FLUKE®

TiX560 and TiX520 Thermal Imagers

The Fluke Expert Series

Technical Data

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**[1]—150 % more viewing area[2]
- **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[3]
- See the details you need with **smart lenses**—2x and 4x telephoto, wide angle, and 25 micron macro—no calibration required, interchangeable between compatible thermal imagers

[1]Compared to industrial handheld thermal imagers with 320x240 detector resolution as of October 14, 2014.
[2]Compared to a 3.5 inch screen.
[3]Up to 30 meters (100 feet).

PREMIUM IMAGE QUALITY

SPATIAL RESOLUTION

TiX560 and TiX520
1.31 mRad

RESOLUTION

TiX560 and TiX520
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

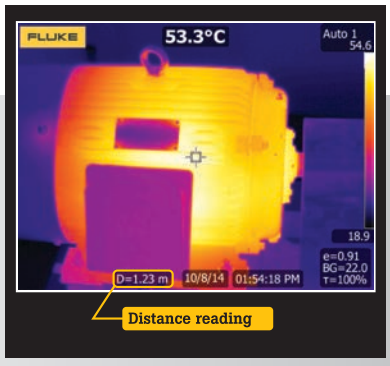
TEMPERATURE RANGE

TiX560
-20 °C to +1200 °C (-4 °F to +2192 °F)
TiX520
-20 °C to +850 °C (-4 °F to +1562 °F)

IMAGE SHARPENING

TiX560
Image sharpening improves image clarity and quality

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.

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Detailed specifications

	TiX560	TiX520
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 hot spot in remote control mode	Via HDMI
Touchscreen display (capacitive)	14.4 cm (5.7 in) diagonal landscape color VGA (640 x 480) LCD with backlight	
Wireless connectivity		
CNX™ Wireless System	Yes (where available)	
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 easy 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

	TiX560	TiX520
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	
Image capture, review, save mechanism	One-handed image capture, review, and save capability	
Post-capture image editing (on camera)	Yes. Conduct on camera analysis for in-field results	
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 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	
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)
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	

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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

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**).

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