TECHNICAL DATA

Ti450, Ti400 and Ti300 Thermal Imagers

The Fluke Professional Series

SUPERIOR IMAGE QUALITY

SPATIAL RESOLUTION

Ti450 and Ti400
1.31 mRad

Ti300
1.75 mRad

RESOLUTION

Ti450
320 x 240
SuperResolution mode: 640 x 480

Ti400
320 x 240

Ti300
240 x 180

FIELD OF VIEW

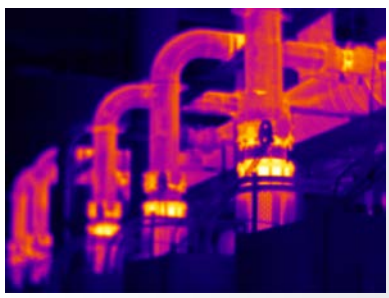
Ti450, Ti400, Ti300
24 °H x 17 °V

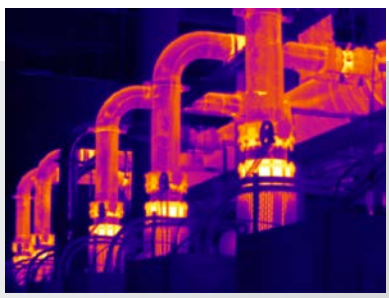
Fluke Connect® compatible

Focus redefined.

- Capture a clear, accurate image focused throughout the field of view with **MultiSharp™ Focus**. Simply point and shoot—the camera automatically processes a stack of images focused near and far (Ti450)
- Get an instant in-focus image of your designated target. **LaserSharp® Auto Focus**, exclusive to Fluke, uses a built-in laser distance meter that calculates and displays the distance from your designated target with pinpoint accuracy
- Get 4x the pixel data with **SuperResolution**, which captures multiple images and combines them to create a 640 x 480 image (Ti450)
- Save time–wirelessly sync images directly from your camera to the **Fluke Connect® system**, and attach to an asset record or work order. Having access to maintenance records simultaneously at the inspection site and from the office or an off-site location enables faster decision making and real time collaboration between team members
- **Get the context** of the visual and infrared details all in one precisely blended or picture-in-picture image with IR-Fusion® technology
- **See the details you need** with interchangeable smart lenses—2x and 4x telephoto and wide angle—no calibration required

100% Focused–Every object. Near and far. MultiSharp™ Focus.


Manual Focus


MultiSharp™ Focus, available on the Ti450.

Detailed specifications

	Ti450	Ti400	Ti300
Key features			
Detector resolution	320 x 240 (76,800 pixels)—or 640 x 480 with SuperResolution	320 x 240 (76,800 pixels)	240 x 180 (43,200 pixels)
SuperResolution	Yes, on camera and in software. Captures and combines 4x the data to create a 640 x 480 image	–	
IFOV with standard lens (spatial resolution)	1.31 mRad, D:S 753:1		1.75 mRad, D:S 565:1
Field of view	24 °H x 17 °V		
Minimum focus distance	15 cm (approx. 6 in)		
IFOV with optional 2x telephoto smart lens	0.65 mRad, D:S 1529:1		0.87 mRad, D:S 1147:1
Field of view	12 °H x 9 °V		
Minimum focus distance	45 cm (approx. 18 in)		
IR-Fusion® technology	Picture-in-picture and full screen		
IFOV with optional 4x telephoto smart lens	0.33 mRad, D:S 2941:1		0.44 mRad, D:S 2208:1
Field of view	6.0 °H x 4.5 °V		
Minimum focus distance	1.5 m (approx. 5 ft)		
IR-Fusion® technology	Picture-in-picture and full screen		
IFOV with optional wide-angle smart lens	2.62 mRad, D:S 377:1		3.49 mRad, D:S 283:1
Field of view	46 °H x 34 °V		
Minimum focus distance	15 cm (approx. 6 in)		
IR-Fusion® technology	Full screen		
MultiSharp™ Focus	Yes, focused near and far, throughout the field of view	–	
LaserSharp® Auto Focus	Yes, for consistently in-focus images. Every. Single. Time.		
Laser distance meter	Yes, calculates distance to the target for precisely focused images and displays distance on screen		
Advanced manual focus	Yes		
Wireless connectivity	Yes, to PC, iPhone® and iPad® (iOS 4s and later), Android™ 4.3 and up, and WiFi to LAN (where available)		
Fluke Connect® app compatible	Yes*, connect your camera to your smartphone, and images taken automatically upload to the Fluke Connect® app for saving and sharing		
Fluke Connect® Assets optional software	Yes*, assign images to assets and create work orders. Easily compare measurement types–whether mechanical, electrical or infrared images–in one location		
Fluke Connect® Instant Upload	Yes*, connect your camera to your building's WiFi network, and images taken automatically upload to the Fluke Connect® system for viewing on your smartphone or PC		
Fluke Connect® tool compatible	Yes*, connects wirelessly to select Fluke Connect® enabled tools and displays measurements on camera screen. Five simultaneous connections supported		
IR-Fusion® technology	Yes, adds the context of the visible details to your infrared image		
AutoBlend™ mode	Min, Mid, Max IR plus full visible on camera; continously variable in software		
Picture-In-Picture (PIP)	Yes		
Ruggedized touchscreen display	3.5 inch (landscape) 640 x 480 LCD		
Rugged, ergonomic design for one-handed use	Yes		
Thermal sensitivity (NETD)	≤ 0.05 °C at 30 °C target temp (50 mK)		
Filter mode (NETD improvement)	≤ 0.03 °C at 30 °C target temp (30 mK)	–	
Level and span	Smooth auto and manual scaling		
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)	3.0 °C (5.4 °F)		
Built-in digital camera (visible light)	5MP		
Frame rate	60 Hz or 9 Hz versions		
Laser pointer	Yes		
LED light (torch)	Yes		
Digital zoom	2x and 4x	–	
Data storage and image capture			
Extensive memory options	Removable 4 GB micro SD memory card, 4 GB internal flash memory, save to USB flash drive capability, upload to Fluke Cloud™ for permanent storage		
Image capture, review, save mechanism	One-handed image capture, review, and save capability		

