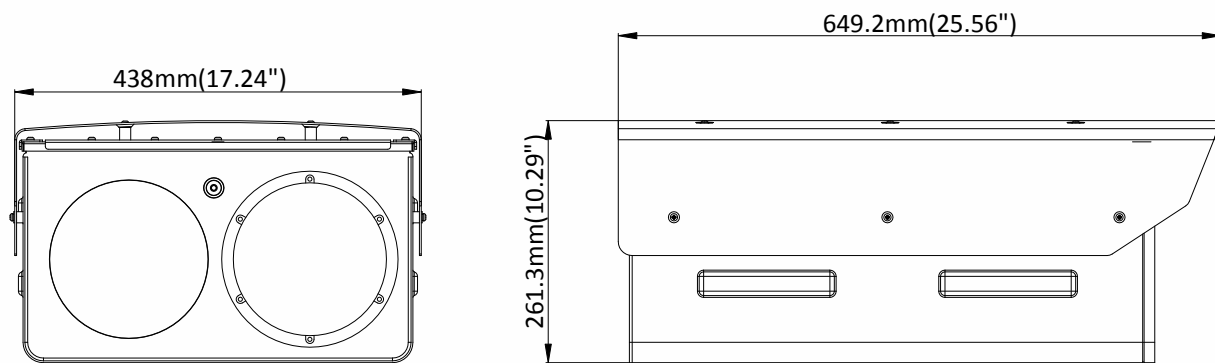
**Note:** The table below is only for reference, the performance varies from model to model, and the specific data is based on 17 μm detector pitch.

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)
5400m	1800m	4212m	2124m	10584m	5292m

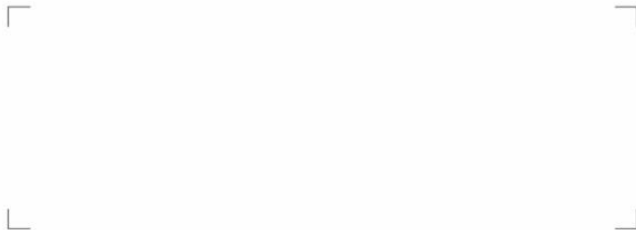
## Order Models

DS-2TD8166-180ZE2F/V2

## Dimensions



Distributed by



## HIKVISION®

### Headquarters

No.555 Qianmo Road, Binjiang District,  
Hangzhou 310051, China  
T +86-571-8807-5998  
overseasbusiness@hikvision.com

**Hikvision USA**  
T +1-909-895-0400  
sales.usa@hikvision.com

**Hikvision Europe**  
T +31-23-55-42-770  
info.eu@hikvision.com

**Hikvision Middle East**  
T +971-4-8816086  
salesme@hikvision.com

**Hikvision Russia**  
T +7-495-669-67-99  
saleru@hikvision.com

**Hikvision India**  
T +91-22-28469900  
sales@pramahikvision.com

**Hikvision Italy**  
T +39-0438-6902  
info.it@hikvision.com

**Hikvision France**  
T +33(0)1-85-330-450  
info.fr@hikvision.com

**Hikvision Spain**  
T +34-91-737-16-55  
info.es@hikvision.com

**Hikvision Poland**  
T +48-22-460-01-50  
poland@hikvision.com

**Hikvision UK**  
T +01628-902140  
support.uk@hikvision.com

**Hikvision Singapore**  
T +65-6684-4718  
sg@hikvision.com

**Hikvision Oceania**  
T +61-2-8599-4233  
salesau@hikvision.com

**Hikvision Canada**  
T +1-909-895-0400  
sales.usa@hikvision.com

**Hikvision Korea**  
T +82-31-731-8841  
sales.korea@hikvision.com

**Hikvision Brazil**  
T +55 11 3318-0050  
Latam.support@hikvision.com

**Hikvision Africa**  
T +27 (10) 0351172  
sale.africa@hikvision.com

**Hikvision Hong Kong**  
T +852-2151-1761