

The SC620 is an affordable research camera with superior thermal and visual image quality, spot size resolution, and temperature measurement accuracy. An advanced feature set includes a built-in digital camera, voice annotation, laser target locator, visual illuminator, and much more.



- > Rugged, Ergonomic Features
- > Uncooled 640x480 IR Detector Array
- > Temperature Range: -40°C to 500°C
- > Thermal Sensitivity $\leq 55\text{mK}$
- > Full Radiometric Real-time Video to PC
- > Built-in 3.2 Mpixel visual camera
- > 5.6" Widescreen On-camera LCD
- > Text and Voice Annotation

Features both thermal and visual camera capabilities – at the touch of a button!

High Sensitivity

The SC620 provides exceptional value in thermographic studies and temperature measurements. Its high-definition 640 X 480 infrared detector features 0.05°C sensitivity and $\pm 2^\circ\text{C}$ (3.6°F) accuracy. The result is outstanding resolution and image quality for precise readings on small objects at extended distances.

Flexible Image Integration

A 3.2 megapixel digital camera is an integral part of the SC620, supplying picture-on-picture flexibility with the corresponding thermographic image. The visual camera has a matching Field Of View (FOV) lens, so IR and visual images correlate over various distances. Infrared and visual images can also be stored in standard JPEG formats for easy data presentation.

Versatile Image Capture

In addition to an on-camera LCD screen, the SC620 supplies a composite video output in NTSC or PAL format. Thermal and visual images can also be stored on high capacity (1GB) SD-cards in JPEG format, along with the associated 14-bit temperature measurement data. Its FireWire interface can transfer 14-bit radiometric directly to a PC. In addition, a USB port allows the streaming of MPEG-4 non-radiometric video sequences to the PC, as well as image transfers with measurement data and annotations.

Text and Voice Annotation

Text comments for each image can be entered manually or preloaded from a PC. Furthermore, a user can record 30 seconds of digital voice and embed it with each IR image. These annotation features eliminate the need to keep separate notes

to describe the target object, its location, and associated conditions.

Increased Productivity

The SC620 was designed with convenience and productivity in mind. Its multi-angle handle has an integrated joystick and buttons that allow fast point-and-shoot operation. They include features such as auto-focus, freeze-frame, and image storage. The tiltable viewfinder presents the user with high-resolution color imagery. Auto-focus facilitates image capture in hard-to-focus situations, while manual focus provides greater flexibility. A target illuminator lamp ensures good visual reference images in low lighting conditions. All these features and functions help shorten the learning curve, allowing new users to quickly become productive.

Safety Matters

The SC620's large target-distance to spot-size ratio allows users to make accurate measurements swiftly and safely when conducting IR studies in dangerous environments. Furthermore, the camera's laser locator 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 use finger pointing to identify target objects in hazardous areas. An IrDA interface allows wireless communications to remote locations, so users can be positioned outside hazardous areas.

Rugged, Ergonomic Design

The magnesium housing of the SC620 is designed for rugged portability and ergonomic efficiency. It meets the IP54 standard for protection of internal parts from shock, vibration, dust and water-splash.

This is accomplished within a package that weighs only 1.7kg (3.8lb), including the rechargeable battery. Users can comfortably carry the SC620 for several hours a day.

Three Hours of Run Time

The rechargeable battery provides up to three hours of operation when fully charged. The SC620 comes with an intelligent charging station capable of conditioning and charging two batteries simultaneously. A user can also plug the camera into an AC outlet or optional 12V cable and charge the battery inside the unit.

Optional Research Package

The optional SC620 Research Package consists of the SC620 camera and the ThermoVision ExaminIR analysis software. FLIR's ThermoVision ExaminIR Software seamlessly stores, retrieves, and analyzes IR images and temperature data directly from the SC620 camera, allowing in depth and precise evaluation of thermal performance. This powerful Windows®-based package for R&D professionals is easy to use for both static and real-time image analysis. It includes temperature display and analysis functions such as isotherms, line profiles, area histograms, and much more. Its high-speed data acquisition capabilities add another level of power and flexibility to thermal imaging and temperature measurements.

Infrared Certification Training and Support

In addition to worldwide service and support, FLIR Systems offers Thermographer certification classes at its state-of-the-art facilities near Boston, Massachusetts. The FLIR Systems Infrared Training Center (ITC) is the Global leader in IR Thermography Training.

