

TC4/TC8 Series

Thermal imaging cameras



Two resolutions, 2 m drop resistance and IR-daylight fusion on a touchscreen

TC4/TC8

Handheld thermal cameras for predictive maintenance

amperis

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Ergonomic handheld cameras that survive the field: 2 m drops, 25G shocks and IP54.

Product overview

Two resolutions, one concept

The series offers two detectors — 160×120 in the TC4 and 384×288 in the TC8 — over the same ergonomic handheld design for electrical and industrial predictive maintenance, with temperature ranges from $-20\text{ }^{\circ}\text{C}$ up to $+650\text{ }^{\circ}\text{C}$, expandable to $1200\text{ }^{\circ}\text{C}$ or $2000\text{ }^{\circ}\text{C}$.

Fusion at your fingertips

A 3 MP daylight camera and the thermal detector share a convenient 3.6-inch touchscreen with fusion display; dual LED fill lights keep shots clear in dark cabinets, and network transmission streams picture and video in real time.

Main features

- New drop-resistant sensor technology: 2 m drops, 25G shock, 2G vibration.
- IR and daylight fusion display on a 3.6-inch touchscreen.
- Bluetooth audio transmission (headset/RS232).
- JPEG and H.264 recording with original radiometric data.
- 60 s voice notes per image.
- Under 1 kg, with side-mount handrail and tripod thread.



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Applications and analysis functions

Applications

- Predictive maintenance of electrical panels, lines and substation equipment.
- Industrial inspection and process control.
- Scientific research with real-time network transmission.

On-screen analysis

Up to 5 movable spots, 5 areas with maximum, minimum and average temperature and 2 measurement lines, plus profiles, isotherms, temperature difference and voice/colour alarms; emissivity, background and atmospheric corrections are user-adjustable.

Ready for the workday

The Li-Ion battery covers 3 h of continuous use with automatic sleep and shut-down; images and data transfer via mini-USB, video output or Bluetooth.



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TC4/TC8 – TECHNICAL SPECIFICATIONS

Detector	Uncooled FPA microbolometer — TC4: 160 × 120; TC8: 384 × 288
Spectral range	8-14 µm
Thermal sensitivity (NETD)	≤ 0.06 °C at 30 °C
Field of view / min. focus	25° × 19° / 0.1 m; manual focus
Spatial resolution (IFOV)	TC4: 2.37 mrad; TC8: 1.37 mrad
Frame rate	50/60 Hz
Visible camera	3 MP daylight camera; dual LED fill lights
Display	3.6-inch TFT colour touchscreen, 640 × 480; IR-daylight fusion
Temperature range	TC4: -20 °C to +350 °C (expandable to 650 °C); TC8: -20 °C to +650 °C (to 1200 °C or 2000 °C)
Accuracy	±2 °C or ±2 % of reading, whichever is greater
Analysis functions	Up to 5 spots, 5 areas (max/min/average), 2 lines; profile, isotherms, difference, alarms (voice, colour)
Image control	11 palettes; automatic/manual gain and brightness
Corrections	Emissivity 0.01-1.0; background temperature; atmospheric transmittance
Storage	8 GB micro SD (TF), max. 32 GB; automatic/manual saving with IR-visible link
File formats	JPEG and H.264, both with original radiometric data
Annotation	60 s voice notes per image (built-in microphone)
Laser pointer	Class 2, 1 mW / 635 nm (red), IEC 60285
Power supply	Rechargeable Li-Ion, 3 h continuous; auto sleep and shut-down; 12 V charger
Ruggedness	2 m drop resistant; shock 25G (IEC 68-2-29); vibration 2G (IEC 68-2-6)
Environment	-15 °C to +50 °C (storage -25 °C to +60 °C); ≤ 90 % RH; IP54
Weight and dimensions	0.98 kg; 230 × 105 × 245 mm; side-mount handrail; 1/4-inch tripod thread
Interfaces	Mini-USB for images and data; video output; Bluetooth audio/data (headset/RS232)



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