*Fluke Connect® system is not available in all countries. Please check availability with your authorized Fluke distributor.

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Detailed specifications

	Ti450	Ti400	Ti300
Image file formats	Non-radiometric (.bmp) or (.jpeg) or fully-radiometric (.is2); no analysis software required for non-radiometric (.bmp, .jpg and .avi) files		
Memory review	Thumbnail and full screen review		
Software	SmartView® software—full analysis and reporting software and Fluke Connect® system		
Export file formats with SmartView® software	Bitmap (.bmp), GIF, JPEG, PNG, TIFF		
Voice annotation	60 seconds maximum recording time per image; reviewable playback on camera, optional bluetooth headset available but not required		
IR-PhotoNotes™	Yes (5 images)		
Text annotation	Yes		
Video recording	Standard and radiometric		
File formats video	Non-radiometric (MPEG - encoded .AVI) and fully-radiometric (.IS3)		
Streaming video (remote display)	Yes, see the live stream of the camera display on your PC, smartphone, or TV monitor. Via USB, WiFi hotspot, or WiFi network to SmartView® software on a PC; via WiFi hotspot to the Fluke Connect® app on a smartphone; or via HDMI to a TV monitor		
Remote control operation	Yes, through SmartView® software or Fluke Connect® mobile app		—
Auto capture (temperature and interval)	Yes		
Battery			
Batteries (field-replaceable, rechargeable)	Two lithium ion smart battery packs with five-segment LED display to show charge level		
Battery life	3-4 hours per battery (*Actual life varies depending on settings and usage)		
Battery charge time	2.5 hours to full charge		
Battery charging system	Two-bay battery charger or in-imager charging. Optional 12 V automotive charging adapter		
AC operation	AC operation with included power supply (100 V AC to 240 V AC, 50/60 Hz)		
Power saving	User selectable sleep and power off modes		
Temperature measurement			
Temperature measurement range (not calibrated below -10 °C)	-20 °C to +1200 °C (-4 °F to +2192 °F)		-20 °C to +650 °C (-4 °F to +1202 °F)
Accuracy	± 2 °C or 2 % (at 25 °C nominal, whichever is greater)		
On-screen emissivity correction	Yes (both value and table)		
On-screen reflected background temperature compensation	Yes		
On-screen transmission correction	Yes		
Color palettes			
Standard palettes	8: Ironbow, Blue-Red, High Contrast, Amber, Amber Inverted, Hot Metal, Grayscale, Grayscale Inverted		
Ultra Contrast™ palettes	8: Ironbow Ultra, Blue-Red Ultra, High Contrast Ultra, Amber Ultra, Amber Inverted Ultra, Hot Metal Ultra, Grayscale Ultra, Grayscale Inverted Ultra		
General specifications			
Color alarms (temperature alarms)	High temperature, low temperature, and isotherms (within range)		
Infrared spectral band	7.5 µm to 14 µm (long wave)		
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		
Center-point temperature measurement	Yes		
Spot temperature	Hot and cold spot markers		
User-definable spot markers	3 user-definable spot markers		
Center box	Expandable-contractible measurement box with MIN-MAX-AVG temp display		
Safety	IEC 61010-1: Overvoltage category II, Pollution Degree 2		
Electromagnetic compatibility	IEC 61326-1: Basic EM environment. CISPR 11: Group 1, Class A		
Australian RCM	IEC 61326-1		
US FCC	CFR 47, Part 15 Subpart B		
Vibration	0.03 g2/Hz (3.8 g), 2.5 g IEC 68-2-6		
Shock	25 g, IEC 68-2-29		
Drop	Engineered to withstand 2 meter (6.5 feet) drop with standard lens		
Size (H x W x L)	27.7 cm x 12.2 cm x 16.7 cm (10.9 in x 4.8 in x 6.5 in)		
Weight (battery included)	1.04 kg (2.3 lb)		
Enclosure rating	IEC 60529: IP54 (protected against dust, limited ingress; protection against water spray from all directions)		
Warranty	Two-years (standard), extended warranties are available		
Recommended calibration cycle	Two-years (assumes normal operation and normal aging)		
Supported languages	Czech, Dutch, English, Finnish, French, German, Hungarian, Italian, Japanese, Korean, Polish, Portuguese, Russian, Simplified Chinese, Spanish, Swedish, Traditional Chinese, and Turkish		

