

Specifications

Parameter		Model	DS-2TD8166-180ZE2F
		Thermal & Optical Bi-spectrum Network Stable PTZ Camera	
Thermal module	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	
Optical camera	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	
Smart function	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, over 256 presets as scene, 21 rules of each scene (10 points, 10 regions, 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	
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/Doom Reboot/Doom Adjust/Aux Output	
Network	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.264 (Baseline/Main/High Profile) /MJPEG/MPEG4	

	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,I GMP,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 (0-5V 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 Micro SD/SDHC/SDXC Card Slot, Up to 64GB; 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
	General	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		439 mm × 649 mm × 649 mm (17.28 " × 25.55 " × 25.55 ")
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.

Lens (focal length)	7mm	10mm	15mm	25mm	35mm	50mm	75mm	100 mm	150 mm	180 mm
Detection range (Vehicles)	631m	902m	1353m	2255m	3157m	4510m	6765m	9020m	13529 m	16235 m
Detection range (Humans)	206m	294m	441m	735m	1029m	1471m	2206m	2941m	4412 m	5294 m
Recognition range (Vehicles)	158m	225m	338m	564m	789m	1127m	1691m	2255m	3382 m	4059 m
Recognition range (Humans)	51m	74m	110m	184m	257m	368m	551m	735m	1103 m	1324 m
Identification range (Vehicles)	79m	113m	169m	282m	395m	564m	846m	1127m	1691 m	2029 m
Identification range (Humans)	26m	37m	55m	92m	129m	184m	276m	368m	551 m	662 m