Highest sensitivity and most advanced feature set available. Supplies a combination of infrared and visible spectrum images of superior quality and temperature measurement accuracy – plus GPS, voice annotation, and a host of other advanced features.

Uncooled 640×480 IR Detector Array
Thermal Sensitivity ≤0.045°C
Built-in 3.2 Mpixel visual camera
Temperature Range: −40°C to 1500°C

Full Radiometric Real-time Video to PC
Automatic GPS Data
Text and Voice Annotation
Optional Wireless Remote Operation

**Highest Sensitivity**
The SC660’s high-definition 640×480 infrared detector delivers exceptional sensitivity, resolution, and image quality for scientific and research applications. Its 0.045°C sensitivity and ±1°C accuracy means precise readings, taken on smaller objects, at safer distances. The Dynamic Detail Enhancement (DDE) feature further improves thermal image sharpness.

**Visual Image Integration**
The SC660 includes an integrated 3.2 megapixel digital video camera to aid in data presentation. Infrared and visual images can also be stored in standard JPEG formats. The visual camera includes a matching Field Of View (FOV) lens, so IR and visual images correlate over various distances. Moreover, full flexibility in the fusion of images allows user-adjusted sizing and location of a picture-in-picture (PiP) view.

**Multifunction Video Capture**
The SC660’s 5.6” widescreen LCD allows on-camera viewing of images. Its FireWire interface can transfer 14-bit radiometric data directly into a PC for real-time analysis of captured images. Furthermore, radiometric sequences can be stored on high capacity (1 GB) SD-cards, an advantage when viewing moving targets. MPEG-4 non-radiometric video sequences can also be streamed to a PC via USB.

**Voice and Text Annotation**
The user can record a full 60 seconds of digital voice and embed it with each IR image. This allows a full description of the target and situation to be recorded and then documented in a data presentation. In addition, data from the built-in GPS system can be used to denote the camera’s location. For added flexibility, text comments for each image can be entered manually or preloaded from a PC. Similarly, thermal and visual images, temperature measurements, and annotations can be transferred to the PC via USB.

**Productivity Features**
An abundance of features enhance the convenience and productivity of the SC660. Its tiltable viewfinder provides high-resolution color imagery. The multi-angle handle has an integrated joystick and buttons and for easy point-and-shoot operation – functions like auto-focus, freeze-frame, and image storage are just a button click away. Manual focus allows operators greater flexibility, while the auto-focus is helpful in hard-to-focus situations, and allows new users to become productive sooner. A visual target illuminator (lamp) ensures good visual reference images, even under low lighting conditions.

**Safety Enhancements**
The laser locator on the SC660 helps associate a spot on the IR image with the exact location of the target object. This greatly enhances user safety by eliminating the tendency to “finger point” at hazardous areas. The camera’s large target-distance to spot-size ratio allows users to do accurate measurement and analysis, while quickly and safely conducting IR studies in dangerous environments. An optional wireless remote control unit is very useful in hard-to-focus situations, and allows new users to become productive sooner. A visual target illuminator (lamp) ensures good visual reference images, even under low lighting conditions.

**Lightweight and Rugged**
The ergonomic magnesium housing is designed for rugged portability and meets the IP54 standard, thereby protecting internal parts from shock, vibration, dust and water-splash. The result is a camera that weighs only 1.7kg with battery, for the comfort of users that need to carry a camera several hours a day.

**3-hour Run Time Battery**
The SC660 can run up to three hours on a single, fully charged battery. It comes with an intelligent charging station capable of conditioning and charging two batteries at a time. In addition, you can plug the SC660 into an AC outlet or optional 12V cable and charge the battery while still in the camera.

**Evaluate Thermal Performance in Real-time with Powerful, Real-Time Digital Storage and Analysis Software**
Engineers designing products or performing thermal tests often need to see more than just thermal anomalies, they have to be able to quantify and monitor heat patterns resulting from extremely fast or minute temperature changes. ThermaCAM® Researcher™ software is a powerful Windows-based infrared software package that provides detailed, precision analysis and measurement tools for capturing, recording, and studying extremely high speed thermal events. It digitally stores, retrieves and analyzes live infrared images directly from the SC Series IR cameras. Whether you’re evaluating static IR images, live IR video sequences or dynamic high speed thermal events, the ThermaCAM Researcher software available to help you manage thermal performance and develop cost-effective design solutions.

