Thermal Network Hybrid Bullet Camera
DTC-2241-24-RAD

Manufactured by

KEY FEATURES

- Heat detection and alarm, tripwire, intrusion, and target filtering
- 1/2.7" 4Megapixel progressive scan (CMOS) 25 fps
- H.265, Two-way Audio, I/O PoE, Micro SD
- Vanadium oxide uncooled focal plane detector
- RAD-SENSOR (FOV Optional): 24°, 50.6°
- Temperature measurement range of –20 °C to +550 °C

DETEC NEXT FIRE

- Radiometric thermal camera module with both temperature and radiant energy measurement customized for use with Detec Next RAD Camera License on Detec Next VMS.
- Edge analysis on camera to be used with other types of Detec Next camera licenses.
- Reliable temperature exception alarm function
- Advanced fire detection algorithm
- Very early notification of potential fires to the fire service/control center, for use at i.e:
  - Detection in larger wooden building areas
  - Preventive fire detection and monitoring at garbage facilities

- Vanadium oxide uncooled focal plane detector.
- 1/2.7" 4Megapixel progressive scan CMOS.
- Heat detection and alarm, tripwire, intrusion, and target filtering.
- Junction box optional.
- Illumination distance is up to 35 m.
- IP67 rated.
- Wide input voltage 12 VDC ± 20%, and PoE power supply.
- Smart linkage of white light and audio.
- Dual image fusion (visible and thermal images)
- Temperature measurement range of –20 °C to +550 °C.

Featuring thermal and visible channels, Thermal Network Hybrid Bullet Camera offers various AI functions such as tripwire, intrusion, call detection, smoking detection, heat detection and temperature monitoring. It can be used in short-distance monitoring scenes such as perimeter protection and heat monitoring, which provides an all-in-one video surveillance solution for small and medium scenes

Technical Specification

Thermal

Detector Type	Vanadium oxide uncooled focal plane detector
Effective Pixels	256 (H) × 192 (V)
Pixel Pitch	12 μm
Spectral Range	8 μm–14 μm
Sensitivity (NETD)	≤40 mK@f/1.0
Focal Length	3.5 mm; 7 mm
Field of View	3.5 mm: H: 50.6°; V: 37.8° 7 mm: H: 24°; V: 18°
Thermal Focus Control	Fixed-focal
Close Focus Distance	3.5 mm: 0.5 m (1.64 ft) 7 mm: 1 m (3.28 ft)
Detection Distance①	3.5 mm: Vehicle: 449 m (1,472.17 ft); Human: 146 m (479.00 ft) 7 mm: Vehicle: 897 m (2,944.34 ft); Human: 292 m (958.01 ft)
Recognition Distance②	3.5 mm: Vehicle: 110 m (361.10 ft); Human: 38 m (124.67 ft) 7 mm: Vehicle: 220 m (722.20 ft); Human: 75 m (246.06 f)
Identification Distance③	3.5 mm: Vehicle: 56 m (182.27 ft); Human: 19 m (62.34 ft) 7 mm: Vehicle: 111 m (364.54 ft); Human: 38 m (124.67 ft)

Note:
①Detection Distance: Detects objects, but cannot recognize their characteristics (objects must cover more than 3.6 pixels of the image).
②Recognition Distance: Classifies objects into general categories, such as human, vehicle (the object must cover more than 14 pixels of the image).
③Identification Distance: Classifies objects into specific categories based on their characteristics, such as enginee truck, car (the object must cover more than 28 pixels of the image)

Digital Detail Enhancement (DDE)	Yes
Thermal Image Stabilization	Electronic Image Stabilization (EIS)
Digital Zoom	16 levels
Thermal AGC	Auto/Manual
Thermal Noise Reduction	2D NR/3D NR
Image Flip	90°; 180°; 270°
Color Palettes	18 (white hot/black hot/fusion/rainbow/golden autumn/midday/iron red/amber/jade/sunset/icefire/ painting/pomegranate/emerald /spring/summer/ autumn/winter)
Temperature Measurement Range	High temperature mode: 0 °C to +550 °C (+32 °F to +1022 °F) Low temperature mode: –20 °C to +150 °C (–4 °F to +302 °F) Auto mode: –20 °C to +550 °C (–4 °F to +1022 °F)
Temperature Measurement Accuracy	Max. (±2 °C, ±2%); (Temperature: –20 °C to +60 °C)
Temperature Measurement Mode	Spot: 12 Line: 12 Area: 12 Supports 12 rules simultaneously

