dahua TECHNOLOGY

DH-TPC-SD8320-T

Thermal Network Hybrid Dome Camera

· 336*256 VOx uncooled thermal sensor technology
· Athermalized Lens(thermal),Focus-free
· 1/1.9" 2Megapixel progressive scan Exmor CMOS
· Powerful 30x optical zoom
· Support temperature measurement
· Support Fire detect&alarm
· Max 240°/s pan speed, 360° endless pan rotation
· Up to 300 presets, 5 auto scan, 8 tour, 5 pattern
· 7/2 alarm in/out
· Micro SD memory, IP66

Ultra Series	40mK °C	Fire Detect	(temperature)	Analysis	AC24V	IP66

System Overview

Featuring a dual lens, speed dome camera, this series provides an all-in-one solution for capturing long distance video surveillance for outdoor applications. Together with Thermal and Starlight Technology, the camera is the perfect solution for dark, long rang monitoring applications. The series combines one thermal camera for monitoring in total darkness and one visible camera with starlight feature and motorized lens for confirming details.

Functions

Uncooled Vox Technology

Dahua thermal cameras use uncooled Vox sensor technology . Because of small size and better performance, it's cost-effective solution for thermal security.

High Sensitivity

High thermal sensitivity(<40mK) makes cameras capture more image details and temperature difference information.

Fire Detect&Alarm

With built-in Fire detect function, the camera has the ability to detect fire in a long distance. because thermal camera is sensitive to temperature, so the accuracy of Fire detect will be higher than visible camera. especially useful for forest fire prevention.

Temperature Measurement

Dahua thermal camera (-T Model) can be used for remote temperature monitoring with the possibility to set temperature alarms. Measure the objects' temperature whatever daytime or night. It is ideal for remote monitoring of power generating facilities. It'll trigger an alarm when temperature over threshold. Temperature range is between-40 °C to 550 °C (-40 °F to 1022 °F).

Intelligent Video System (IVS)

With built-in intelligent video analytics, the camera has the ability to detect and analyze moving objects for improved video surveillance. The camera provides optional standard intelligence at the edge allowing detection of multiple object behaviors such as abandoned or missing objects. IVS also supports Tripwire analytics, allowing the camera to detect when a pre-determined line has been crossed.

Auto-tracking

The camera supports auto-tracking. The tracking action can be triggered manually or automatically by defined rules. Once rules are triggered, the camera can zoom in and track the defined target automatically.

Environmental

With a temperature range of-40 °C to +70 °C (-40 °F to +158 °F), the camera is designed for extreme temperature environments. Subjected and certified to rigorous dust and water immersion tests, the IP66 rating makes it suitable for demanding outdoor applications. For enviorments with rain, sleet, snow and fog, an integrated wiper provides users with clear visibility at all times.

Protection

Supporting ±25% input voltage tolerance, this camera suits even the most unstable conditions for outdoor applications. Its 6KV lightning rating provides protectection against the camera and its structure from the effects of lightning.

Onvif PSIA

Technical Specification

Thermal Camera

Image Sensor	Uncooled VOx Microbolometer
Effective Pixels	336(H)x256(V)
Pixel Size	17um
Thermal Sensitivity(NETD)	<40mK@f/1.0
Spectral Range	7~14um
Image Setting	Brightness/Sharpness/ROI/DDE/AGC/FFC/3D DNR
Color Palettes	14(Whitehot/Blackhot/Ironrow/Icefire/ Fusion/Rainbow/Globow/Iconbow1/ Iconbow2 .etc)

Thermal Lens

Lens Type	Fixed		
Focus Control	Athermalized,Focus-free		
Focal Length	25mm	35mm	50mm
Angle of View	13°* 10 °	9.3°* 7.1 °	6.5°* 5 °
Effective Distance① Man(1.8m*0.5m)	D②:820m R③:210m I④:100m	D:1150m R:280m I :140m	D:1500m R:400m I :200m
Effective Distance Vehicle(2.3m*2.3m)	D:2200m R:600m I :300m	D:3000m R:800m I :400m	D:4000m R:1000m I :550m

