MT-TPC6400V2-AI

Thermal AI Network Bullet Camera

AI Thermal Analytics	**High Sensitivity**	**Flexible Optics**	**Professional Grade**
Heat detection, tripwire, intrusion, human/vehicle classification	Vanadium oxide uncooled FPA, ≤35 mK NETD, 400×300 pixels	7.5 / 13 / 25 / 35 mm lens options, up to 735 m IVS range	IP67, wide voltage 12 VDC ± 20%, PoE, surge protection 6 kV

Advanced Thermal AI Perimeter Protection

Featuring a vanadium oxide uncooled focal plane detector with 17 µm pixel pitch and multiple lens options, this thermal bullet camera delivers accurate heat detection and AI-powered perimeter protection for medium-to-long distance outdoor applications. Intelligent human/vehicle classification reduces false alarms, while 18 color palettes and digital detail enhancement ensure optimal image analysis in any condition.

FEATURES

• Vanadium oxide uncooled focal plane detector, 400×300 effective pixels, 17 µm pixel pitch

• AI functions: heat detection, tripwire, intrusion, and human/vehicle classification

• Multiple lens options: 7.5 mm / 13 mm / 25 mm / 35 mm fixed-focal

• High thermal sensitivity ≤35 mK (NETD @f/1.0)

• 18 color palettes including white hot, black hot, fusion, rainbow, and more

• Digital Detail Enhancement (DDE) and 2D/3D noise reduction

• H.265/H.264 video compression, supports up to 50/60 fps

• Cold/hot spot trace for precise temperature monitoring

• Wide input voltage 12 VDC ± 20%, PoE (802.3af), Long-distance PoE

• Alarm I/O (2 in / 2 out), audio I/O (1 in / 1 out), RS-485

• Micro SD card storage up to 512 GB

• IP67 rated, surge protection 6 kV, operating range –30 °C to +70 °C

TECHNICAL SPECIFICATIONS

Intelligent

Heat Detection	Yes
Cold/Hot Spot Trace	Yes
Perimeter Protection	Tripwire and intrusion
Target Distinction	Human / Vehicle classification
Heat Detection Distance	7.5 mm: 75 m | 13 mm: 128 m | 25 mm: 250 m | 35 mm: 350 m
IVS Distance (Vehicle)	7.5 mm: 157.5 m | 13 mm: 273 m | 25 mm: 525 m | 35 mm: 735 m
IVS Distance (Human)	7.5 mm: 52.5 m | 13 mm: 91 m | 25 mm: 175 m | 35 mm: 245 m
DRI - Detection (Vehicle)	7.5 mm: 676 m | 13 mm: 1,173 m | 25 mm: 2,255 m | 35 mm: 3,157 m
DRI - Detection (Human)	7.5 mm: 221 m | 13 mm: 382 m | 25 mm: 735 m | 35 mm: 1,029 m
DRI - Recognition (Vehicle)	7.5 mm: 169 m | 13 mm: 293 m | 25 mm: 564 m | 35 mm: 789 m
DRI - Recognition (Human)	7.5 mm: 55 m | 13 mm: 96 m | 25 mm: 184 m | 35 mm: 257 m
DRI - Identification (Vehicle)	7.5 mm: 85 m | 13 mm: 147 m | 25 mm: 282 m | 35 mm: 395 m
DRI - Identification (Human)	7.5 mm: 28 m | 13 mm: 48 m | 25 mm: 92 m | 35 mm: 129 m

Power

Power Supply	12 VDC ± 20%, PoE (802.3af), Long-distance PoE
Power Consumption	Basic: 5.0 W (12 VDC) / 5.5 W (PoE); Max: 13 W (heater on, 12 VDC) / 14 W (heater on, PoE)

Environment

Operating Temperature	−30 °C to +70 °C (−22 °F to +158 °F)
Operating Humidity	≤95%
Storage Temperature	−30 °C to +70 °C (−40 °F to +158 °F)

Certifications

Certifications	CE; FCC

Thermal Detector

Detector Type	Vanadium oxide uncooled focal plane detector
Effective Pixels	400 (H) × 300 (V)
Pixel Pitch	17 μm
Spectral Range	8 μm – 14 μm
Sensitivity (NETD)	≤35 mK (@f/1.0)
Focus Control	Fixed-focal
Aperture	F1.0
Focal Length	7.5 mm; 13 mm; 25 mm; 35 mm
Field of View	7.5 mm: H:53.5° V:39.5° | 13 mm: H:30.4° V:22.5° | 25 mm: H:15.5° V:11.6° | 35 mm: H:11.1° V:8.3°
Close Focus Distance	7.5 mm: 1 m | 13 mm: 3 m | 25 mm: 10 m | 35 mm: 20 m
Digital Detail Enhancement (DDE)	Yes
Thermal AGC	Auto / Manual
Thermal Noise Reduction	2D NR / 3D NR
Image Flip	180°
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)

Video

Video Compression	H.265; H.264; H.264H; H.264B; MJPEG
Resolution (Main Stream)	1280×1024; 1280×960; 1280×720; 400×300 (default: 1280×960)
Resolution (Sub Stream)	640×512; 640×480; 400×300 (default: 400×300)
Frame Rate (50 Hz)	Main: 1–50 fps (25 fps default); Sub: 1–50 fps (15 fps default)
Frame Rate (60 Hz)	Main: 1–60 fps (30 fps default); Sub: 1–60 fps (15 fps default)
Image Encoding Format	JPEG

Audio

Audio Compression	G.711a; G.711mu; AAC; PCM

Network

Network Port	1 × RJ-45 (10/100 Base-T)
Protocol	HTTP; HTTPS; TCP; ARP; RTSP; RTP; UDP; RTCP; SMTP; FTP; DHCP; DNS; DDNS; PPPoE; IPv4/v6; SNMP; QoS; UPnP; NTP
Interoperability	ONVIF; CGI
Browser	IE; Firefox; Chrome
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 20 users; multi-level permissions (2 levels): management group and user group
Malfunction Detection	Network disconnection; IP conflict; memory card state; memory space detection
Storage	FTP; Micro SD card (optional, max 512 GB)

Structure

Protection	IP67
Reliability	Surge protection: 6 kV; Air discharge: 15 kV; Contact discharge: 8 kV
Product Dimensions	291 mm × 103 mm × 97 mm (11.46" × 4.06" × 3.82")
Net Weight	≤1.4 kg (3.09 lb)
Gross Weight	≤1.9 kg (4.19 lb)
Bracket	Included

Port

Analog Output	1 × CVBS output (BNC)
Alarm Input	2
Alarm Output	2
Audio Input	1
Audio Output	1
RS-485	1