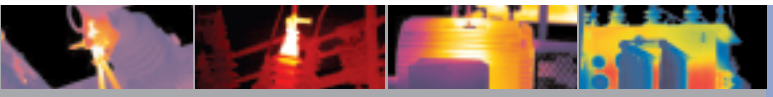
FLIR SYSTEMS

The Global Leader in Infrared Cameras

ThermaCAM® EX320

INFRARED CAMERA



The ThermaCAM® EX320 has a true, built-in 320 x 240 pixel array, giving you four times the resolution of any IR camera in its size and price range, and making it the first, low cost, ultra portable infrared camera to provide such detailed imaging and superior performance.

Plant Engineering PRODUCT of the YEAR WINNER

2002 WINNER

The latest addition to the award-winning FLIR ThermaCAM® E-Series family

- Best Image Quality
- Robust Post Processing Capabilities
- Interchangeable Optics
- Built-in Laser LocatIR™
- Easy-view 2.5" Color LCD
- Built-in Digital Zoom 2x 4x
- Easy-to-use
- 320 x 240 Pixel Array for Optimal Accuracy

Find Problems Fast

Unlike other cameras, you can use the powerful, affordable EX320 in all types of harsh industrial environments to find faults in electrical and mechanical systems quickly and accurately. Store more than 80 thermal images inside the camera, along with text annotations for post-processing and analysis on the camera, or after downloading to a PC.

Most Accurate Temperature Measurement

The EX320 is the most accurate lightweight, handheld IR camera on the market today. Using the world's best infrared detector material, vanadium oxide, the EX320 sees temperature differences as small as 0.08°C and provides 76,800 picture elements in each image.

Lightweight, Rugged & Ergonomic

The EX320 is built tough for hard work in the field and in all weather conditions and industrial environments — a critical design capability. Dust and splash proof, the EX320 meets IP 54 standards. Unlike other cameras that might be "lab calibrated," the EX320 won't seize-up in freezing cold, extreme heat or other harsh conditions. Its exclusive Ambient Temperature Compensation (ATC) technology assures accuracy under the most challenging ambient temperature conditions.

Download and Document

Download thermal images with measurements to your PC quickly with ThermaCAM QuickViewTM software and standard USB or serial cables. Document your findings simply by inserting the JPEG images into your favorite word processing program.

Flexible JPEG Image Storage with Post Processing

Store and recall more than 80 calibrated thermal images using the camera's on-board memory. The EX320's radiometric JPEG image format allows you to go back to any image at any time to add and move spots, measure temperatures, and perform analysis you may have missed in the field.

View Sensitive Thermal Images at Standard TV Rates

A maintenance-free, state-of-the-art uncooled FPA infrared detector produces crisp thermal images that reveal subtle temperature variations that can signal electro-mechanical problems. The EX320 can detect problems before they become critical, helping you increase safety, reduce production downtime, and eliminate potential fires. TV rate imaging (30 Hz) allows you to scan bus ducts and capture sharp images of moving targets.

Pinpoint Problems with Precision

The built-in Laser LocatIR™ projects a bright red dot on the target that enables you to associate the IR image with the real physical target. This feature greatly enhances worker safety by eliminating the tendency to "finger point" at problems in potentially hazardous electrical environments.

Interchangeable Optics

EX320 optional lenses are; telescopic – ideal for inspecting distant targets such as overhead power lines, and wide-angle – more than doubles the standard field-of-view, for evaluating large objects from a short distance, such as roofs and electrical panels.

Smart Power Management

Lightweight, longlife Li-Ion batteries assure uninterrupted inspections. The EX320 includes an external 2-bay battery charger and an internal battery charger. A 12 VDC car/truck charger adapter is also available.

Infrared can accurately and quickly locate faults before failures, shutdowns, or even fires occur.

ThermaCAM® EX320 Technical Specifications

Imaging Performance	
Field of view/min focus distance	Interchangeable; 25° x 19° (standard), 15° x 11° or 45° x 36°
Thermal sensitivity	< 0.08° C at 25° C
Detector type	Focal Plane Array (FPA), uncooled Vanadium Oxide micro bolometer, 320 x 240 pixels - 25/30 Hz
Spectral range	7.5 to 13 µm
Digital zoom	1x,2x,4x
Spot size ratio (with 15° lens)	500:1
Image Presentation	
Display	2.5" color LCD, 320 x 240 pixels in IR image
Image Controls	Palettes (Iron, Rainbow, RainbowHC, B/W, B/W inv), Level, Span, Auto adjust (continuous/manual) and semi-automatic
Measurement	
Temperature range	-20° C to +250° C (-4° F to +482° F) and 0° C to +500° C (+32° F to 932° F) Up to 1200° C (2192° F), optional
Accuracy	± 2°C (±3.6°F) or ± 2% of absolute temperature in °C
Measurement modes	3 movable spots, area max, area min, area average, temp difference, color alarm above or below
Set-up controls	Date/time, Temperature units °C/°F, Language (English, Spanish), Scale, Info field, LCD intensity (high/normal/low)
Measurement corrections	Reflected ambient. Automatic, based on user-input
Image Storage	
Digital storage functions	Freeze, Store, Standard Calibrated JPEG images, Delete all images, Delete image, Open
Image storage capacity	More than 80 Calibrated JPEG Images with image gallery
Text annotation of images	Predefined text selected and stored together with image
Laser LocatIR™	
Classification	Class 2
Type	Semiconductor A1GaInP Diode Laser: 1mW/635 nm (red)
Power Source	
Battery type	Li-Ion; rechargeable, field replaceable (2)
Battery operating time	2 hours. Display shows battery status
Battery charging	In camera, AC adapter or 12V from car with optional 12V cable. 2 bay intelligent charger (included)
AC operation	AC adapter, 90-260VAC, 25/30 Hz/12VDC out
Voltage	11 to 16VDC
Power saving	Automatic shutdown and sleep mode (user-selectable)
Environmental	
Operating temperature range	-15 °C to +45 °C (5 °F to 111 °F)
Storage temperature range	-40 °C to +70 °C (-40 °F to 158 °F)
Humidity	Operating and storage 20% to 80%, non-condensing, IEC 359
Water and dust resistant (encapsulation)	IP 54, IEC 359
Shock	25g, IEC 68-2-29
Vibration	2g, IEC 68-2-6
Physical Characteristics	
Weight	0.8 kg (1.76 lb.), includng battery and 27.4 mm lens
Size (L x W x H)	272mm x 80mm x 105mm (10.7" x 3.2"" x 4.1") with 27.4mm lens
Color	Titanium grey
Tripod mounting	Standard, 1/4" - 20
Cover case	Plastic and rubber
Interfaces	
USB (cable included)	Image and text transfer to PC
Video output	NTSC, standard RCA composite video
Software	
ThermaCAM® QuickView Software (included), Compatible with ThermaCAM® Reporter, Microsoft® Office Suite	

Camera includes:
IR camera
Ruggedized transport case
Power supply and cord
Hand strap
Lens cap
ThermaCAM® QuickView™ software
USB cable
Video-out cable
User manual (multilingual)
Battery (2)
2-Bay battery charger
Training CD
Interchangeable lenses (optional)
2X Telescope (15° X 11°/1.2m)
0.5X Wide angle (45° X 36°/0.1m)

EX320 Value Package!

Purchase an EX320, and receive ImageBuilder image composite software, a **$2,500** value, for no additional charge.

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1 800 464 6372

www.flirthermography.com/EX320data