Kaiyang Series
Handheld Thermal Camera T300/600

InfiRay Kaiyang T Series Handheld Thermal Camera is embedded with the self-developed VOx infrared detector with high performance, resolution and sensitivity. It is our first infrared thermal camera with auto-focusing function and Interchangeable lens. The powerful hardware configuration shines in application fields such as production equipment inspection, manufacturing process inspection, and metallurgy and chemical industry. More breakthroughs have been achieved in terms of software functions, including smart shooting (inspection task package), smart database management (picture retrieval, comparison and analysis), and smart diagnosis, providing comprehensive and efficient inspection solutions for users in the power industry.

Efficient Inspection Solution

01

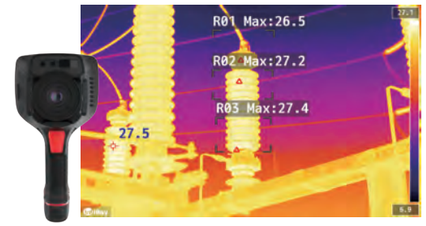
Comprehensive Leading Thermal Imaging Performance

Make Inspection Efficient, Clear, and Accurate

384×288/640×512 High Infrared Resolution, 50mK High Thermal Sensitivity

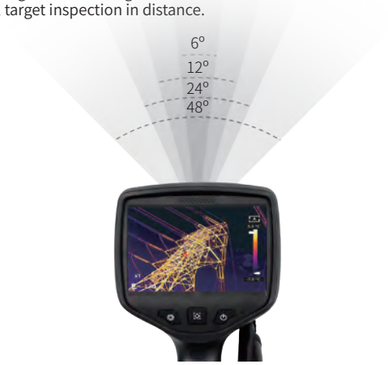
Kaiyang T Series offers two solutions, T300 and T600. T300 is cost-effective for daily and some fine inspections, while T600 with higher resolution can fully meet the most demanding professional requirements for fine inspection.

Both T300 and T600 have ultra-high thermal sensitivity of 50mK, highlighting more temperature details and finding out the potential risks that are difficult to find by low-sensitivity equipment during inspection.



Various Lenses from Wide-angle to Long-focus is Optional, Suitable for Multiple Scenarios

Kaiyang T Series has replaceable lenses. Various lens clusters from wide angle to long focus are provided for engineers to cope with all kinds of thermal imaging applications. They can conduct fast checking with wide-angle lens around near area and can deal with small target inspection in distance.



Fully Automatic Infrared Focusing System, Fast for Improving Efficiency

The newly introduced automatic infrared focusing system realizes quick and accurate focusing on the target. It enables engineers to focus and take pictures quickly with only one hand in a complex environment, thereby improving work efficiency and safety.

Optional Extended Temperature Measurement Range up to 2,000°C

It can fully meet the inspection requirements of various high-temperature targets and cover most industrial application scenarios.

02

Combining Multiple Advantages Together

Classic Product Worth Every Penny

5-inch Touch Screen, Intuitive and Easy-to-operate

Larger display brings clearer view and more accurate operation. It is convenient to use point/line/area temperature measuring tools on site for efficient and clear observation and analysis of targets.

5,000,000-pixel Visible Light Camera, Recording Inspection Results with Dual-spectrum

Kaiyang T Series supports 4 image modes, including infrared, PIP (picture-in-picture), dual-spectrum fusion, and visible light. They are integrated to efficiently find targets and record visible light at the same time for detailed analysis of site conditions.

More Extended Functions

WIFI

Kaiyang T Series has flexible and diverse file and video transmission modes, including WiFi, HDMI and USB.Multiple functions are available, such as Optional, Bluetooth, laser rangefinding, audible and visual alarm, so as to improve the speed and efficiency of inspection and maintenance.

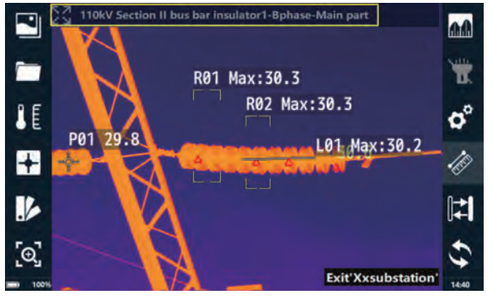
03

Professional and Diverse Software Functions

Smart Equipment to Improve Efficiency

Smart Shooting - Power Inspection Task Package

The chart of the inspection task can be imported in advance to automatically generate the inspection task package. It can save the working effort by saving the photos automatically according to the naming rules in the inspection task package.



Database Management - Image Retrieval, Comparison, and Analysis

Kaiyang T Series supports intelligent database management to enable the functions of equipment image retrieval and equipment status comparison and analysis. The data are traceable as the basis for equipment status prediction reducing misjudgment.

