Ti7 Datasheet

■ Specifications

Basic parameters	
Infrared Resolution	640*480
Super Resolution (SR)	Enhanced to 1280*960
Detector Type	Uncooled Infrared Focal Plane Detector
Thermal Sensitivity (NETD)	<30mK@30°C
Detectable gas	HR lens: sulfur hexafluoride, ammonia, ethylene, vinyl chloride, methyl ethyl ketone, acrylonitrile
Pixel Pitch	17μm
Spectral Response Range	8~14μm
Image Frame Rate	30Hz
Field of View (FOV)	25°*19°
Spatial Resolution (IFOV)	0.68mrad
Minimum Imaging Distance	0.25m
Focal length	25mm
Focusing Method	Autofocus, manual focus.
Lens Recognition	Automatic recognition.
Optional Lens	Refer to "Lens Parameters"
Measurement and analysis	
Temperature Measurement Range	-20~550°C
Temperature Span	-20~120°C,0~550°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	12
Temperature Measurement Line	3
Temperature Measurement Box	12
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, GreyRed, Yellow, Rain, Blue, GlowBow, Medical, Prism Supports real-time preview and switching of color palettes
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	1–10x 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
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.

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.
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
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	2-year warranty for the whole unit
Recommended calibration interval	2 Years
Supported languages	
Supported languages	English, German, French, Spanish, Portuguese, Italian, Japanese, Korean, Traditional Chinese, Thai

■ Lens

● Optional

Lens	Lens Parameters					
	Field of View (FOV)	Spatial Resolution (IFOV)	Minimum Imaging Distance	Minimum Registration Distance	Focal length	Temperature Span
L25	25°*19°	0.68mrad	0.25m	0.5m	25mm	-20~120°C□0~550°C
L25HR	25°*19°	0.68mrad	0.25m	0.5m	25mm	-20~120°C, 0~550°C (accuracy not guaranteed below 200°C)
L44	44°*33°	1.20mrad	0.1m	0.7m	14mm	-20~120°C□0~550°C
L12	12°*9°	0.33mrad	1m	1m	51mm	-20~120°C□0~550°C

■ Available Models

A250003-B002 Fotric Ti7-L25

A250003-B001 Fotric Ti7-L44

A250003-B003 Fotric Ti7-L12

A250003-B004 Fotric Ti7-L25-L44

A250003-B005 Fotric Ti7-L25-L12

A250003-B006 Fotric Ti7-L44-L12

A250003-B007 Fotric Ti7-L25-L44-L12-L07

* For additional configurations, please contact us directly.

■ Accessories

● Optional

F902_2 Rechargeable Lithium Battery

C251243 Charging Dock

C251240 Power Adapter

C251332 Portable Soft Bag

C251362 Hard Carrying Case

C251360 Hard Carrying Case