Technical Data

Fluke Ti480U, Ti401U, Ti300U Classic Ultra Series Thermal Imagers

Clearer Imaging. Faster Focus. Simplified Workflow.



The Fluke Classic Ultra Series delivers a high-performance infrared experience built for professional use. It features a simplified workflow, improved image quality, enhanced thermal sensitivity to detect fine temperature differences, and advanced imaging for clear, on-screen detail.

With 640 x 480 resolution, improved spatial resolution, and UltraFocus technology, the Ti480U, Ti401U, and Ti300U provide the image quality and clarity professionals need to get the job done.



Ti480U

- 640 × 480 Pixels
- 0.68 mrad Spatial Resolution (IFOV)
- -20 °C to 1200°C Temperature Measurement Range

Ti401U

- 640 × 480 Pixels
- 0.68 mrad Spatial Resolution (IFOV)
- -20 °C to 650°C Temperature Measurement Range

Ti300U

- 384 × 288 Pixels
- 1.14 mrad Spatial Resolution (IFOV)
- -20 °C to 650°C Temperature Measurement Range

Improved image quality, faster focus, and enhanced measurement capability deliver better overall performance. Combined with Fluke's proven industrial design, the Classic Ultra Series enhances usability and supports faster, more effective workflows.

- Improved optics and imaging deliver sharper images and clearer detail, helping users identify targets and problem areas more quickly
- UltraFocus technology delivers fast, reliable focusing, even in complex scenes. It automatically focuses in as little as 1 second based on temperature differences, with laser-assisted targeting and continuous autofocus to support easier inspections
- Temperature measurement up to 1200 °C supports high-temperature applications and advanced testing needs
- Up to 10x digital zoom with flexible on-screen zooming to inspect distant targets, including high-voltage equipment, overhead pipelines, and large mechanical systems
- SmartView IR software for PC enables thermal video processing, data analysis, and report generation



Specifications

Basic Parameters	Fluke Ti480U	Fluke Ti401U	Fluke Ti300U
IR resolution	640 × 480		384 × 288
SuperResolution	1280 × 960	-	-
Detector type	Uncooled focal plane infrared detector		
Thermal sensitivity (NETD) @30 ℃	50 mk (0.05°C)	75 mk (0.075°C)	
Spectral response	7-14 μm		
Image frame rate	9Hz		
Lens Field of View (FOV)	25° x 19°		
Spatial resolution (IFOV)	0.68 mrad		1.14 mrad
Minimum imaging distance	0.25 m		0.1 m
Lens focal distance	f24.8		f15
Focus	Auto / Manual Focus		
Lens recognition	Auto		
Digital zoom	1-10x		1-4x
Measurement Analysis			
Temperature range	-20°C to 1200°C	-20°C to 650°C	
Temperature measurement range	-20°C to 120°C 0°C to 650°C 300°C to 1200°C	-20°C to 120°C 0°C to 650°C	
Intelligent range	Yes		
Temperature accuracy	±2°C or 2%, whichever is greater (@ 23°C ± 5°C ambient temperature)		
Temperature measurement area	Spots: 16 Lines: 8 Areas: 12		
Global temperature measurement correction	Support emissivity, environment temperature, reflected temperature, relative humidity, temperature measurement distance, IR window (temperature and transmittance) correction		
Area temperature measurement correction	Yes		
Area audible alarm	Support high and low temperature alarm for the highest, lowest and average temperature of the area		
Temperature rise function	Reference temperature can be the highest, lowest or custom temperature of the area		
On-screen analysis	The thermal photos or videos are directly analyzed in the Imager		
Analysis software for PC	SmartView IR		

