

# Ti125, Ti110, Ti105, Ti100, Ti95, Ti90, TiR125, TiR110 and TiR105 Infrared Cameras

## The Fluke Performance Series

## Technical Data



Now compatible with Fluke  
Connect™ Mobile App<sup>1</sup>

### Fluke Infrared Cameras Experience. Performance. Confidence.

The Fluke Performance Series Infrared Cameras can save you time and money by finding potential problems before they become costly failures.

- **Fluke Connect™ ShareLive™ video call** lets you collaborate with others, so they see what you see. Get approvals without leaving the field<sup>1</sup>
- **Precisely blended visual and infrared images** with crucial details to assist in identifying potential problems – IR-Fusion® technology with AutoBlend™ mode<sup>2</sup>
- **Easily see potential problems** with the large 3.5 inch LCD, a full 32% larger than many competitive models
- **Automatically focus** from 1.2 m (4 ft) and beyond with IR-OptiFlex™ Focus System and as close as 15 cm (6 in) in manual mode<sup>2</sup>
- **Building diagnostic models** – get 20% better thermal sensitivity (80 mK) with a lower temperature range with TiR models (TiR125, TiR110, TiR105) compared to standard Ti125, Ti110 and Ti105 models

### SUPERIOR IMAGE QUALITY

#### SPATIAL RESOLUTION

**Ti125, Ti110, Ti105, Ti100**  
3.39 mRad

**Ti95, Ti90**  
5.6 mRad

#### RESOLUTION

**Ti125, Ti110, Ti105, Ti100**  
160x120 (19,200 pixels)

**Ti95**  
80x80 (6,400 pixels)

**Ti90**  
80x60 (4,800 pixels)

#### FIELD OF VIEW

**Ti125, Ti110, Ti105, Ti100**  
22.5 °H x 31 °V

**Ti95**  
26 °H x 26 °V

**Ti90**  
19.5 °H x 26 °V

#### EXTENSIVE SD MEMORY SYSTEM

Removable SD memory card and  
wireless SD Card (where available)

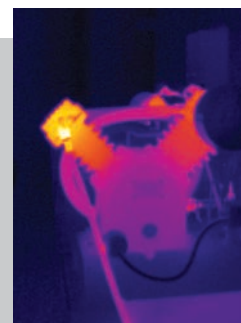
### IR-Fusion® Technology with AutoBlend™ Mode



Precisely blended visual and infrared images with crucial details to assist in identifying potential problems.



Air Compressor –  
Full Visible



Air Compressor –  
Full Infrared



Air Compressor –  
AutoBlend™ Mode

<sup>1</sup>Within your provider's wireless service area; Fluke Connect™ is not available in all countries.

<sup>2</sup>Included features vary by model; see table for model specifications.