Generation Test Reports Automatically

Click for professional report. The data processing cost and learning cost for users are greatly reduced.

Application Fields

Transmission Inspection | Distribution Inspection | Distribution patrol inspection | Metallurgy and Petrochemical Industry | Production and Manufacture

Main Specifications

Model	T600	T300
Version	Overseas	
Detector Type	Uncooled VOx IRFPA	
Detector Resolution	640×512	384×288
Thermal sensitivity/NETD	<50mK	
Spatial resolution(IFOV)	0.68mrad(with 24°×18°lens)	1.31mrad(with 24°× 18° lens)
	1.30mrad(with 48°× 36°lens)	2.6mrad(with 48°×36°lens)
	0.34mrad(with 12°×9°lens)	0.68mrad(with 12°× 9°lens)
	0.17mrad(with 6°×4.5°lens)	0.34mrad(with 6°× 4.5°lens)
Lens	Standard：24°, Optional：48°, 12°, 6°	
Imaging Distance	0.3m~∞(with 48°lens)；0.5m~∞(with 24°lens)；1m~∞(with 12°lens)；4m~∞(with 6°lens)；	
Standard temperature measurement range	-20°C~150°C(low temperature mode),0°C~410°C(medium temperature mode),300°C~650°C (high temperature mode)	
Optional temperature measurement range	300°C~2000°C(high temperature mode)	
Measurement accuracy	±2°C or ±2% of reading	
Measurement mode	Track the highest temperature/lowest temperature of the full screen	
Custom temperature measurement analysis	Support up to 10 points, 10 areas, 5 lines at the same time, with the highest, lowest and average temperature.	
Temperature difference	Auto calculate the temperature difference of the same analysis	
Digital camera	built-in 5MP digital camera，with LED lamp	
Electric torch	Suppport	
Laser	Laser pointer and laser range finding【Distance：0.3m~40m, accuracy：±(1.5cm+5‰ of reading)】	
Focus mode	Auto/manual/electic	
Lens replacement mode	Direct clamping (Increase energy transmittance)	
Display	5-inch touch screen, with 800*480 pixels	
Image mode	Thermal, dual-spectrum fusion, visible light, PIP	
Color palettes	10 kinds	
Temperature Scale	Auto/Manual	
Digital zoom	1×,2×,4×,8×	
Isotherm	Support	
Text annotation	Select a text annotation from the preset list, which can be edited in the thermal camera	
Voice annotation	Support voice annotation and be saved along with the image	
QR-code scanning	Supports scanning and reading QR code strings	
Language	Simplified Chinese, English, Japanese, Polish, Russian, Korean, Hungarian, Brazilian Portuguese, German, French, Spanish, Italian, Turkish, Traditional Chinese	
Wi-Fi	Thermal image transfer to Mobiel phone/PC via Wi-Fi	
GPS	Optional auto add location information to the image	
Bluetooth	Listen to audio information through Bluetooth headsets	
Shutter correction	Auto/Manual	
Emissivity settings	0.01-1.00, step length 0.01, with emissivity of common materials	
Atmospheric transfer correction	Auto, based on the input value of distance, atmospheric temperature and RH	
Alarm type	Above audible and visual alarm/below audible and visual alarm	
Smart image capture	Support patrol task package, support auto image naming	
Image super resolution	4× (1280×960)	4× (768×576)
Storage mode	32G SD card (able to save about 10000 thermal images), expandable to128G	
Sync storage settings	Save both visual and thermal images	
Image capture mode	General/power distribution	
IR image format	JPG/PNG/JPG of State Grid standard(all with temperature data)	
Visual iamge format	JPG/PNG	
IR video format	H.264/IRV radiometric IR video	
Data export	SD memory card	
Video output	HDMI	
Video output interface	MicroHDMI	
Battery type	Rechargeable and detachable Lithium battery	
Power voltage	DC12V	
Battery operating time	more than 2 hrs (single battery) at 25°C ambient temperature and typical use	
Power management	Support sleep mode	
Charging system	Two-bay charger or 12V car charger	
Weight	≤1.3kg(incl. battery)	
Camera dimension	260x135x136mm	
Operating temperature range	-20°C~55°C	
Storage temperature range	-40°C~70°C	
Humidity (operating and storage)	<95%RH, no condensation	
Encapsulation	IP54	
National standard	GB/T19870-2018	
Certificates	Certificates from Zhejiang Metrology Research Institute/UN38.3/SDS/CE/FCC/RoHS/ Certificates from CEPRI (China Electric Power Research Institute)/DGM	