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IRTECH

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FLIR P Series

FLIR P640
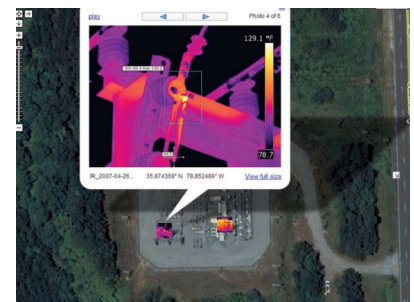## The High Performance infrared inspection system

FLIR P640 is the highest performing infrared inspection system available. With its state of the art technology, including 640x480 detector resolution and unique ergonomic design it is the natural choice for professional thermographers that want the most efficient instrument producing professional results.
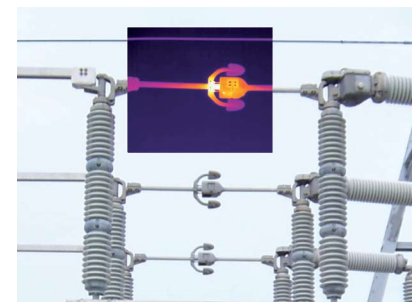
- *Image resolution 640x480*
- *Sensitivity 30 mK*
- *Large high resolution 5.6" flip-out LCD*
- *Tiltable high resolution viewfinder*
- *High performance lenses with USM technology*
- *1-8 times continuous zoom with pan*
- *Picture in Picture*
- *Thermal fusion: above, below interval*
- *Rotatable handle for convenient operation*

- *Built-in 3.2 Mpixel digital camera with target illuminator*
- *Standard temperature range -40 °C to 500 °C*
- *Real time radiometric storage to built-in RAM*
- *Periodic storage*
- *Panorama*
- *Voice and text annotation*
- *MPEG-4 streaming to PC using USB or FireWire*
- *Programmable buttons*

GPS technology helps to record location information

FLIR Systems FLIR P640 is an affordable easy-to-operate high-performance infrared camera that delivers accurate temperature measurements at productive and safe distances. This makes the P640 camera an ideal solution for cost-effective and efficient predictive maintenance programs.

The P640 includes an integrated 3.2 megapixel camera to aid in reporting. Infrared and visual images taken with the P640 can be stored in standard JPEG formats.The P640 visual camera includes matching Field Of View lenses, so IR and visual images are shown at similar long distances using the same Field Of View.

Fusion, a function that lets you display a part of digital photo as an infrared image.
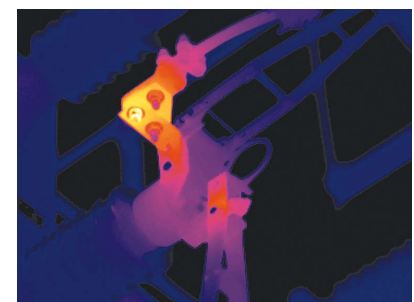
Infrared inspection helps to detect overheating parts, can avoid costly downtime and maintain plant efficiencies.