Ordering information

FLK-Ti450 60Hz Thermal Imager
FLK-Ti450 9Hz Thermal Imager
FLK-Ti400 60Hz Thermal Imager
FLK-Ti400 9Hz Thermal Imager
FLK-Ti300 60Hz Thermal Imager
FLK-Ti300 9Hz Thermal Imager

Included

Thermal Imager with standard infrared lens; AC power supply and battery pack charger (including universal AC adapters); two rugged lithium ion smart battery packs; USB cable; HDMI video cable; 4 GB micro SD card; rugged, hard carrying case; soft transport bag and adjustable hand strap. **Available by free download:** SmartView® desktop software and user manual.

Optional accessories

FLK-LENS/TELE2 Infrared Telephoto Lens (2X magnification)
FLK-LENS/4XTELE2 Infrared Telephoto Lens (4X magnification)
FLK-LENS/WIDE2 Infrared Wide Angle Lens
TI-CAR-CHARGER Car Charger
FLK-TI-VISOR3 Sun Visor
BOOK-ITP Introduction to Thermography Principles Book
TI-TRIPOD3 Tripod Mounting Accessory
FLK-TI-BLUETOOTH Bluetooth headset
FLK-TI-SBP3 Additional Smart Battery
FLK-TI-SBC3B Additional Smart Battery Charger

Kits

FLK-TI400 60HZ/FCA* Thermal Imager, 3000 FC DMM, a3001FC iFlex Module
FLK-TI300 60HZ/FCA* Thermal Imager, 3000 FC DMM, a3001FC iFlex Module
FLK-TI400 60HZ/FCC* Thermal Imager, 3-a3001FC iFlex Modules, 805 Vibration Tester
FLK-TI400 9HZ/FCA Thermal Imager, 3000 FC DMM, a3001FC iFlex Module
FLK-TI300 9HZ/FCA Thermal Imager, 3000 FC DMM, a3001FC iFlex Module
FLK-TI400 9HZ/FCC Thermal Imager, 3-a3001FC iFlex Modules, 805 Vibration Tester

Visit www.fluke.com to get complete details on these products or ask your local Fluke sales representative.

***Only available in certain countries.**

RF connection time (binding time) may take up to 1 minute.

The Expert Series

Go expert with the Fluke TiX560, TiX520 or TiX500, and get maximum flexibility with an articulating lens that rotates a full 240 degrees and a 5.7 inch touchscreen LCD. Includes in-field analysis and post-capture image processing on camera, along with other expert-level features and more lens options.

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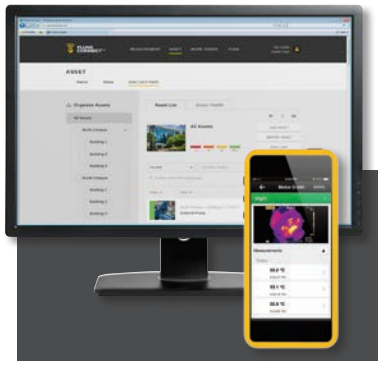

FLUKE CONNECT®

Set up and sustain preventive maintenance practices with ease, using the Fluke Connect® system of wireless test tools and asset management software.

- Improve your ability to prevent or predict failures
- Make confident decisions with data you can trust and trace
- Access your infrared images from anywhere, anytime with secure cloud storage
- Connect and collaborate with your team – even when you are in different places
- Provide more complete information to your maintenance teams by generating work orders that include measurements and infrared images
- Edit and analyze images; create and send reports from your smartphone directly from the field

Download the app at:

Download on the App Store

ANDROID APP ON Google play

WiFi or cellular service is required to share data. Smartphone, wireless service and data plan not included with purchase. First 5 GB of storage is free. Phone support details can be viewed at fluke.com/phones.

Fluke. *Keeping your world up and running.®*

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