

# TECHNICAL DATA

## TiX560, TiX520 and TiX500\* Infrared Cameras The Fluke Expert Series



### PREMIUM IMAGE QUALITY

#### SPATIAL RESOLUTION

**TiX560, TiX520 and TiX500**

1.31 mRad

#### RESOLUTION

**TiX560, TiX520 and TiX500**

320 x 240 (76,800 pixels) and 640x480 (307,200 pixels) with SuperResolution Mode

#### FILTER MODE (NETD IMPROVEMENT)

**TiX560**

≤ 0.03 °C at 30 °C target temp (30 mK)

**TiX520**

≤ 0.04 °C at 30 °C target temp (40 mK)

#### TEMPERATURE RANGE

**TiX560**

-20 °C to +1200 °C (-4 °F to +2192 °F)

**TiX520**

-20 °C to +850 °C (-4 °F to +1562 °F)

**TiX500**

-20 °C to +650 °C (-4 °F to +1202 °F)

### Your view of infrared technology is about to change 180°

- Easily navigate over, under and around objects with the **180° articulating lens** and see the image before you capture it
- Premium in-field viewing experience with the **only 5.7 inch responsive touchscreen LCD in its class**<sup>1</sup>—150 % more viewing area<sup>3</sup>
- **Enhanced image quality and temperature measurement accuracy**—turn your 320 x 240 images into 640 x 480 images, that's 4x's the resolution and pixels with SuperResolution
- **Get an in-focus image with the touch of a button.** **LaserSharp® Auto Focus**, exclusive to Fluke, uses a built-in laser distance meter that calculates and displays the distance to your designated target with pinpoint accuracy<sup>2</sup>
- See the details you need with **smart lenses**—2x and 4x telephoto, wide angle, and 25 micron macro—no calibration required, interchangeable between compatible cameras
- See, save and share from the field and connect to the **largest selection of wireless test and measurement tools** with Fluke Connect®

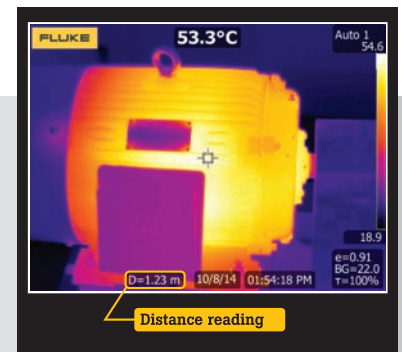
<sup>1</sup>Compared to industrial handheld infrared cameras with 320x240 detector resolution as of September 1, 2015.

<sup>2</sup>Up to 30 meters (100 feet).

<sup>3</sup>Compared to a 3.5 inch screen.



Get tough shots from any angle with a 180° degree rotating lens and the only 5.7 inch LCD.



**LaserSharp® Auto Focus** uses a built in laser distance meter that calculates and displays the distance to your designated target with pinpoint accuracy.



\*TiX500 is not available in all countries

## Detailed specifications

	TiX560		TiX520	TiX500*
Key Features				
IFOV with standard lens (spatial resolution)	1.31 mRad, D:S 764:1			
Detector resolution	320 x 240 (76,800 pixels)			
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 1528:1			
Field of view	12 °H x 9 °V			
Minimum focus distance	45 cm (approx. 18 in)			
IFOV with optional 4x telephoto smart lens	0.33 mRad, D:S 3056:1			
Field of view	6.0 °H x 4.5 °V			
Minimum focus distance	1.5 m (approx. 5 ft)			
IFOV with optional wide-angle smart lens	2.62 mRad, D:S 399:1			
Field of view	46 °H x 34 °V			
Minimum focus distance	15 cm (approx. 6 in)			
Minimum micron spot size with optional macro smart lens	25 microns			
Field of view	36.1° X 27.1°			
Working distance	~8 mm (0.3 in) to ~14 mm (0.6 in) with optimal at 10 mm (0.4 in)			
SuperResolution	On camera and in software		In software	
Image sharpening	Yes		—	
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			
Streaming video (remote display)	Via HDMI or WiFi in remote control mode		Via HDMI or WiFi to SmartView	
Touchscreen display (capacitive)	14.4 cm (5.7 in) diagonal landscape color VGA (640 x 480) LCD with backlight			
Wireless connectivity	Yes			
Wireless compatibility	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 (where available)			
Fluke Connect® tool compatible	Yes (where available). Connects wirelessly to select Fluke Connect® enabled tools. Five simultaneous connections supported			
IR-Fusion® technology	Yes			
AutoBlend™ mode	Yes			
Picture-In-Picture (PIP)	Yes			
Continuous AutoBlend™	Set AutoBlend™ level across continuum		—	
Rugged, ergonomic design	Rotatable (articulating lens) >180 degrees			
Thermal sensitivity (NETD)	≤ 0.045 °C at 30 °C target temp (45 mK)		≤ 0.05 °C at 30 °C target temp (50 mK)	
Filter Mode (NETD improvement)	≤ 0.03 °C at 30 °C target temp (30 mK)		≤ 0.04 °C at 30 °C target temp (40 mK)	—
Level and span	Smooth auto and manual scaling			
Touchscreen adjustable level/span	Yes. Span and level can be easily and quickly set by simply touching the screen			
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)	5 megapixel industrial performance			
Frame rate	60 Hz or 9 Hz versions			
Laser pointer	Yes			
LED light (torch)	Yes			
Digital Zoom	2x, 4x, 8x		2x, 4x	2x
Data storage and image capture				
Extensive memory options	Removable micro SD memory card, on-board flash memory, save-to-USB flash drive capability, direct download via USB-to-PC connection			
Post-capture image editing (on camera)	Yes. Conduct on camera analysis for in-field results			

