



## Overview

The Sonel KT Series Thermal Imagers are budget-friendly yet offer highly accurate temperature measurements. Robustly designed and constructed, they are ideally suited for:

- Troubleshooting electrical installations, wiring, panels, motors, breakers, transformers, switchgear, and electrical equipment;
- Monitoring the thermal performance of industrial manufacturing processes;
- Identifying overheating of mechanical and electro-mechanical components;
- Inspecting buildings for insulation leaks, energy audits, HVAC/R equipment, water damage, and pests;
- Locating hidden heat sources (of people, animals, objects) in dark / low-light conditions.

## User friendly operation

The user-friendly design, light weight, and intuitive handling make Sonel thermal cameras a pleasure to use. Experienced or new users needing a professional diagnostic tool will find the menus easy to navigate via the touchscreen. Both the touchscreen and the lens swivel independently to view objects of interest that are difficult to access from any angle.

## Key features

- Removable Li-ion battery with 4 hour working time
- 5" large rotating touchscreen with no image cropping
- High brightness display gives detailed information in high ambient light or outdoors
- Save IR images and videos (to SD card or directly to a PC)
- Built-in Report module for complete thermal analysis in the camera
- View images as: IR, visual, "picture in picture" and MIF mode (combined visual and IR)
- Add voice and text notes, draw graphical symbols (arrows or circles) on images
- 5 Mpix visual camera
- GPS, digital compass, LED flashlight and laser pointer
- Micro USB 2.0, Wi-Fi, Bluetooth®, Gigabit Ethernet, Mini USB and SD slot for data transfer
- **ThermoAnalyze2** Software for PC

# Specifications

	KT-670	KT-650	KT-560
Detector type	640 x 480		384 x 288
Spectral range	7.5~14 $\mu$ m		
Thermal sensitivity	30 mK	40 mK	50 mK
Lens (FOV /focal length)	24.6° x 18.5°/25 mm option: 45.4° x 34.9°/13 mm 11.3° x 8.5°/55 mm 7.3° x 5.5°/85 mm		21.7° x 16.4°/25 mm option: 40.5° x 31.0°/13 mm 10.0° x 7.5°/55 mm 6.7° x 5.1°/85 mm
Display	5", 1280 x 720, HQ touch LCD		
Viewfinder	1280 x 960 LCOS		
Picture type	IR image/Visual image/PIP/MIF (combined)		
Zoom	1...10	1...4	
Temperature range	Range 1: -20°C...150°C / -4°F...302°F Range 2: 150°C...800°C / 302°F...1472°F Option: 2000°C / 3632°F		
Accuracy	$\pm$ 2°C or 2% of reading		
Image analysis modes	10 points, 10 lines, 10 polygons, temperature display: min, max, avg, isotherm, dew point, temperature alarm	8 points, 8 lines, 8 polygons, temperature display: min, max, avg, isotherm, dew point, temperature alarm	5 points, 2 lines, 5 polygons, temperature display: min, max, avg isotherm, dew point, temperature alarm
Palette	10	8	
Emissivity	Adjustable from 0.01 to 1.00 or from the list of materials		
Measurement correction	Adjustable: distance, relative humidity, ambient temperature		
File format	JPG		
Notes to pictures	Voice note (up to 60s), text, graphical, additional visual pictures	Voice note (up to 60s), text, graphical	
Reports module	Reports to PDF, printing via WiFi directly from the camera, or via PC		
Video file format	AVI, IRV (with temperature info)		
Built-in functions	Visual camera 5 Mpix, LED flashlight, GPS, laser pointer, microphone, loudspeaker, digital compass, light sensor		
Wireless communication	Wi-Fi + Bluetooth	Wi-Fi	
Interface	SD card, LAN 1 Gb/s, mini HDMI, microUSB 2.0		
Power supply	Li-Ion battery (work time >4 hours), built-in charger, AC adapter 110-230 V, 50/60 Hz		
Work temperature	-15°C...+50°C / 5°F...122°F		
Storage temperature	-40°C...+70°C / -40°F...158°F		
Humidity	10%...95%		
Shock / vibration	25G, IEC 60068-2-29 / 2G, IEC 60068-2-6		
Casing	IP54		
Weight	1.3 kg / 2.9 lbs (with battery)		

## Standard accessories

Rechargeable Li-Ion battery	WAAKU18
Power adapter	WAZASZ13
External battery charger (KT-670)	WAZASZ14
USB cable (A to Micro B Type)	WAPRZUSBMICRO
RJ45 cable	WAPRZRJ45
HDMI cable	WAPRZHDMI
16 GB SD memory card	WAPZSD16
Shoulder strap	WAPZPAS3
L9 carrying case	WAWALXL9
Calibration certificate issued by an accredited laboratory (no accreditation)	

## Optional accessories

External battery charger (KT-560/650)	WAZASZ14
HDMI to RCA converter	WAADAHDMIXRCP
High temp filter	WAADAOF1
42.1°×32.2°/13 mm wide angle lens (KT-560)	WAADA013V560
10.4°×7.8°/55 mm tele lens (KT-560)	WAADA055V560
45.4°×34.9°/13 mm wide angle lens (KT-657/670)	WAADA013V650
11.3°×8.5°/55 mm tele lens (KT-650/670)	WAADA055V650
M11 bag	WAFUTM11

## Sonel ThermoAnalyze 2

Software for analyses and reports, included in the thermal imager kit.

- Capability of correcting emissivity factor for part of or the entire thermal image – the factor can be corrected for each selected area individually,
- Selection of analysed areas – selecting a rectangular, oval or area of any shape.
- Readout of temperature at any point – placing the cursor over the „Information” window results in the continuous readout of the temperature and current coordinates as well as other available saved information (maximum temperature, humidity, emissivity).
- Use of Infra Fusion technology – a thermal image is overlaid on part of the visual image in any user-selected palette. The thermal image is overlaid with selected transparency, thus allowing for the optimal presentation and the marking of areas of interest, especially, if it is difficult to visually compare spots in the thermogram with the details of the visual image of the object under observation.
- Determining and readout of the minimum, maximum and average temperature for the entire area, as well as for each selected area. Selection of a section (straight line or polyline).
- Creation of reports in a simple way, a report can include all the required elements – thermal images, corresponding visual images.
- Records of all the introduced corrections as well as characteristic points in order to enable further analysis at a later date.
- Selection of the visually optimal colour palette (from 9 palettes available in the software) for the best visual presentation of temperature changes. Definition of the temperature range for the best presentation of temperature distribution (manual or automatic mode available).
- This software has an unlimited license - it can be used simultaneously on many PCs.