Visible Camera

Image Sensor	1/1.9" Exmor CMOS
Effective Pixels	1944(H) x 1092(V), 2 Megapixels
Electronic Shutter Speed	1/1 ~ 1/30,000s
Min. Illumination	Color: 0.001Lux@F1.5; B/W: 0.0001Lux@F1.5;
S/N Ratio	More than 56dB
IR Distance	150m
IR On/Off Control	Auto/Manual
IR LEDs	9

Visible Lens

Focal Length	6mm~180mm
Max Aperture	F1.5 ~ F4.3
Angle of View	H: 61.2° ~ 2.32°
Optical Zoom	30x
Focus Control	Auto / Manual
Close Focus Distance	100mm~ 1000mm (328ft~3280ft)

PTZ

Pan/Tilt Range	Pan: 0° ~ 360° endless;Tilt:-20° ~ 90°
Manual Control Speed	Pan: 0.1° ~200° /s; Tilt: 0.1° ~120° /s
Preset Speed	Pan: 0.1° ~240° /s ;Tilt: 0.1° ~200° /s
Preset	300
PTZ Mode	5 Pattern, 8 Tour, Auto Pan, Auto Scan
Speed Setup	Human-oriented focal length/ speed adaptation
Power up Action	Auto restore to previous PTZ and lens status after power failure
Idle Motion	Activate Preset/ Scan/ Tour/ Pattern if there is no command in the specified period
Protocol	DH-SD, Pelco-P/D (Auto recognition)

Video

Compression	H.264(Base profile/Main profile/High profile)/ MJPEG
Frame Rate	Main Stream: Thermal: 1280*1024 (default)/ 720P @30fps Visible: 1080P (default)/720P@30fps
	Sub Stream: Thermal: 640*512 (default)/ 320*256 @15fps Visible: CIF(default)/D1@15fps
Bit Rate Control	CBR / VBR
Bit Rate	H.264: 1280K ~14Mbps
Day/Night	Auto(ICR) / Color / B/W
BLC Mode	BLC / HLC / WDR(120dB)
White Balance	Auto, ATW,Indoor, Outdoor, Manual
Noise Reduction	Ultral DNR
Motion Detetion	Off / On (4 zone, Rectangle)
Region of Interest	off/On (4 zone)
Electronic Image Stabilization (EIS)	NA
Defog	Off/On
Digital Zoom	16x
Flip	180°
Mirror	Off/On
Privacy Masking	Off / On (4 area, Rectangle)

Temperature Measurement

Measurement range	Low Gain:-40°C ~+550°C High Gain:-40°C ~+160°C
Measurement accuracy	Max(±2°C,±2%)
Measurement mode	Spot/Line/Area
Measurement preset	Spot:8 Line:1 Area:8 Support 8 presets simultaneously

Audio

Compression	G.711a/G.711Mu/AAC

Intelligent Function

Auto Tracking	Support
IVS (optional)	Tripwire, Intrusion, Object Detection(People&Vehicle), Abandon detection, Missing detection, Fire detect& alarm .etc.
Tracking Trigger Mode	Manual / Auto (alarm triggered)
Tracking Trigger Event	Targeting, Zoom, Tracking, Recording, Snapshot, Alarm and etc.