	Ti125/TiR125	Ti110/TiR110	Ti105/TiR105	Ti100	Ti95	Ti90
<b>Key features</b>						
<b>IFOV (spatial resolution)</b>	3.39 mRad			5.6 mRad		
Detector resolution	160x120 (19,200 pixels)			80x80 (6,400 pixels)	80x60 (4,800 pixels)	
Field of view	22.5 °H x 31 °V			26 °H x 26 °V	19.5 °H x 26 °V	
<b>Wireless connectivity</b>	Yes					
Fluke Connect™ app compatible	Yes, with included wireless SD card (where available)					
CNX™ Wireless System	Yes (where available)			—		
<b>IR-Fusion® technology</b>						
AutoBlend™ mode	Mid IR and Min IR		Mid IR	—		
Picture-In-Picture (PIP)	Max IR PIP, Mid IR PIP, Min IR PIP		Max IR PIP, Mid IR PIP	—	Max IR PIP	—
Focus system	IR-OptiFlex™ focus system Minimum focus distance, 15 cm (6 in)		Fixed focus Minimum focus distance, 122 cm (48 in)		Fixed focus Minimum focus distance, 46 cm (18 in)	
Ruggedized display	3.5 inch diagonal (portrait format)					
Rugged, ergonomic design for one-handed use	Yes					
Thermal sensitivity (NETD)	<b>Standard models:</b> ≤ 0.10 °C at 30 °C target temp (100 mK) <b>TiR models:</b> ≤ 0.08 °C at 30 °C target temp (80 mK)			≤ 0.10 °C at 30 °C target temp (100 mK)		≤ 0.15 °C at 30 °C target temp (150 mK)
Temperature measurement range (not calibrated below -10 °C)	<b>Ti125:</b> -20 °C to +350 °C (-4 °F to +662 °F) <b>TiR125:</b> -20 °C to +150 °C (-4 °F to +302 °F)	<b>Ti110 and Ti105:</b> -20 °C to +250 °C (-4 °F to +482 °F) <b>TiR110 and TiR105:</b> -20 °C to +150 °C (-4 °F to +302 °F)		-20 °C to +250 °C (-4 °F to +482 °F)		
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)	2.5 °C					
Minimum span (in auto mode)	5 °C					
Built-in digital camera (visible light)	2 megapixel industrial performance			None - IR Only	2 megapixel industrial performance	
Frame rate	30 Hz or 9 Hz versions (TiR models: 9 Hz only)			9 Hz only		
Laser pointer	Yes			—		
LED light (torch)	Yes			—		
<b>Data storage and image capture</b>						
Extensive SD memory system	Removable SD memory card and wireless SD card (where available); direct download via USB-to-PC connection					
Image capture, review, save mechanism	One-handed image capture, review, and save capability					
File formats image	Non-radiometric (.bmp) or (.jpeg) or fully-radiometric (.is2); No analysis software required for non-radiometric (.bmp, .jpg) 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	—				
IR-PhotoNotes™	Yes (3 images)		—			
Standard video recording	Yes (AVI with MPEG encoding, up to 5 minutes)		—			
Radiometric video recording	Yes	—				
File formats video	Non-radiometric (MPEG - encoded .AVI) and fully-radiometric (.IS3)	Non-radiometric (MPEG - encoded .AVI)	—			
Streaming video (remote display)	Streaming via USB to PC	—				
<b>Battery</b>						
Batteries (field-replaceable, rechargeable)	Two lithium ion smart battery packs with five-segment LED display to show charge level	One lithium ion smart battery pack with five-segment LED display to show charge level				
Battery life	Four+ hours continuous use per battery pack (assumes 50% brightness of LCD and average usage)					

	Ti125/TiR125	Ti110/TiR110	Ti105/TiR105	Ti100	Ti95	Ti90
<b>Battery</b>						
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	In-imager charging. Optional two-bay battery charger or 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					
<b>Temperature measurement</b>						
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	—				
<b>Color palettes</b>						
Standard palettes	8: Ironbow, Blue-Red, High-Contrast, Amber, Amber Inverted, Hot Metal, Grayscale, Grayscale Inverted			4: Ironbow, Blue-Red, Amber, Grayscale	6: Ironbow, Blue-Red, High-Contrast, Amber, Hot Metal, Grayscale	3: Ironbow, Blue-Red, Grayscale
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	3: Ironbow Ultra, Blue-Red Ultra, Grayscale Ultra	—			
<b>General specifications</b>						
Color alarms (temperature alarms)	High temperature, low temperature, isotherm	High temperature, low temperature	High temperature	—		
Infrared spectral band	7.5 µm to 14 µm (long wave)				9 µm to 15 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)					
Relative humidity	10 % to 95 %, non-condensing					
Center-point temperature measurement	Yes					
Spot temperature	Hot and cold spot markers	—			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			—	Fixed-size measurement box with MIN-MAX-AVG temp	—
Safety standards	CSA: C22.2 No. 61010-1-04, UL: UL STD 61010-1 (2nd Edition), ISA: 82.02.01					
Electromagnetic compatibility	EN 61326-1:2006 IEC 61326-1:2005					
C Tick	IEC/EN 61326-1					
US FCC	EN61326-1; FCC Part 5					
Vibration	2G, IEC 68-2-6					
Shock	25G, IEC 68-2-29					
Drop	Engineered to withstand 2 meter (6.5 feet) drop					
Size (H x W x L)	28.4 cm x 8.6 cm x 13.5 cm (11.2 in x 3.4 in x 5.3 in)					
Weight (battery included)	0.73 kg (1.6 lb)					
Enclosure rating	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					

Note: Specifications are based on models with serial number starting with 1406 or later. Specifications may differ on earlier models.

