

# Choose the right tool for the job.

EXPERT SERIES	PROFESSIONAL SERIES	PERFORMANCE SERIES
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Engineers, R&D professionals and advanced thermographers who require premium image quality and an unsurpassed level of detail in every infrared image.

Professional in-house, contract and service thermographers who need quality images and advanced features and specifications for use in multiple applications.

Technicians and contractors who need quality images and feature rich affordability for quick scans and/or intermittent inspections.

**Where used**

- Industrial maintenance
- Oil and gas predictive maintenance
- Power generation/transmission
- Research and development
  - Electrical
  - Mechanical
  - Biology/sciences
- Quality control
- Plus the industries included under the professional and performance series

- Industrial maintenance
- Heavy commercial facility maintenance
- Oil and gas maintenance
- Veterinary
- Reliability inspections (PdM)
- Heavy building diagnostics
  - Building envelope
  - Construction defects
- Electrical, water, gas utilities
- Chemical processing
- Machinery, instrumentation and appliances
- Plus the industries included under the performance series

- Electrical inspections
- HVAC/R inspections
- Mechanical
- Residential home inspections
- Light commercial maintenance
  - Building diagnostics
  - Building envelope
  - Commercial/industrial facilities



	<b>TiX1000</b>	<b>TiX660</b>	<b>TiX640</b>	<b>TiX620</b>	<b>TiX580</b>	<b>TiX560</b>	<b>TiX520</b>	<b>TiX500</b>	<b>Ti480</b>	<b>Ti450</b>	<b>Ti400</b>	<b>Ti300</b>	<b>TiS75</b>	<b>TiS65/60</b>	<b>TiS55/50</b>	<b>TiS45/40</b>	<b>TiS20</b>	<b>TiS10</b>
<b>Detector resolution</b>	1024 x 768, 2048 x 1536 SuperRes.	640 x 480, 1280 x 960 SuperRes.	640 x 480, 1280 x 960 SuperRes.	640 x 480, 1280 x 960 SuperRes.	640 x 480, 1280 x 960 SuperRes.	320 x 240, 640 x 480 SuperRes.	320 x 240, 640 x 480 SuperRes.	320 x 240, 640 x 480 SuperRes.	640 x 480, 1280 x 960 SuperRes.	320 x 240, 640 x 480 SuperRes.	320 x 240	240 x 180	320 x 240	260 x 195	220 x 165	160 x 120	120 x 90	80 x 60
<b>Spatial resolution</b>	0.6 mRad	0.8 mRad	0.8 mRad	0.85 mRad	0.93 mRad	1.31 mRad	1.31 mRad	1.31 mRad	0.93 mRad	1.31 mRad	1.31 mRad	1.75 mRad	2.0 mRad	2.4 mRad	2.8 mRad	3.9 mRad	5.2 mRad	7.8 mRad
<b>Field of view</b>	32.4° x 24.7°	30.9° x 23.1°	30.9° x 23.1°	32.7° x 24.0°	34° x 24°	24° x 17°	24° x 17°	24° x 17°	34° x 24°	24° x 17°	24° x 17°	24° x 17°	35.7° x 26.8°	35.7° x 26.8°	35.7° x 26.8°	35.7° x 26.8°	35.7° x 26.8°	35.7° x 26.8°
<b>Distance to spot</b>	1765:1	1200:1	1200:1	1100:1	1065:1	753:1	753:1	753:1	1065:1	753:1	753:1	565:1	504:1	409:1	346:1	252:1	189:1	126:1
<b>Thermal sensitivity*</b>	50 mK	30 mK	30 mK	40 mK	50 mK	30 mK	40 mK	50 mK	50 mK	30 mK	50 mK	50 mK	80 mK	80 mK	80 mK	90 mK	100 mK	150 mK
<b>Temperature range</b>	-40 °C to +1200 °C (-40 °F to +2192 °F)	-40 °C to +1200 °C (-40 °F to +2192 °F)	-40 °C to +1200 °C (-40 °F to +2192 °F)	-40 °C to +600 °C (-40 °F to +1112 °F)	-20 °C to +800 °C (-4 °F to +1472 °F)	-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)	≤ -20 °C to +800 °C (-4 °F to 1472 °F)	-20 °C to +1200 °C (-4 °F to +2192 °F)	-20 °C to +1200 °C (-4 °F to +2192 °F)	-20 °C to +650 °C (-4 °F to +1202 °F)	-20 °C to +550 °C (-4 °F to +1022 °F)	-20 °C to +550 °C (-4 °F to +1022 °F)	-20 °C to +450 °C (-4 °F to +842 °F)	-20 °C to +350 °C (-4 °F to +662 °F)	20 °C to +350 °C (-4 °F to +662 °F)	-20 °C to +250 °C (-4 °F to +482 °F)
<b>Focus systems</b>	LS, AF, AMF, ES	LS, AF, AMF, ES	AF, AMF, ES	AF, AMF, ES	MSF, LS, AMF	MSF, LS, AMF	MSF, LS, AMF	MSF, LS, AMF	MSF, LS, AMF	MSF, LS, AMF	LS, AMF	LS, AMF	MF	MF (TiS65), FF (TiS60)	MF (TiS55), FF (TiS50)	MF (TiS45), FF (TiS40)	FF	FF
<b>Laser distance meter</b>	Yes	Yes	No	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-	-	-
<b>Image enhancement</b>	IRF, PIP, SR	IRF, PIP, SR	IRF, PIP, SR	IRF, PIP, SR	IRF, PIP, SR	IRF, PIP, SR	IRF, PIP, SR	IRF, PIP, SR	IRF, PIP, SR	IRF, PIP, SR	IRF, PIP	IRF, PIP	IRF, PIP	IRF, PIP	IRF, PIP	IRF, PIP	IRF	-
<b>Annotation</b>	VA, TA	VA, TA	VA, TA	VA, TA	IRPN, VA, TA	IRPN, VA, TA	IRPN, VA, TA	IRPN, VA, TA	IRPN, VA, TA	IRPN, VA, TA	IRPN, VA, TA	IRPN, VA, TA	IRPN, VA	IRPN, VA	IRPN, VA	VA	-	-
<b>Standard video rec.</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
<b>Radiometric video rec.</b>	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	-	-	-	-
<b>Optional lenses</b>	7	7	7	2	4	4	4	4	3	3	3	3	-	-	-	-	-	-