Network

Ethernet	RJ-45 (10/100Base-T)
Protocol	IPv4/ IPv6, HTTP, HTTPS, SSL, TCP/IP, UDP, UPnP, ICMP, IGMP, SNMP, RTSP, RTP, SMTP, NTP, DHCP, DNS, PPPOE, DDNS, FTP, IP Filter, QoS, Bonjour, 802.1x
Interoperability	ONVIF PSIA CGI
Streaming method	Unicast / Multicast
Max. User Access	20
Edge Storage	micro SD (128GB) Memory status display (Normal / Error / Active / Formatting / Lock), NAS (Network Attached Storage), Local PC for instant recording
Web Viewer	<IE11, <Chrome44, Firefox
Management Software	Smart PSS, DSS
Smart Phone	Android, Ios

Certifications

Certification	CE (EN 60950:2000) FCC (FCC Part 15 SubpartB)

Intelface

Video Interface	1.0Vp-p/75Ω, PAL / NTSC (HDCVI Optional)
Audio Interface	Input/Output 1 Input / 1 Output
RS485	Support
Alarm	7/2 In/Out

Electrical

Power Supply	24V AC ±25%
Power Consumption	Max. 38W (24V AC, Heater on),

Environmental

Operating Condition	-40°C ~ +70°C (-40°F ~ +158°F) / Less than 95% RH * Start up should be done at above-40°C (-40°F)
Strorage Conditions	-40°C ~ +70°C (-40°F ~ +158°F)) / Less than 95% RH
Ingress Protection	IP66

Construction

Casing	Metal
Dimensions	Φ240mm x 464mm (Φ9.45" x 15.04")
Net Weight	6.8Kg (14.99 lb)
Gross Weight	9.5Kg(20.94 lb)

Note:
① Effective distance values shown are nominal values and should be used as estimates only. Exact value calculations depend on a wide variety of conditions.
② D:Detection
③ R: Recognition
④ I : Identification

Ordering Information

Type	Part Number	Description
DH-TPC-SD8320-T	DH-TPC-SD8320P-TA25 DH-TPC-SD8320N-TA25	Thermal:336*256 25mm lens Visible:2Mp 30X Temperature measurement
	DH-TPC-SD8320P-TA35 DH-TPC-SD8320N-TA35	Thermal:336*256 35mm lens Visible:2Mp 30X Temperature measurement
	DH-TPC-SD8320P-TA50 DH-TPC-SD8320N-TA50	Thermal:336*256 50mm lens Visible:2Mp 30X Temperature measurement

Accessories

Included:

PFA111
Mount Adapter

AC24V/3A
Power Supply

Optional：

PFA140
Power box

PFB300C
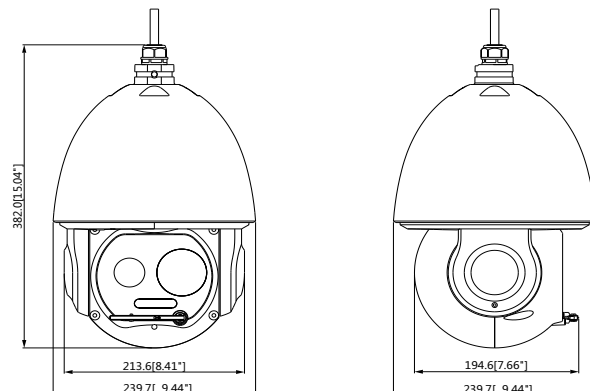Ceiling Mount

PFB303W
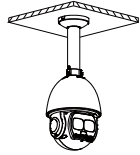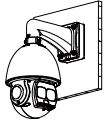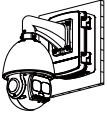Wall Mount

PFA150
Pole Mount

PFA151
Corner Mount
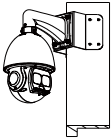
PFA120
Junction Box

Dimensions (mm)

382.0[15.04"]

213.6[8.41"]
239.7[9.44"]

194.6[7.66"]
239.7[9.44"]

Mounting Type

Ceiling Mount	Junction Mount
PFA111 + PFB300C	PFA111 + PFB303W + PFA120
Power Box Mount	Pole Mount
PFA111 + PFB303W + PFA140	PFA111 + PFB303W + PFA150
Corner Mount	Parapet Mount
PFA111 + PFB303W + PFA151	PFA111+ PFB303S