## Ordering information

**FLK-Ti125 30HZ** Industrial-Commercial Thermal Imager  
**FLK-Ti125 9HZ** Industrial-Commercial Thermal Imager  
**FLK-Ti110 30HZ** Industrial-Commercial Thermal Imager  
**FLK-Ti110 9HZ** Industrial-Commercial Thermal Imager  
**FLK-Ti105 30Hz** Industrial-Commercial Thermal Imager  
**FLK-Ti105 9HZ** Industrial-Commercial Thermal Imager  
**FLK-Ti100 9HZ** General Use Thermal Imager  
**FLK-Ti95 9HZ** General Use Thermal Imager  
**FLK-Ti90 9HZ** General Use Thermal Imager  
**FLK-TiR125 9HZ** Building Diagnostics Thermal Imager  
**FLK-TiR110 9HZ** Building Diagnostics Thermal Imager  
**FLK-TiR105 9HZ** Building Diagnostics Thermal Imager

### Included with product

Thermal imagers are shipped with ac power adapter, universal AC adapters, lithium ion smart battery (Ti125 includes 2 each—other models 1 each), USB cable, SD memory card, Fluke Connect™ wireless SD card (wherever Fluke Connect™ is available), hard carrying case (Ti125, Ti110, Ti105, Ti100 only), soft transport bag, and adjustable hand strap (except Ti90). The users manual and SmartView® software in supported languages are available for free download from Fluke.com. Ti125 models also include a two-bay battery charger and a multi-format USB memory card reader.

### Optional

**FLK-FC-SD 8GB** Fluke Connect Wireless SD Card  
**FLK-TI-VISOR2** Sun Visor  
**FLK-TI-TRIPOD2** Tripod Mounting Accessory  
**BOOK-ITP** Introduction to Thermography Principles Book  
**FLK-TI-SBP3** Additional Smart Battery  
**FLK-TI-SBC3** Additional Smart Battery Charger  
**TI-CAR CHARGER** Car Charger

### Fluke Connect Kits

**FLK-Ti125 30HZ/FCB** Ti125 Thermal Imager, (3) a3001 FC iFlex Modules, 805 FC  
**FLK-Ti105 30HZ/FCA** Ti105 Thermal Imager, 3000 FC DMM, a3001 FC iFlex Module  
**FLK-Ti95 9HZ/FCA** Ti95 Thermal Imager, 3000 FC DMM, a3001 FC iFlex Module  
**FLK-Ti95 9HZ/FCC** Ti95 Thermal Imager, (1) a3001 FC iFlex Module

### Fluke Connect modules

**FLK-a3000 FC** AC Current Clamp Module  
**FLK-a3001 FC** iFlex™ AC Current Clamp Module  
**FLK-a3002 FC** AC/DC Current Module  
**FLK-v3000 FC** AC Voltage Module  
**FLK-v3001 FC** DC Voltage Module  
**FLK-t3000 FC** K-Type Temperature Module

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



Built with  
**FLUKE  
CONNECT™**

**See it. Save it. Share it.**  
**All the facts, right in the field.**

Fluke Connect™ with ShareLive™ video call is the only wireless measurement system that lets you stay in contact with your entire team without leaving the field. The Fluke Connect™ mobile app is available for Android™ (4.3 and up) and iOS (4s and later) and works with over 20 different Fluke products—the largest system of connected test tools in the world. And more are on the way. Go to the Fluke website to find out more.

**Download the app at:**



Smart phone wireless service and data plan not included with purchase.



For a high performance, feature rich infrared camera that produces consistently in-focus images with a touch of a button EVERY, SINGLE, TIME, consider the Professional Series with LaserSharp® Auto Focus.

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