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	TiX560		TiX520	TiX500*
Data storage and image capture (continued)				
Advanced text Annotation	Yes. Including standard shortcuts as well as user programmable options			
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 view navigation and review selection			
Software	SmartView® software, Fluke Connect™ (where available), and SmartView® Mobile App—full analysis and reporting software			
Export file formats with SmartView® software	BMP, DIB, GIF, JPE, JFIF, JPEG, JPG, PNG, TIF, and TIFF			
Voice annotation	60 seconds maximum recording time per image; reviewable playback on camera; Bluetooth headset provided**			
IR-PhotoNotes™	Yes			
Text annotation	Yes			
Video recording	Standard and radiometric			
File formats video	Non-radiometric (MPEG - encoded .AVI) and fully radiometric (.IS3)			
Remote control operation	Yes	—		
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	Three hours continuous use per battery pack			
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 +850 °C (-4 °F to +1562 °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 and low-temperature			
Infrared spectral band	7.5 µm to 14 µm (long wave)			
Temperature	Operating: -10 °C to +50 °C (14 °F to 122 °F); Storage: -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			
Safety	IEC 61010-1: Overvoltage Category II, Pollution degree 2			
Electromagnetic compatibility	IEC 61326-1: Basic EM Environment; CISPR11, Group 1, Class A			
Australian RCM	IE 61326-1			
US FCC	CFR 47, Part 15 Subpart B			
Vibration	0.03 g2/Hz (3.8 grms), 2.5g IEC 68-2-6			
Shock/Drop	25 g, IEC 68-2-29/Engineered to withstand 1 meter (3.3 feet) drop with standard lens			
Size (H x W x L)/Weight (battery included)	27.3 cm x 15.9 cm x 9.7 cm (10.8 in x 6.3 in x 3.8 in)/1.54 kg (3.4 lb)			
Enclosure rating	IEC 60529: IP54 (protected against dust, limited ingress; protection against water spray from all directions)			
Warranty/Calibration cycle	Two-years (standard), extended warranties are available/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			

\*TiX500 is not available in all countries

\*\*Bluetooth not available in all countries

## Ordering information

**FLK-TiX560 60Hz** Thermal Imager; 320x240; 60 Hz  
**FLK-TiX560 9Hz** Thermal Imager; 320x240; 9 Hz  
**FLK-TiX520 60Hz** Thermal Imager; 320x240; 60 Hz  
**FLK-TiX520 9Hz** Thermal Imager; 320x240; 9 Hz  
**FLK-TiX500\* 60Hz** Thermal Imager; 320x240; 60 Hz  
**FLK-TiX500\* 9Hz** Thermal Imager; 320x240; 9 Hz

### Included with product

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; rugged, hard carrying case, adjustable neck and hand strap, bluetooth headset (where available), warranty registration card and calibration certificate. Flash drive includes product manuals in English, Chinese, German, Portuguese, Spanish, French, Italian, Korean, and Japanese, Russian and Turkish and SmartView® software. (Software is also available via download at [www.fluke.com/smartviewdownload](http://www.fluke.com/smartviewdownload)).

### Kits

**FLK-TiX560/T2 60HZ** Thermal Imager, Tele2 Infrared Telephoto Lens  
**FLK-TiX560/T2 9HZ** Thermal Imager, Tele2 Infrared Telephoto Lens  
**FLK-TiX560/W2 60HZ** Thermal Imager, Wide2 Infrared Wide Angle Lens  
**FLK-TiX560/W2 9HZ** Thermal Imager, Wide2 Infrared Wide Angle Lens

### 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  
**FLK-LENS/25MAC2** 25 Micron Macro Infrared Lens  
**TI-CAR-CHARGER** Car Charger  
**BOOK-ITP** Introduction to Thermography Principles Book  
**FLK-TI-SBP4** Additional Smart Battery  
**FLK-TI-SBC3** Additional Smart Battery Charger  
**FLK-TiX5X-LENS CAP** Infrared Lens Cover  
**FLK-TiX5XX-NECK** Neck strap  
**FLUKE-TiX5XX HAND** Hand strap  
**FLK-TI-BLUETOOTH** Bluetooth Headset  
**FLK-TiX5XX-HDMI** HDMI Cable

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**Set up and sustain preventive maintenance practices with ease to help you oversee your complex world with the Fluke Connect® system of software and wireless test tools.**

- Maximize uptime and make confident maintenance decisions with data you can trust and trace.
- Save measurements to the Fluke Cloud™ and associate with an asset so your team can consult both historical and current measurements from one location.
- Collaborate with ease by sharing your data with others with ShareLive™ video calls and emails.
- Wireless one-step measurement transfer with AutoRecord™ measurements removes the need for clipboards and paperwork.
- Consult summary views of all assets over time for easy identification of correlated or periodic failures for easier prioritization of maintenance work.
- Generate reports with multiple measurement types to provide status or work recommendations.

Find out more at [flukeconnect.com](http://flukeconnect.com)

Download the app at:



Smartphone is not included with purchase.

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