

TECHNICAL DATA

Fluke TiR32 Infrared Camera



Key features

Superior image quality

- Delivers the clear, crisp images needed to find problems fast with its 320 x 240 sensor.
- Identify even the smallest temperature differences that could indicate problems with thermal sensitivity (NETD)
- Automatic alignment (parallax correction) of visual and infrared images with Fluke patented IR-Fusion®
- Optional telephoto and wide angle lenses available for added versatility and special applications. (easily installable in the field)

Easy to use

- Field replaceable batteries give you maximum flexibility no matter where your work takes you.
- Intuitive, three-button menu is easy to use—simply navigate with the push of a thumb.
- No need to carry pen and paper—record findings by speaking into the imager. Voice annotations can be recorded with every image you take. Voice comments are saved along with individual images for future reference.
- One-handed focus capability, emissivity correction, reflected background temperature compensation, and transmission correction increase the accuracy of measurements in most situations.
- Adjustable hand strap for left-or right-handed use.
- Everything needed to get started is included.

Rugged

- Optimized for field use in challenging work environments.
- Engineered and tested to withstand a 2 m drop for the ultimate peace of mind - When was the last time you dropped a tool or piece of equipment?

- Withstands dust and water—tested to an IP54 rating.

Product overview: Fluke TiR32 Infrared Camera

When You Need to See the Most Subtle Temperature Differences from Short or Long Distances

We know you work long hours in the field. That's why we built this camera tough, so you can quickly and easily move from job to job. The TiR32 can save you time and money by allowing you to quickly identify building application problems and cut energy waste. Combining powerful 320 x 240 resolution with IR-Fusion® Technology, the blending of digital and infrared images into a single image, the TiR32 delivers strikingly crisp detailed images, making problem detection extremely easy. The TiR32 also produces partially transparent images that help you identify issues and report findings easier (AutoBlend™).

A Precision Instrument for Advanced Infrared Camera Trouble Shooting

With thermal sensitivity of ≤ 0.04 °C at 30 °C (40 mK) and temperature ranges from -20 °C to 150 °C (-4 °F to 302 °F) the TiR32 is ideal for all building applications including energy audits, weatherization and restoration. Field installable telephoto and wide angle lenses are available for added versatility for special applications and voice annotation makes pen and paper no longer necessary.

For applications that require a high temperature range and low thermal sensitivity (NETD), the Fluke Ti400 is an alternative choice. It features wireless connectivity for quick and easy sharing of images, LaserSharp® Auto Focus for consistently in-focus images – every, single, time and a ruggedized high resolution 640 x 480 capacitive touch screen for quick menu navigation.

As always, Fluke SmartView® Software is included at no additional charge.

Specifications: Fluke TiR32 Infrared Camera

Temperature	
Temperature measurement range (not calibrated below -10 °C)	-20 °C to +150 °C (-4 °F to +302 °F)
Temperature measurement accuracy	± 2 °C or 2% (at 25 °C nominal, whichever is greater)
On-screen emissivity correction	Yes
On-screen reflected background temperature compensation	Yes
On-screen transmission correction	Yes
Imaging Performance	
Detector type	320 x 240 Focal Plane Array, uncooled microbolometer
Thermal sensitivity (NETD)	≤ 0.04 °C and 40 mK
Total pixels	76,800
Infrared spectral band	7.5 μm to 14 μm (long wave)
Visual (visible light) camera	Industrial performance 2.0 megapixel
Minimum focus distance	46 cm (approx. 18 in)

