

TR-TD2618-T1A

Thermographic Network Bullet Camera



Key Features

Dual-vision fusion: Thermal + Optical

High quality imaging with 5 MP resolution

160 × 120 resolution, 12 μm, VOx UFPA, NETD < 25 mK (25 °C, F# = 1.0)

High accuracy temperature exception alarm, -20 °C to 150 °C (-4 °F to 302 °F), ± 8 °C (±14.4 °F)

Image processing technology: linear, histogram, self-adaptive thermal AGC mode, DDE, 3D DNR

Support smoking detection algorithm

Support sun-reflection filter

Water and dust resistant (IP67) and vandal-resistant (IK10)

Introduction

The Thermographic Network Bullet Camera combines thermal imaging with high-resolution optical monitoring, delivering both clear visual details and reliable detection under all conditions. This powerful integration not only ensures precise temperature measurement and early fire prevention but also enhances perimeter protection and situational awareness. Ideal for manufacturing supervision of pyrophoric materials, electrical substations, and hydropower stations, it provides real-time alarms to minimize risks and safeguard both assets and operations.

Specifications

Thermal sensor

Image Sensor	Vanadium Oxide Uncooled Focal Plane Arrays
Resolution	160 × 120
Pixel Pitch	12 μm
Spectral Range	8 μm to 14 μm
NETD	≤25 mK (25°C, F1.0)
Focal Length	6.9mm
IFOV	1.74mrad
Field of View	24.9° × 18.7° (H × V)
Min. Focusing Distance	1 m
Aperture	F1.0
Digital Zoom	×2, ×4

Optical Module

Sensor Size	1/2.7" Progressive Scan CMOS
Max. Resolution	2688 × 1944
Color Sensitivity	Color: 0.0089 Lux @(F1.6,AGC ON) ,0 Lux with IR
Shutter Speed	1s to 1/100,000s
Focal Length	8 mm
Field of View	39.4° × 22° (H × V)
Aperture (Range)	F1.6

WDR	120 dB
Image Effect	
Bi-spectrum Image Fusion	Display the details of optical channel on thermal channel
Picture in Picture	Display partial image of thermal channel on the full screen of optical channel
Target Coloration	Yes. Supported in white hot and black hot mode.
Illuminator	
Light Supplement	Hybrid (IR, White light or Smart mode)
IR Distance	Up to 60m
Audible and Visual Alarm	
White Light Range	Up to 60 m
Visual Alarm	Yes. White light alarm with adjustable flashing frequencies
Smart Function	
VCA	4 VCA rule types (line crossing, intrusion, region entrance, and region exiting), up to 8 VCA rules in total.
Temperature Measurement	3 temperature measurement rule types (point, area, line), 21 rules in total
Temperature Range	-20 °C to 150 °C (-4 °F to 302 °F)
Temperature Accuracy	±8°C (±14.4°F)
Fire Detection	Dynamic fire detection, up to 10 fire points detectable
Video and Audio	
Main Stream	Thermal: 25 fps (1280 × 720, 704 × 576, 640 × 512, 320 × 240) Optical: 50 Hz: 25 fps (2688 × 1944, 2688 × 1520, 1920 × 1080, 1280 × 720) 60Hz: 30 fps (2688 × 1944, 2688 × 1520, 1920 × 1080, 1280 × 720)
Sub-stream	Thermal: 25 fps (704 × 576, 640 × 512, 320 × 240) Optical: 50 Hz: 25 fps (704 × 576, 352 × 288) 60 Hz: 30 fps (704 × 480, 352 × 240)
Video Compression	Main Stream: H.265/H.264 Sub-Stream: H.265/H.264/MJPEG
Audio Compression	G.722.1/ G.711ulaw/ G.711a law/MP2L2/ G.726/PCM
Video and Image	
Color Palettes	17 types (White hot, Black hot, Fusion 1, Rainbow, Fusion 2, Ironbow 1, Ironbow 2, Sepia, Color 1, Color 2, Ice fire, Rain, Red hot, Green hot, Dark blue, Winter, Summer)
Network	
Protocols	IPv4/IPv6, 802.1x, Qos, FTP, SMTP, UPnP, SNMP, DNS, DDNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMP, ICMP, DHCP, PPPoE, Bonjour, SFTP, SRTP
Network Storage	NAS (NFS, SMB/CIFS), Auto Network Replenishment (ANR)
API	ISAPI, SDK, and third-party management platform, Open Network Video Interface (Profile S, Profile G, Profile T, Profile M), OTAP

Simultaneous Live View	Up to 20 channels
User/Host level	Up to 32 users, 3 levels: Administrator, Operator, User
Client	VSP
Interface	
Alarm Input	2, alarm input (0-5 VDC)
Alarm Output	2, alarm output (alarm response actions configurable)
Alarm Action	SD recording/Relay output/Smart capture/FTP upload/Email linkage
Audio Input	1, 3.5 mm Mic in/Line in interface Line input: 2 - 2.4 V [p-p], output impedance: 1 K Ω $\pm$ 10%
Audio Output	Linear level, impedance: 600 Ω
Communication Interface	1, RJ45 10 M/100 M Self-adaptive Ethernet interface. 1, RS-485 interface (half duplex)
General	
Web Client Language	32 languages English, Russian, Estonian, Bulgarian, Hungarian, Greek, German, Italian, Czech, Slovak, French, Polish, Dutch, Portuguese, Spanish, Romanian, Danish, Swedish, Norwegian, Finnish, Croatian, Slovenian, Serbian, Turkish, Korean, Traditional Chinese, Thai, Vietnamese, Japanese, Latvian, Lithuanian, Portuguese (Brazil)
Power Supply	12 VDC $\pm$ 25%, two-core terminal block PoE (802.3at, class 4)
Power Consumption	12 VDC $\pm$ 25%: 1.67A to 2.5 A, max. 24W PoE (802.3at, class 4): 42.5 V to 57 V, 0.56 A to 0.42 A, max. 24W
Working Temperature/ Humidity	Temperature: -40°C to 65°C (-40°F to 149°F) Humidity: 95% or less
Protection Level	IP67 Standard, IK10 TVS 6000V lightning protection, surge protection, voltage transient protection
Dimensions	349.1 mm $\times$ 113 mm $\times$ 105mm
Weight	1710 g
Detection Range Table	
VCA Range for Humans	70 m
VCA Range for Vehicles	210 m
Approval	
Protection	IP67: IEC 60529-2013 IK10: IEC 62262-2002

▪ Range Table

VCA Range (Humans: 1.8 × 0.5 m)	VCA Range (Vehicles: 1.4 × 4.0 m)	Temperature Measurement (Object: 0.5 × 0.5 m)	Temperature Measurement (Object: 0.2 × 0.2 m)	Fire Detection (Object: 0.5 × 0.5 m)	Smoking Detection
70 m	210 m	58 m	23.3m	48 m	10.35m

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Detection Range (Humans: 1.8 × 0.5 m)	Detection Range (Vehicles: 1.4 × 4.0 m)	Recognition Range (Humans: 1.8 × 0.5 m)	Recognition Range (Vehicles: 1.4 × 4.0 m)	Identification Range (Humans: 1.8 × 0.5 m)	Identification Range (Vehicles: 1.4 × 4.0 m)
287m	881m	72m	220m	36m	110m

▪ Dimension