FLIR P640 Technical Specifications

Imaging and optical data	
Field of view (FOV) / Minimum focus distance	24° × 18° / 0.3 m
Spatial resolution (IFOV)	0.65 mrad
Thermal sensitivity / NETD	30 mK @ +30°C
Image frequency	30 Hz
Focus	Automatic or manual (electric or on the lens)
Zoom	1–8× continuous, digital zoom, including panning
Focal Plane Array (FPA) / Spectral range	Uncooled microbolometer / 7.5–13 µm
IR resolution	640 × 480 pixels
Image presentation	
Display	Built-in widescreen, 5.6 in. LCD, 1024 × 600 pixels
Viewfinder	Built-in, tiltable LCD, 800 × 600 pixels
Automatic image adjustment	Continuous / manual; linear or histogram based
Manual image adjustment	Level /span / max / min
Image modes	IR-image, visual image, thermal fusion, picture in picture, thumbnail gallery
Thermal fusion	IR image shown above, below or within temp interval on visual image
Picture in Picture	Resizable and movable IR area on visual image
Reference image	Shown together with live IR image
Measurement	
Temperature range	−40°C to +500°C
Accuracy	±2°C or ±2% of reading
Measurement analysis	
Spotmeter	10
Area	5 boxes or circles with max. / min. / average
Automatic hot / cold detection	Max / Min temp. value and position shown within box, circle or on a line
Isotherm	2 with above / below / interval
Profile	1 live line (horizontal or vertical)
Difference temperature	Delta temperature between measurement functions or reference temperature
Reference temperature	Manually set or captured from any measurement function
Emissivity correction	Variable from 0.01 to 1.0 or selected from editable materials list
Measurement corrections	Reflected temperature, optics transmission, atmospheric transmission and external optics
Measurement function alarm	Audible/visual alarms (above / below) on any selected measurement function
Set-up	
Set-up commands	Configurable measurement tools menu; configure information to be shown in image; 2 Programmable buttons; user profiles; local adaptation of units, language, date and time formats
Storage of images	
Image storage	Standard JPEG, including measurement data, on memory card Built-in RAM for burst recording
Image storage mode	IR / visual images; simultaneous storage of IR and visual images Visual image is automatically associated with corresponding IR image
Periodic image storage	Every 10 seconds up to 24 hours
Panorama	For creating panorama images in FLIR Reporter Building software
Image annotations	
Voice	60 seconds stored with the image
Text	Predefined text or free text from PDA (via IrDA) stored with the image
Image marker	4 on IR or visual image
Video recording and streaming	
Radiometric IR-video recording	Real-time to built-in RAM, transferable to memory card.
Non-radiometric IR-video recording	MPEG-4 to memory card
Non-radiometric IR-video streaming	MPEG-4 to PC using USB or WLAN (optional)
Digital camera	
Built-in digital camera	3.2 Mpixel, auto focus, and video lamp
Laser pointer	
Laser	Activated by dedicated button
Data communication interfaces	
Interfaces	USB-mini, USB-A, IrDA, composite video, headset connection
Power system	
Battery	Li Ion, 3 hours operating time
Charging system	In camera (AC adapter or 12 V from a vehicle) or 2-bay charger
Power management	Automatic shutdown and sleep mode (user selectable)
Environmental data	
Operating temperature range	−15°C to +50°C
Storage temperature range	−40°C to +70°C
Humidity (operating and storage)	IEC 68-2-30/24 h 95% relative humidity +25°C to +40°C
Encapsulation	IP 54 (IEC 60529)
Bump	25 g (IEC 60068-2-29)
Vibration	2 g (IEC 60068-2-6)
Physical data	
Camera weight, incl. lens and battery	1.8 kg
Cameras size, incl. lens (L × W × H)	324 × 144 × 147 mm
Tripod mounting	UNC ¼"-20

Camera includes:
- Hard transport case
- Infrared camera with lens
- Battery (2 ea., one inserted in camera, one outside camera)
- Battery charger
- Calibration certificate
- FLIR QuickReport™ PC software CD-ROM
- FireWire cable, 4/6
- FireWire cable, 6/6
- Headset
- Lens cap (mounted on lens)
- Lens cap (2 ea.)
- Mains cable
- Memory card-to-USB adapter
- Memory card with adapter
- Power supply
- Printed Getting Started Guide
- Shoulder strap
- USB cable
- User documentation CD-ROM
- Video cable
- Warranty extension card or Registration card

Supplies & Accessories
- Close-up IR lens 0.5X, f = 75 mm (fits 24° IR lens) for ThermaCAM and FLIR 600 series
- IR lens f = 76 mm, 12°, incl. case for FLIR 600 series
- IR lens, f = 131 mm, 7°, incl. case for FLIR 600 series
- IR lens f = 19 mm, 45°, incl. case for FLIR 600 series
- IR lens f = 38 mm, 24°, incl. case for FLIR 600 series
- Macro lens 1x (25 um) with case
- Protective window (fits 24°) with case
- High temperature option +2000°C
- High temperature option +1500°C
- Battery
- Battery charger, incl. power supply and cable
- Battery charger, incl. power supply and cable
- Battery charger, incl. power supply and cable
- Battery charger, incl. power supply with multi plugs
- Power supply, incl. multi plugs
- SD memory card, 1 GB
- Adapter, SD memory card to USB
- Memory card micro-SD with adapters
- USB cable Std A <-> Mini-B, 2 m
- FireWire cable 6/6, 2.0 m
- FireWire cable 4/6, 2.0 m
- Video cable, RCA <-> RCA, 2.0 m
- Cigarette lighter adapter kit, 12 VDC, 1.2 m
- Hard transport case for FLIR B/P/SC640
- Headset, 3.5 mm plug
- Remote Control Unit
- FLIR Reporter Ver. 8.3 Professional (Sec. device)
- FLIR Reporter Ver. 8.3 Professional
- FLIR Reporter Ver. 8.3 Standard (Sec. device)
- FLIR Reporter Ver. 8.3 Standard
- FLIR BuildIR
- FLIR Reporter Ver. 8.5 Standard
- FLIR Reporter Ver. 8.5 Professional
- Cover Visual Camera mkII

FLIR Reporter

FLIR Reporter software - powerful yet easy-to-use tool to generate comprehensive and professional infrared inspection reports.

LASER RADIATION
DO NOT STARE INTO BEAM
CLASS 2 LASER PRODUCT

WAVELENGTH: 635 nm MAX. OUTPUT POWER: 1 mW

THIS PRODUCT COMPLIES WITH 21 CFR 1040.10 AND 1040.11 EXCEPT FOR DEVIATIONS PURSUANT TO LASER NOTICE NO. 50, DATED JULY 26TH, 2001.

FLIR®

100317 P640 datasheet_en