Visible

Image Sensor	1/2.7" CMOS
Max. Resolution	2336 (H) × 1752 (V)
Pixel	4 MP
Horizontal Definition	≥1600 TVL
Min. Illumination	Color: 0.05 lux B/W: 0.005 lux 0 lux (IR on)

Visible AGC	Auto/Manual
Visible Noise Reduction	2D NR/3D NR
S/N Ratio	≥55 dB
White Balance	Auto; indoor; outdoor; tracking; manual; natural; street lamp
Defog	Electronic defog
Electronic Shutter Speed	1 s–1/30,000 s (auto/manual)
BLC	Yes
WDR	DWDR
HLC	Yes
Day/Night	Auto (ICR); Color; B/W
Iris Control	Fixed
Image Flip	90°; 180°; 270°
Exposure Compensation	Yes
Visible Focus Control	Fixed-focal
Focal Length	Fixed-focal
Field of View	4 mm: H: 71.2°; V: 52° 8 mm: H: 33.4°; V: 25°
Close Focus Distance	4 mm: 1 m (3.28 ft) 8 mm: 2.5 m (8.20 ft)
Aperture	4 mm: F1.6 8 mm: F2.0

Audio and Video

Video Compression	H.265; H.264; H.264H
Resolution	Thermal: Main stream: 1.3M (1280 × 960); XVGA (1024 × 768); VGA (640 ×480/256 × 192); 1280 × 960 (default) Sub stream: VGA (640 ×480/256 × 192); 256 × 192 (default) Visible: Main stream: 2336 × 1752; 1080p (1920 × 1080); 720p (1280 × 720); D1 (704 × 576); 2336 × 1752 (default) Sub stream: 720p (1280 × 720); D1 (704 × 576); CIF (352 × 288); 352 × 288 (default)
Video Frame Rate	Thermal: Main stream: 1 fps–25 fps, 25 fps by default Sub stream: 1 fps–25 fps, 15 fps by default Visible: Main stream: 1 fps–25 fps, 25 fps by default Sub stream: 1 fps–25 fps, 15 fps by default
Audio Compression	G.711a; G.711mu; PCM
Image Encoding Format	JPEG

Function

Two-way Audio	Yes
Sound and Light Alarm	Yes
Network Protocol	IHTTPS; HTTP; TCP; ARP; RTSP; RTP; UDP; RTCP; SMTP; FTP; DHCP; DNS; DDNS; PPPOE; IPv4/v6; SNMP; QoS; UPnP; NTP
Region of Interest (RoI)	Yes
Storage	Micro SD card
Micro SD Card (Max.)	256 GB
Interoperability	ONVIF; CGI; DaHua SDK
Browser	IE: IE 9 and later (Edge is not supported) Chrome: 42 and earlier Firefox: 42 and earlier
User/Host	Up to 20 (total bandwidth: 64 MB)
Security	Authorized username and password; attached MAC address; encrypted HTTPS; IEEE 802.1x; controlled network access
User Management	Up to 10 users; supports multi-level user permissions (2 levels): management group and user group
Malfunction Detection	Network disconnection detection; IP conflict detection; memory card state detection; memory space detection
Fusion Mode	Warm color; cold color; fuse with iron oxide red
PIP	Yes (Intelligence automatically turns off when PIP is on)

Intelligence

Heat Detection	Yes
Cold/Hot Spot Trace	Yes
IVS (Perimeter Protection	Yes. Supports tripwire and intrusion.
Target Distinction	Human/Vehicle Classification
Target Tracking	Yes
Smoke Detection	Yes
Call Detection	Yes

Port

Analog Output	1 × CVBS output; BNC port (not supported by the device with a junction box)
Network Port	1 × RJ-45 (10/100 Base-T)
Alarm Input	2
Alarm Output	2
Audio Input	1
Audio Output	1
RS-485	1

Power

Power Supply	12 VDC ± 20%, PoE (802.3af), ePoE
Power Consumption	Basic: 5 W (12 VDC); 8.9 W (PoE) Max: 15 W (12 VDC); 18 W (PoE)
ePoE	Yes

Corner Mount	Wall Mount	Pole Mount(Vertical)

Tripod Mount

103.8 [4.09]
96.7 [3.81]

98.8 [3.89]
266.5 [10.49]

291.3 [11.47]

70.0 [2.76]
70.0 [2.76]
4-Φ4.5 [Φ0.18]