FOTRIC Ti3 Datasheet

■ Specifications

Basic parameters	
Infrared Resolution	160*120
Super Resolution (SR)	Enhanced to 320×240
Detector Type	Uncooled Infrared Focal Plane Detector
Thermal Sensitivity (NETD)	<50mK@30°C
Detectable gas	Not supported.
Pixel Pitch	17μm
Spectral Response Range	8~14μm
Image Frame Rate	30Hz
Field of View (FOV)	25°*19°
Spatial Resolution (IFOV)	2.73mrad
Minimum Imaging Distance	0.1m
Focal length	8mm
Focusing Method	Autofocus, manual focus.
Lens Recognition	Automatic recognition.
Optional Lens	Refer to "Lens Parameters"
Measurement and analysis	
Temperature Measurement Range	-20~650°C
Temperature Span	-20~120°C,0~650°C,intelligent range
Temperature Measurement Accuracy	±2°C or 2%, whichever is greater (environmental temperature 15~35°C, target temperature >0°C, calibration at 1 meter)
Temperature Measurement Spot	4
Temperature Measurement Line	3
Temperature Measurement Box	4
Global Temperature Correction	Support temperature measurement parameter correction: emissivity, ambient temperature, reflected temperature, relative humidity, target distance, infrared window parameters(temperature and transmittance) .
Local Parameters	Support emissivity correction for temperature measurement areas.
Area Alarm	Supports high/low temperature alarms for max/min temperature in measurement areas
Temperature Rise Function	Reference temperature can be the highest, lowest, average, or custom temperature in the measurement area
On-device Analysis	The device can directly analyze thermal images.
Analysis software	AnalyzIR professional thermal imaging analysis software
Image display	
Display screen	5-inch, 1280*720 pixels, IPS LCD touch display with Gorilla Glass explosion-proof cover
Image mode	Thermal image mode, blend(T-DEF®) mode, and Picture-in-Picture mode, digital camera, high sensitivity mode; Blend(T-DEF®) mode and Picture-in-Picture mode is only available with alignable lens; High sensitivity mode is only available when the lens is recognized as gas detection lens.

Picture-in-Picture	Overlay a movable and resizable thermal image on the visible light image
Palette	Supports 10 color palettes: Iron, Grey, Rainbow, Rain, Medical, GreyRed, GlowBow, Prism, Yellow, Blue Supports real-time palette preview and switching
Span Mode	Supports automatic adjustment of temperature span Supports manual adjustment of temperature span (minimum 2°C) Supports touch adjustment of temperature span (minimum 2°C)
Color Alarm	Supports color alarms for above, below, and between temperatures
Image overlay information	Display global maximum temperature, minimum temperature, ROI maximum temperature, minimum temperature, average temperature, emissivity, temperature measurement parameters, lens, compass information, as well as date and time information.
High/Low Temperature Tracking	Automatically tracks the highest and lowest temperature points within a marked measurement area
Image Detail Enhancement (IREdge)	Supports IREdge infrared image contour enhancement
Normalized Histogram Color Distribution(T-TWB®)	Optimize display of images with large dynamic range to show more details
Digital zoom	1–6x continuous zoom
Imaging function	
Digital camera	8 million pixels, industrial-grade digital camera
Storage card	SD card, hot-swappable, supports up to 1TB
Single-frame capture	In thermal image mode, blend (T-DEF®) mode, and picture-in-picture mode, save as an analyzable thermal image; In high-sensitivity mode, save as a non-analyzable thermal image; In digital camera mode, save as a digital camera image. When the lens is recognized as an alignable lens, the thermal image in thermal image mode, blend (T-DEF®) mode, and picture-in-picture mode includes a aligned digital camera image.
Timed Capture	Set time interval from 2 seconds to 1 hour to automatically save images in thermal, blend (T-DEF®), and picture-in-picture modes
Panorama	In thermal image mode, save multiple thermal images as a single panoramic thermal image for analysis
MP4 Video Recording	Supports mp4 video recording in all image modes
Image format	jpg (thermal image), jpg (visible light image)
Video Format	mp4
Freeze Interface	In thermal image, blend mode (T-DEF®), and picture-in-picture modes, single-frame capture supports enabling a freeze frame for preview.
QR Code Functionality	Supports scanning QR codes and barcodes as text annotations and tags.
Voice Annotation	Record up to 120 seconds of audio and save it to thermal images.
Text Annotation	Input text using the soft keyboard and save it to the thermal image.
Sketch	Record touch traces on the touchscreen or add specific shapes, and save them into thermal images
On-device gallery	Supports icon view for photos and videos in the gallery Support preview of images and videos in the gallery Support thermal image analysis in the gallery Support filtering and deleting images and videos in the gallery