Standard infrared lens type	Field of view	23 ° x 17 °
	Spatial resolution (IFOV)	1.25 mRad
	Minimum focus distance	15 cm (approx. 6 in)
Optional telephoto infrared lens type	Field of view	11.5 ° x 8.7 °
	Spatial resolution (IFOV)	0.63 mRad
	Minimum focus distance	45 cm (approx. 18 in)
Optional wide-angle infrared lens type	Field of view	46 ° x 34 °
	Spatial resolution (IFOV)	2.50 mRad
	Minimum focus distance	7.5 cm (approx. 3 in)
Focus mechanism	Manual, one-handed Smart Focus capability	
Image Presentation		
Palettes	Standard	Ironbow, blue-ted, high contrast, amber, amber inverted, hot metal, grayscale, grayscale inverted
	Ultra Contrast™	Ironbow ultra, blue-red ultra, high contrast ultra, amber ultra, amber inverted ultra, hot metal ultra, grayscale ultra, grayscale inverted ultra
Level and span	Smooth auto-scaling and manual scaling of level and span	
Fast auto toggle between manual and auto modes	Yes	
Fast auto-rescale in manual mode	Yes	
Minimum span (in manual mode)	2.0 °C (3.6 °F)	
Minimum span (in auto mode)	3 °C (5.4 °F)	
IR-Fusion® Information		
Automatically aligned (parallax corrected) visual and IR blending	Yes	
Picture-in-picture (PIP)	Three levels of on-screen IR blending displayed in center of LCD	
Full screen infrared	Three levels of on-screen IR blending displayed in center of LCD	
Color alarms (temperature alarms)	Dewpoint temperature alarm (user-selectable)	
Image Capture and DataStorage		
Voice annotation	60 seconds maximum recording time per image; reviewable playback on imager	
	The Ti32 allows user to adjust palette, blending, level, span, IR-Fusion® mode, emissivity, and reflected background temperature compensation, and transmission correction on a captured image before it is stored.	
Image capture, review, save mechanism	One-handed image capture, review, and save capability	
Storage medium	SD Memory Card (2 GB memory card will store at least 1200 fully radiometric (.is2) IR and linked visual images each with 60 seconds voice annotations, or 3000 basic bitmap (.bmp) images, or 3000 jpeg (.jpeg) images; transferrable to PC via included multi-format USB card reader	

File formats	Non-radiometric (.bmp) or (.jpeg) or fully-radiometric (.is2) No analysis software required for non-radiometric (.bmp and .jpeg) files
Export file formats w/ SmartView® software	.JPEG, .JPG, .JPE, .JIF, BMP, GIF, DIB, PNG, TIF, and TIFF
Memory review	Thumbnail view navigation and review selection
General Specifications	
Operating temperature	-10 °C to + 50 °C (14 °F to 122 °F)
Storage temperature	-20 °C to + 50 °C (-4 °F to 122 °F) without batteries
Relative humidity	10% to 95% non-condensing
Display	9.1 cm (3.6 in) diagonal landscape color VGA (640 x 480) LCD with backlight (selectable bright or auto)
Controls and adjustments	User selectable temperature scale (°C/ °F) Language selection Time/Date set Emissivity selection Reflected background temperature compensation Transmission correction User selectable hot spot and cold spot, and center point on the image (other custom markers and shapes in SmartView® software) High temperature alarm User selectable backlight: "Full Bright" or "Auto" Information display preference
Software	SmartView® full analysis and reporting software included
Batteries	Two lithium ion rechargeable smart battery packs with five-segment LED display to show charge level
Battery life	Four+ hours continuous use per battery pack (assumes 50% brightness of LCD)
Battery charge time	2.5 hours to full charge
AC battery charging	Two-bay AC battery charger (110 V AC to 220 V AC, 50/60 Hz) (included), or in-imager charging. AC mains adapters included. Optional 12 V automotive charging adapter.
AC operation	AC operation with included power supply (110 V AC to 220 V AC, 50/60 Hz). AC mains adapters included.
Power saving	Sleep mode activated after five minutes of inactivity, automatic power off after 30 minutes of inactivity
Safety standards	CSA (US and CAN): C22.2 No. 61010-1-04, UL: UL STD 61010-1 (2nd Edition), ISA: 82.02.01
Electromagnetic compatibility	Meets all applicable requirements in EN61326-1:2006
C Tick	IEC/EN 61326-1
US FCC	CFR 47, Part 15 Class B
Vibration	0.03 g ² /Hz (3.8 grms), IEC 68-2-6
Shock	25 g, IEC 68-2-29
Drop	2 m (6.5 ft) with standard lens
Dimensions (H x W x L)	27.7 x 12.2 x 17.0 cm (10.9 x 4.8 x 6.7 in)
Weight (battery included)	1.05 kg (2.3 lb)



Enclosure rating	IP54 (protected against dust, limited ingress; protection against water spray from all directions)
Warranty	Two-years (standard)
Recommended calibration cycle	Two-years (assumes normal operation and normal aging)
Supported languages	Czech, English, Finnish, French, German, Italian, Japanese, Korean, Polish, Portuguese, Russian, Simplified Chinese, Spanish, Swedish, Traditional Chinese, and Turkish

Ordering information



Fluke TiR32

Fluke TiR32 Infrared Camera

Includes:

- Building Diagnostics Thermal Imaging Camera with standard infrared lens
 - AC power supply and battery pack charger (including mains adapters)
 - Two, rugged lithium ion smart battery packs
 - SD memory card
 - Multi-format USB memory card reader for downloading images into your computer
 - SmartView® software with free software upgrades for life
 - Rugged, hard carrying case
 - Soft transport bag
 - Adjustable hand strap
 - Printed users manual
 - Warranty registration card
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Fluke. *Keeping your world up and running.®*

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