**Infrared Certification Training and Support**
In addition to worldwide service and support, FLIR Systems offers Thermographer certification classes and high quality interactive thermography training from the most qualified international thermography instructors. The FLIR Systems Infrared Training Center (ITC) is the Global leader of IR Thermography Training.
Imaging Performance

Thermal
Field of view/min focus distance 24° x 18° / 0.3m (with standard lens)
Spatial resolution (IPD) 0.65 mrad (with standard lens)
Thermal sensitivity 0.045°C at 30°C
Electronic Zoom 1–8× continuously, including pan
Focus Auto, electric and manual
Dynamic Detail Enhancement (DDE) Adjustable
Detector type Focal plane array (FPA) uncooled microbolometer; 640 x 640 pixels
Spectral range 7.5 to 13µm

Visual
Built-in digital video 3.2 Mpixel, full color / built-in Target Illuminator / auto focus

Image Fusion
Picture-in-Picture move, resize, and reshape IR image inside visible light images
Thermal Fusion Merging of visual and infrared image (internal, above / below)

Image Presentation
Viewfinder Built-in, tiltable, high-resolution color viewfinder (800 x 600 pixels)
External display Built-in 5.6” LCD (1024 x 600 pixels)
Video output RS170 EIA / NTSC or CCIR / PAL composite video, IEEE-1394 FireWire, USB

Measurement
Temperature ranges ~40°C to +1500°C, in 3 ranges, up to 2000°C
Accuracy (% of reading) ±1°C or ±1% of reading (restricted temp range), otherwise ±2°C or ±2%
Measurement modes Spots/Areas (Boxes, Circles), Isotherms (above, below, interval), Delta T, Line Profile, Reference temperature function
Menu controls Palettes, load custom palettes, auto adjust (manual/continuous/based on histogram equalization), image gallery, sequence storage, programmable storage, on-screen live and reference image
Emissivity correction Variable from 0.20 to 1.0 or select from listings in pre-defined material list
Measurement features Automatic corrections based on user input for reflected ambient temperature, distance, relative humidity, atmospheric transmission, and external optics
Optics transmission correction Automatic, based on signals from internal sensors
Atmospheric transmission correction Automatic, based on inputs for distance, atmospheric temperature and relative humidity
Reflected ambient temperature correction Automatic, based on input of reflected temperature
External optics/window correction Automatic, based on input of optics/window transmission and temperature
Alarm functions Automatic alarm on any selected measurement function, audible/visible alarm above/below

Image Storage
Type Removable SD-card (1GB), built-in RAM memory for burst recording
Image storage modes Single image, simultaneous storage of IR and visual images
Periodic image storage Every 10 seconds up to 24 hours
File format - THERMAL Standard JPEG, 14 bit thermal measurement data included
File format - VISUAL Standard JPEG mixed with corresponding thermal image
Voice annotation of images 60 sec. of digital voice “clip” stored together with the image
Text annotation of images Predefined by user and stored with image
Location tagging of images Uses data from built-in GPS
Image marker Markers on visual image

Video recording in camera Real time recording to built-in RAM memory transferable to SD-card
Non radiometric IR-video recording MPEG-4 recording to SD card

Video streaming
Radiometric IR-video streaming Real time, full-dynamic digital IR-video using Firewire
Non radiometric IR-video streaming MPEG-4 streaming to PC using USB, Firewire or WLAN, with optional Wireless remote control

Laser Location
Classification type Class 2, Semiconductor AIGalnP Diode Laser : 1mW/635nm (red)
Laser Laser pointer activated by dedicated button
Laser alignment Laser position automatically shown on IR image

Power Source
Battery type Li-ion, rechargeable, field-replaceable
Battery operating time 3 hours continuous operation
Charging system In-camera (AC adapter or 12V from car) or 2 bay intelligent charger or 12V from car with optional SC 12V connection cable
External power operation AC adapter 90-260 VAC, 50/60Hz or 12V from car (cable with standard plug optional)
Power saving Automatic shutdown and sleep mode (user-selectable)

Environmental
Operating temperature range -15°C to +50°C
Storage temperature range -40°C to +70°C
Humidity 10% to 95%, IEC 68-2-30
Encapsulation IP 54 IEC 529
Shock Operational 25G, IEC 68-2-29
Vibration Operational 2G, IEC 68-2-6

Physical Characteristics
Weight 1.8kg (incl. lens and battery)
Size (L x W x H) 325 x 144 x 147mm (incl. standard lens)
Tripod mounting 1/4” – 20

Interfaces

1394 Firewire Fully radiometric 14bit real time image video to PC
USB-A Connect external USB device
USB Mini-B Data transfer to/from PC
IrDA Wireless communication
SD-card (2) I/O slot; storage slot

Camera includes:
User documentation in CD-ROM
Camera with visual and IR lens
Power supply
2 batteries (3 hours operating time on each)
2 bay charging station
FLIR QuickReport software
Built-in GPS
Manual and Quick Reference Card
SD-card with USB card Reader
Headset
Cables (USB, FireWire, Video)

Lenses (optional)

Camera

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