Dahua
TECHNOLOGY

DH-TPC-AT5401-T

Thermal Network Online Thermography Camera

- Adopts an industry-leading vanadium oxide uncooled focal plane detector that provides high sensitivity and high image quality.
- Features spot temperature measurement, line temperature measure ment and area temperature measurement. Each type supports up to 12 measurement rules.
- Supports IP allowlist and blocklist, MAC allowlist and blocklist, multiple-authority user management, and user-friendly monitoring safety and permission management.
- H.265: Low-stream and fast transmission.
- Dahua 3rd-generation protocol: Easy for secondary development.
- Compact, light, power-efficient and easy for third-party integration.
- View videos on the web, app, PC and more.
- Supports up to 18 color palettes such as white hot, black hot, fusion, rainbow, globow, ironbow1, ironbow2, sepia, spring, summer, autumn and winter.

Series Overview

The thermal network online thermography camera provides a professional temperature measurement solution. It supports 18 color palettes and non-contact temperature measurement. It is applicable for use in indoor and outdoor scenarios with no ambient illumination and industrial scenarios that need to actively measure temperatures such as with the energy industry. The camera is compact, light, power-efficient and easy for third-party integration.

Functions

Vanadium Oxide Uncooled Detector

Adopts a vanadium oxide uncooled focal plane detector with compact volume and high thermal sensitivity (NETD). It accurately captures image details and detects temperature differences.

Temperature Measurement

Uses a self-developed temperature measurement technology to maintain high accuracy of temperature measurements even in complicated scenarios, regardless of changes in the climate and distances.

Ultra-low Power Consumption

Typical power consumption is less than 2 W in general scenarios.

Scene

Applicable to the non-contact temperature measurement in industrial scenarios such as the energy industry.

Technical Specification

General

Appearance	Online thermography
Type	Radiometry

Thermal

Detector Type	Vanadium oxide uncooled focal plane detector
Effective Pixels	400 × 300
Pixel Pitch	17 μm
Spectral Range	8 μm –14 μm
Thermal Sensitivity (NETD)	≤35 mK@f/1.0
Thermal Focal Length	7.5 mm; 13 mm; 25 mm
Thermal Field of View	7.5 mm (H: 51.2°; V: 38.4°) 13 mm (H: 30.4°; V: 22.5°) 25 mm (H: 15.5°; V: 11.7°)
Thermal Focus Control	Athermalized
Thermal Aperture	F1.0
Digital Detail Enhancement (DDE)	Yes
Thermal Digital Zoom	19×
Thermal AGC	Auto/Manual
Thermal Noise Reduction	2D NR/3D NR
Thermal Image Flip	180°/Mirror

Color Palettes	18 (white hot/black hot/fusion/rainbow/globow/ironbow1/ironbow2/sepia/color1/color2/icefire/rain/red hot/green hot /spring/summer/autumn/winter)
Temperature Measurement Range	Low-temp mode: −20 °C to +150 °C (−4 °F to +302 °F) High-temp mode: 0 °C to +550 °C (+30 °F to +1022 °F)
Temperature Measurement Error	Max.: ±2 °C, ± 2% (±3.6 °F, ± 2%); Operating Temperature: −20 °C to +60 °C (−4 °F to 140 °F)
Temperature Measurement Mode	Click the target on the live view interface and the temperature will be displayed immediately Spot temperature measurement: 12 rules; area temperature measurement: 12 rules; line measurement lines: 12 rules Supports temperature alarm Displays functions such as isotherm and color code Supports temperature unit configuration (Celsius/Fahrenheit) Supports real-time temperature analysis and temperature history search

Audio and Video

Video Compression	H.265; H.264M; H.264H; H.264B
Resolution	Main stream: 1280 × 1024; 1280 × 960 (default); 1280 × 720; 400 x 300 Sub stream: 640 × 512; 640 × 480; 400 × 300 (default)
Video Frame Rate	Main stream: 1 fps–25 fps (adjustable, 25 fps by default) Sub stream: 1 fps–25 fps (adjustable, 15 fps by default)
Audio Encoding	NA
Image Encoding Format	JPEG

Function

Two-way Audio	NA
Sound and Light Alarm	NA
Network Protocol	HTTP; TCP; ARP; RTSP; RTP; UDP; RTCP; SMTP; FTP; DHCP; DNS; DDNS; IPV4; NTP
Region of Interest (RoI)	Yes (customizable)
Storage	Micro SD card storage (max. 256 GB)
Interoperability	ONVIF; Dahua SDK
Browser	IE: IE8 and later Chrome: 42 and earlier Firefox: 42 and earlier
User/Host	6
Security	Authorized username and password, MAC address binding, HTTPS encryption, IEEE 802.1x, and network access control
User Management	Up to 6 users; supports multi-level user permissions: management group and user group
Malfunction Detection	Network disconnection detection; IP conflict detection; memory card state detection; memory space detection

Intelligence

Fire Detection	NA
Cold/Hot Spot Trace	Auto tracking of hot spot and cold spot
Smoking Detection	NA
Call Detection	NA

Port

Analog Output	NA
Network Port	1 × RJ-45 (10/100 Base-T)
Alarm Input	2
Alarm Output	1
Alarm Linkage	Triggering on-off value output; email; snapshot
Alarm Event	Temperature alarm; network exception
Audio Input	NA
Audio Output	NA
RS-485	1

Power

Power Supply	12 V DC; PoE
Power Consumption	< 2 W

Environment

Operating Temperature	−20 °C to +60 °C (−4 °F to +140 °F)
Operating Humidity	≤ 90%
Storage Temperature	−30 °C to +60 °C (−22 °F to +140 °F)
Environment Self-Adaption	NA

Structure

Protection	IP54
Product Dimensions	50 mm × 50 mm × 85 mm (1.97" × 1.97" × 3.35") (L × W × H) (len excluded)
Packaging Dimensions	166 mm × 160 mm × 94 mm (6.54" × 6.30" × 3.70") (L × W × H)
Net Weight	≤ 300 g (0.66 lb)
Gross Weight	≤ 520 g (1.45 lb)
Installation	Integrated installation (1/4" standard port)
Power Adapter	Included
Lens	Included
Bracket	1/4" thread tripod

Ordering Information

Type	Model	Description
Radiometry	DH-TPC-AT5401P-TB7	Thermal Network Online Thermography Camera
	DH-TPC-AT5401P-TB13	Thermal Network Online Thermography Camera
	DH-TPC-AT5401P-TB25	Thermal Network Online Thermography Camera
	DH-TPC-AT5401N-TB7	Thermal Network Online Thermography Camera
	DH-TPC-AT5401N-TB13	Thermal Network Online Thermography Camera
	DH-TPC-AT5401N-TB25	Thermal Network Online Thermography Camera

Dimensions (mm[inch])