Specifications continued

Image Display	Fluke Ti480U	Fluke Ti401U	Fluke Ti300U
Display screen	3.5” LCD, 640*480		
Image mode	Thermal image, visible image, PIP, Fusion		
Color palettes	Grey, Iron 10, IronRed, Rainbow, Grey10, GreyRed, MidGrey, Yellow and Rain Palettes can be inverted Support real-time palette preview and switching		
Temperature span mode	Support automatic adjustment of temperature span (min. 3°C) Support manual adjustment of temperature span (min. 2°C) The maximum and minimum value of temperature span can be selected by touch (min. 2°C)		
Audible alarm	Yes. Above the temperature, below the temperature and between the temperature		
Information displayed on the image	Display the global maximum, minimum, average temperature and temperature measurement parameters		
High/low temperature tracking	Marking and automatically tracks high and low temperature points		
IR-Fusion			
Blending degree of a visual photo and an infrared thermal image	0% to 100%		
Picture-in-Picture (PIP)	Yes. The size, position and blending degree of infrared window can be adjusted		
Shooting Function			
Digital camera	Industrial grade digital camera with 13-mega pixels		
Memory card	Micro SD card, standard 64GB; expandable to 128GB		
Shooting mode	Support single frame and time-lapse shooting		
Image format	.bmp.jpg		
Screen freeze	Support single frame shooting and fully-radiometric video recording	Support single frame shooting	Support single frame shooting and fully-radiometric videorecording
Code scanning function	Yes. A QR code can be scanned as a label		
Annotation function	Support voice, text and tag annotation		
Fully-radiometric video recording	Support thermal video recording for analysis	-	Support thermal video recording for analysis
Non-fully-radiometric video recording	Support thermal video, visible video recording (only for viewing, not for analysis)	-	Support thermal video, visible video recording (only for viewing, not for analysis)
Video frame rate	1 Hz to 9 Hz		1 Hz to 9 Hz
Video format	.is5, .mp4	-	.is5, .mp4
Gallery	Support viewing, editing and deleting captured images and video files		
Data Connection			
Bluetooth connection	Support BT4.2LE		
USB interface	Type-A, USB 2.0		
HDMI interface	Mini HDMI interface, HDMI 1.4		
Fully-radiometric video analysis via PC software	Yes	-	Yes
Remote display via software	Yes	-	Yes
Remote operation via software	Yes	-	Yes
HDMI output	Support connection to a display or a projector via the HDMI interface		

Specifications continued

Ancillary Function	Fluke Ti480U	Fluke Ti401U	Fluke Ti300U
Laser	Yes		
Temperature feature measurement	Support measuring the length of the temperature measurement line; support measuring the rectangular and circular area of the temperature measurement area		
LED torch/flashlight	Support flashlight and flash mode		
Power System			
Battery type	7.2V, 19Whr lithium battery, replaceable and rechargeable on field		
Battery life	2 to 3 hours/battery (*Actual life depends on settings and usage)		
Charge mode	10-15V DC charging		
Charge time	2.5 hours to full charge		
Energy saving management	Auto screen-off		
Battery Charge	Ti SBC3B Two Bay Battery Charger (100 V ac to 240 V ac, 50/60 Hz, included), or in-Imager charging. Optional 12 V automotive charging adapter		
External power supply	Power adapter (100 to 240V, 50/60Hz AC power)		
Reliability and Certification			
Safety standard	IEC61010-1: Pollution Degree 2		
Electromagnetic Compatibility (EMC)	International: IEC 61326-1: Industrial Electromagnetic Environment: CISPR 11: Group 1, Class A Korea (KCC): Class A Equipment (Industrial Broadcasting & Communication Equipment)		
Radio frequency	2400MHz to 2483.5MHz		
Radio output power	<100mW		
Laser	IEC 60825-1, Class 2, 650nm, <1mW		
Ingress protection	IEC60529: IP52		
Drop test	Designed for 1 m drop resistance		
RoHS3 Directive	Yes		
Specifications			
Operating temperature	-10°C to 50°C		
Storage temperature	-20°C to 50°C, without battery		
Relative humidity	0% to 95% (non-condensing)		
Dimensions	279 mm x 122 mm x 175 mm		
Weight	1215 g		1188 g
Warranty and Maintenance			
Warranty	2 years		
Recommended calibration period	2 years		
Supported language			
Supported language	Multi-language		

Ordering information

Included items	Ti300U	Ti401U	Ti480U
The Imager (standard field angle lens included)	•	•	•
SBP3 smart battery pack	2	2	2
SBC3 power adapter	•	•	•
SBC3 battery charging base	•	•	•
Hand strap	•	•	•
Hard carrying case	–	•	•
Carrying case	•	–	–
Soft carrying case	•	–	–
Mini HDMI cable	•	•	•
USB-A dual-port cable	•	•	•
64GB MICRO SD	•	•	•
Quick reference guide	•	•	•
Safety information	•	•	•
Calibration report	•	•	•

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