AF: Auto focus | AMF: Advanced manual focus | ES: EverSharp multifocal recording | FF: Fixed Focus | IRF: IR Fusion® Auto Blend | IRPN: IR-PhotoNotes™ | LS: LaserSharp® Auto Focus System  
 MF: Manual focus | MSF: MultiSharp™ Focus | PIP: Picture-in-Picture | SR: SuperResolution | TA: Text Annotation | VA: Voice Annotation

\*Best possible

# Compare Fluke thermal imager models

	Expert Series Thermal Imagers								Professional Series Thermal Imagers				Performance Series Thermal Imagers						
	TiX1000	TiX660	TiX640	TiX620	TiX580	TiX560	TiX520	TiX500	Ti480	Ti450	Ti400	Ti300	TiS75	TiS65/60	TiS55/50	TiS45/40	TiS20	TiS10	
<b>IFOV (spatial resolution)</b>	0.6 mRad	0.8 mRad	0.8 mRad	0.85 mRad	0.93 mRad	1.31 mRad			0.93 mRad	1.31 mRad			1.75 mRad	2.0 mRad	2.4 mRad	2.8 mRad	3.9 mRad	5.2 mRad	7.8mRad
<b>Detector resolution</b>	1024 x 768 (786,432 pixels) SuperResolution mode: 2048 x 1536 (3,145,728 pixels)	640 x 480 (307,200 pixels) SuperResolution mode: 1280 x 960 (1,228,800 pixels)	640 x 480 (307,200 pixels) SuperResolution mode: 1280 x 960 (1,228,800 pixels)	640 x 480 (307,200 pixels) SuperResolution mode: 1280 x 960 (1,228,800 pixels)	640 x 480 (307,200 pixels) SuperResolution mode: 1280 x 960 (1,228,800 pixels)	320 x 240 (76,800 pixels) SuperResolution mode: 640 x 480 (307,200 pixels)			640 x 480 (307,200 pixels) SuperResolution mode: 1280 x 960 (1,228,800 pixels)	320 x 240 (76,800 pixels) SuperResolution mode: 640 x 480 (307,200 pixels)	320 x 240 (76,800 pixels)	240 x 180 (43,200 pixels)	320 x 240 (76,800 pixels)	260 x 195 (50,700 pixels)	220 x 165 (36,300 pixels)	160 x 120 (19,200 pixels)	120 x 90 (10,800 pixels)	80 x 60 (4,800 pixels)	
<b>Field of view</b>	32.4° H x 24.7° V	30.9° H x 23.1° V		32.7° H x 24.0° V	34° H x 24° V	24° H x 17° V			34° H x 24° V	24° H x 17° V			35.7° H x 26.8° V						
<b>Optional lenses</b>	2 wide angle, 2 telephoto, 3 macro and 1 standard			1 wide angle and 1 telephoto	Pre-calibrated smart optional lenses: wide angle, 2x and 4x telephoto, 25 micron macro				Pre-calibrated smart optional lenses: 2x and 4x telephoto, wide angle				—						
<b>Wireless connectivity</b>	—								Fluke Connect® app compatible. Wireless connectivity to PC, iPhone® and iPad® (iOS 4s and later), Android™ 4.3 and up, and WiFi to LAN <sup>1</sup>										
<b>IR-Fusion*</b>	AutoBlend™ mode, continuous blending				AutoBlend™ mode				5 presets (0 %, 25 %, 50 %, 75 %, 100 %)						3 presets (0 %, 50 %, 100 %)	—			
<b>Picture-In-Picture (PIP)</b>	Picture-in-Picture								5 presets (0 %, 25 %, 50 %, 75 %, 100 %)						—				
<b>Focus system</b>	LaserSharp® Auto Focus, auto focus, manual focus, and EverSharp multifocal recording		Auto focus, manual focus, and EverSharp multifocal recording		MultiSharp™ Focus, LaserSharp® Auto Focus with built-in laser distance meter and advanced manual focus				LaserSharp® Auto Focus with built-in laser distance meter and advanced manual focus		Manual focus	Manual focus (TiS65), Fixed focus (TiS60)	Manual focus (TiS55), Fixed focus (TiS50)	Manual focus (TiS45), Fixed focus (TiS40)	Fixed focus				
<b>Display</b>	Extra-large 5.6 inch color TFT display, 1280 x 800 pixel resolution, suitable for daylight operation			5.7 inch touchscreen LCD, 640 x 480 pixel resolution				3.5 inch touchscreen LCD, 640 x 480 pixel resolution				3.5 inch (landscape) 320 x 240 LCD							