FLIR SC620 Technical Specifications

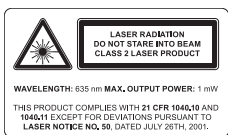
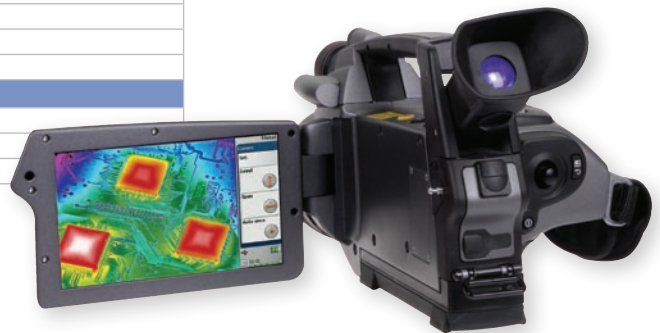
Imaging Performance	
Thermal	
Field of view/min focus distance	24° × 18° / 0.3m
Spatial resolution (IFOV)	0.65 mrad
Thermal sensitivity @ 50/60Hz	55mK at 30°C
Electronic Zoom	1–8× continuous, including pan
Focus	Automatic or manual
Digital image enhancement	Normal and enhanced
Detector type	Focal plane array (FPA) uncooled microbolometer; 640 × 480 pixels
Spectral range	7.5 to 13µm
Visual	
Built-in digital video	3.2 Mpixel, full color / built-in Target Illuminator / exchangeable lens
Standard lens performance	f=8mm / FOV 32°
Image Presentation	
Viewfinder	Built-in, tiltable, high-resolution color viewfinder (800 × 480 pixels)
External display	Built-in 5.6" LCD (1024 × 600 pixels)
Video output	RS170 EIA/NTSC or CCIR/PAL composite video
Measurement	
Temperature ranges	–40°C to +500°C, in 3 ranges; up to +2000°C, optional (–40°F to 932°F with option to 3,632°F)
Accuracy (% of reading)	±1°C or ±1% of reading (object within +5°C to 120°C, ambient within +9°C to 35°C); otherwise ±2°C or ±2%.
Measurement modes	3 Spots/Areas (Boxes, Circles), Isotherms (above, below, interval), Delta T
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 (PoP)
Emissivity correction	Variable from 0.1 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)
File format – THERMAL	Standard JPEG; 14 bit thermal measurement data included
File format – VISUAL	Standard JPEG inked with corresponding thermal image
Voice annotation of images	30 sec. of digital voice "clip" stored together with the image wired headset
Text annotation of images	Predefined by user and stored with image
Laser LocatIR™	
Classification type	Class 2, Semiconductor AlGaInP Diode Laser: 1 mW/635 nm (red)
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
External power operation	AC adapter 110/220 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 (5°F to 122°F)
Storage temperature range	–40°C to +70°C (–40°F to 158°F)
Humidity	Operating and storage 10% to 95%, non-condensing
Encapsulation	IP 54 IEC 529
Shock	Operational: 25G, IEC 68-2-29
Vibration	Operational: 2G, IEC 68-2-6
Physical Characteristics	
Weight	1.7kg (3.8 lbs) w/battery
Size	120mm × 145mm × 220mm
Tripod mounting	1/4"– 20

Camera includes:	
Camera with visual and IR lens	
Power supply	
2 batteries (3 hours operating time on each)	
2 bay charging station	
QuickReport software	
Manual and Quick Reference Card	
Headset	
Cables	
Lenses (optional)	
<i>Automatic lens identification</i>	
Field of view/minimum focus distance	
12° × 9° / 0.9m telelens	
45° × 34° / 0.1m wide angle lens	
Close-up 32 mm × 24 mm / 75 mm	
Interfaces	
1394 Firewire	Fully radiometric 14bit real time image video to PC
USB	Image (thermal and visual), measurement data, voice and text transfer to PC
IrDA	Wireless communication
SD-card (2)	I/O slot; storage slot

NEW! RUGGED & LIGHTWEIGHT MAGNESIUM HOUSING!



ThermoVision ExaminIR example display



1 800 464 6372
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www.infraredresearchcameras.com