Data connectivity	
WiFi Connection	Supports 2.4GHz and 5GHz frequency bands, supports 802.11a/b/g/n/ac
Bluetooth	BT4.2 LE, can be connected to Bluetooth headphones
USB interface	USB Type-C, compliant with USB 3.0/2.0 standard
HDMI Interface	Micro HDMI type, compliant with HDMI 1.4 specifications, supports transmission of 1080P images/videos at 60Hz
FTP Fast Transfer	Connect to the device via WiFi network or device's own WiFi hotspot, then access local data via FTP
Remote Display	Connect to a display or projector via HDMI high-definition interface
Remote Control	
Mobile Control	Supports installing EasyIR on Android systems to preview device screens, synchronize device data, and view, browse, share, and analyze synchronized data.
Web Browser Remote Control	Remote operation and control via built-in browser on devices such as smartphones, computers, tablets, to access, analyze, and share local data
Auxiliary functions	
Software and firmware upgrades	Supports OTA remote upgrade and SD card local upgrade
TurboFocus®	Supports smart focus system with contrast focus, laser focus, continuous focus, and touch focus.
Touch Focus	Auto-focus on the target area within the visible region of the thermal image when no menu or image overlay information is activated by touch control.
Laser	Laser: Class 2, wavelength: 635nm, power: <1mW. Laser ranging: 0.1m-50m, accuracy: d*0.01%±2mm.
ROI Supplement Parameters	Support measurement of temperature line length, support measurement of rectangular and circular area of measurement area.
Geographical Location	Supports Beidou/GPS/GLONASS satellite positioning, location information can be saved to the thermal image
Compass	Supports 360° orientation, orientation information can be displayed in the image overlay information, orientation information can be saved to the thermal image
LED illumination lamp	Support flashlight illumination and flash mode
Floating Ball	Invoke the functions of image capture, focus, laser, AI, and gallery physical buttons via virtual keys
MeasureLink	Transmit measurement data between devices with bluetooth
Power system	
Battery type	7.4V, 3500mAh rechargeable lithium battery, field replaceable
Battery operating time	Continuous Operating Time ≥ 4 Hours (Actual runtime depends on environment and usage conditions)
Charging method	Support for charger dock, and DC 12V direct charging
Charging time	Charge up to 90% in 2.5 hours
Energy management	Auto shutdown, manual screen off
External power supply	Supports using DC 12V power supply for the device
Reliability and certification	
Safety standards	GB 4793.1/EN 61010-1

Electromagnetic compatibility	GB/T 18268.1/EN IEC 61326-1
Protection rating	IP54(GB/T 4208/IEC 60529)
Drop resistance	Designed for 2-meter drop resistance
Shock resistance	25g(GB/T 2423.5/IEC 60068-2-27)
Vibration resistance	2g(GB/T 2423.10/IEC 60068-2-6)
RoHS Directive	Compliant
Physical parameters	
Operating temperature	-20~50°C
Storage temperature	-40–70°C, without battery
Relative humidity	<95%RH
Dimensions	313mm*123mm*139mm
Weight	1.0kg(Excluding lens)
Battery weight	150g
Housing material	Hard plastic: PC+ABS, soft plastic: TPE, magnesium alloy.
Mounting Method	Support tripod connection with UNC 1/4-20 interface
Warranty and maintenance	
Warranty period	1-year warranty for the whole unit
Recommended calibration interval	2 Years
Supported languages	
Supported languages	English, German, French, Spanish, Portuguese, Italian, Polish, Japanese, Korean, Traditional Chinese, Thai
Standard product configuration	
Standard configuration	Main unit ×1□Rechargeable Lithium Battery*2□Charging Dock□Power Adapter□USB Type-C to USB cable ×1□Micro HDMI to HDMI Interface Cable□64G SD Card□SD Card Reader□Calibration certificate□Quick start guide□Packing list□Portable Soft Bag□Hard Carrying Case

■ Lens

Lens	Lens Parameters					
	Field of View (FOV)	Spatial Resolution (IFOV)	Minimum Imaging Distance	Minimum Registration Distance	Focal length	Temperature Span
L25	25°*19°	2.73mrad	0.1m	0.5m	8mm	-20~120°C, 0~650°C (calibrated at 1 m)

■ Available Models

A262348-B001 FOTRIC Ti3-L25

* For additional configurations, please contact us directly.

■ Accessories

● Optional

C251069 Rechargeable Lithium Battery
C251342 Charging Dock
C251240 Power Adapter
C251449 Car Charger
C251332 Portable Soft Bag
C251362 Hard Carrying Case
C251360 Hard Portable Case (For multiple lenses)
C251431 L25 Lens
C251450 Temperature calibration service□≤700°C□each temperature range□
C251451 Temperature calibration service (>700°C, each temperature range)