<b>Design</b>	Camcorder with handle, Tilttable LCoS color viewfinder display, 800 x 600 pixel resolution		Camcorder		Ergonomic FlexCam design with a 240 degree rotating lens				Rugged, ergonomic design for one-handed use				Rugged, lightweight, ergonomic design for one-handed use						
<b>Thermal sensitivity*</b>	≤ 0.05 °C at 30 °C target temp (50 mK)	≤ 0.03 °C at 30 °C target temp (30 mK)		≤ 0.04 °C at 30 °C target temp (40 mK)	≤ 0.05 °C at 30 °C target temp (50 mK)	≤ 0.03 °C at 30 °C target temp (30 mK)	≤ 0.04 °C at 30 °C target temp (40 mK)	≤ 0.05 °C at 30 °C target temp (50 mK)	≤ 0.05 °C at 30 °C target temp (50 mK)	≤ 0.03 °C at 30 °C target temp (30 mK)	≤ 0.05 °C at 30 °C target temp (50 mK)		≤ 0.08 °C at 30 °C target temp (80 mK)			≤ 0.09 °C at 30 °C target temp (90 mK)	≤ 0.10 °C at 30 °C target temp (100 mK)	≤ 0.15 °C at 30 °C target temp (150 mK)	
<b>Temperature measurement range</b>	-40 °C to +1200 °C (-40 °F to +2192 °F) High temperature option—request at time of order: up to 2000 °C (3632 °F)			-40 °C to +600 °C (-40 °F to +1112 °F) High temperature option—request at time of order: up to 2000 °C (3632 °F)	-20 °C to +800 °C (-4 °F to +1472 °F)	-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)	-20 °C to +800 °C (-4 °F to 1472 °F)	-20 °C to +1200 °C (-4 °F to +2192 °F)		-20 °C to +650 °C (-4 °F to +1202 °F)	-20 °C to +550 °C (-4 °F to +1022 °F)	-20 °C to +450 °C (-4 °F to +842 °F)	-20 °C to +350 °C (-4 °F to +662 °F)	-20 °C to +350 °C (-4 °F to +662 °F)	-20 °C to +250 °C (-4 °F to +482 °F)		
<b>Frame rate</b>	30 Hz or 9 Hz versions	60 Hz or 9 Hz versions		30 Hz	60 Hz or 9 Hz versions				30 Hz or 9 Hz versions		30 Hz or 9 Hz versions (TiS65), 9 Hz (TiS60)	30 Hz or 9 Hz versions (TiS55), 9 Hz (TiS50)	330 Hz or 9 Hz versions (TiS45), 9 Hz (TiS40)	9 Hz					
<b>Subwindowing modes available: (add-on at time of order—subwindowing options are not available on 9 Hz models)</b>	Option 1: 640 x 480 (60 fps) Option 2: 384 x 288 (120 fps) Option 3: 1024 x 96 (240 fps)	Option 1: 384 x 288 (120 fps) Option 2: 640 x 120 (240 fps)		384 x 288 (60 fps)	—														
<b>Software</b>	Fluke Connect® (web, mobile and desktop)																		
<b>Voice annotation</b>	60 seconds maximum recording time per image, reviewable playback on camera; Bluetooth headset provided (where available)								60 seconds maximum recording time per image; reviewable playback on camera; optional bluetooth headset available but not required				60 seconds maximum recording time per image, reviewable playback on camera; Bluetooth headset available separately (where available)						—
<b>Text annotation</b>	Yes																	—	
<b>Video recording</b>	Standard and radiometric																		
<b>Streaming video (remote display)</b>	Via HDMI; GigE Ethernet available in SmartView® software				Yes, see the live stream of the camera display on your PC, smartphone, or TV monitor. Via USB, WiFi hotspot, or WiFi network to Fluke Connect® software on a PC; via WiFi hotspot to the Fluke Connect® app on a smartphone; or via HDMI to a TV monitor								Yes, to Fluke Connect® desktop software or mobile app						—
<b>Remote control operation</b>	Yes				Yes, through Fluke Connect® desktop software or mobile app				—				Yes, through Fluke Connect® desktop software or mobile app						—
<b>Alarms</b>	High temperature, low temperature, and isotherms (within range)															High temperature, low temperature	—		
<b>Warranty</b>	Two-years (standard), extended warranties are available																		

\*Best possible  
<sup>1</sup>Fluke Connect® not available in all countries.