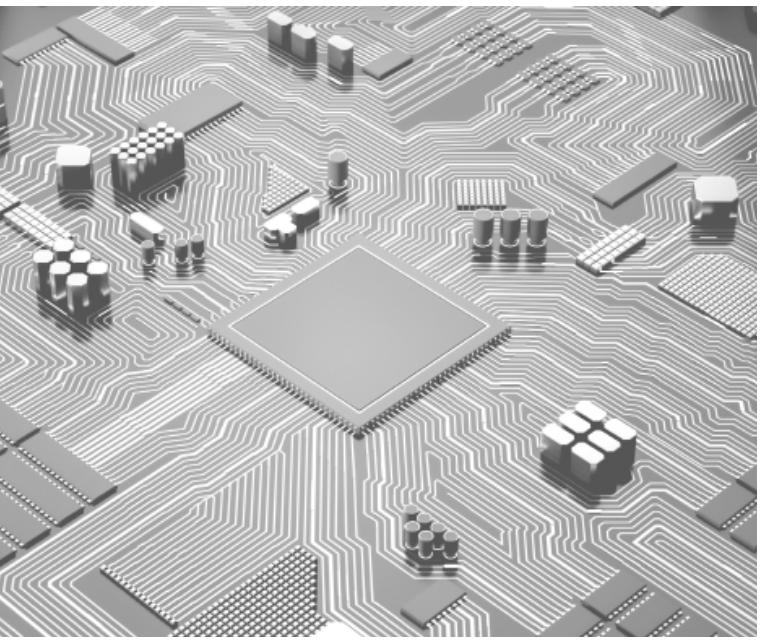
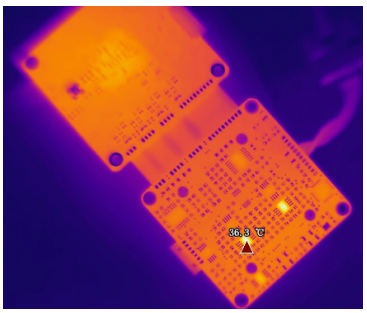
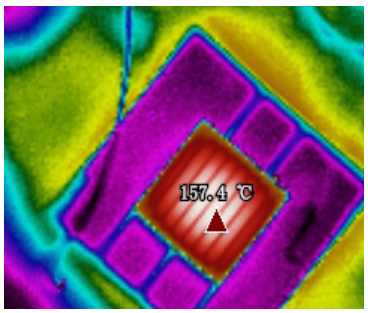
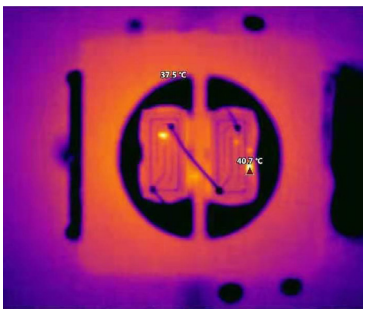
FOTRIC

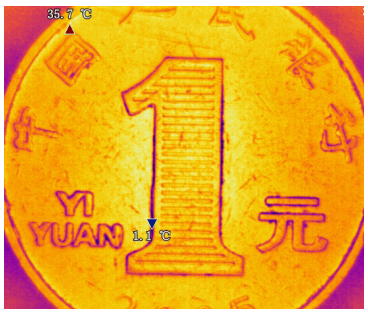
Beyond the limit of Sight





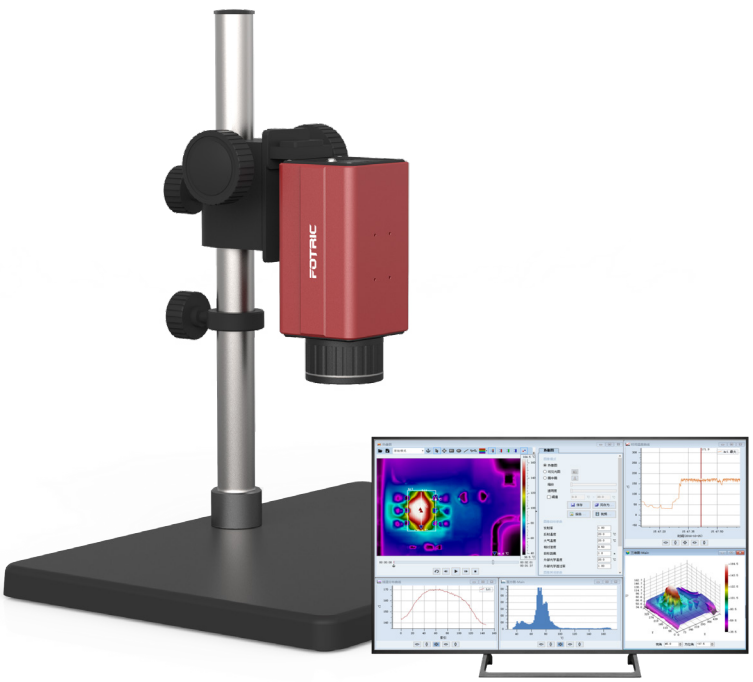






FOTRIC 616c

R&D Station



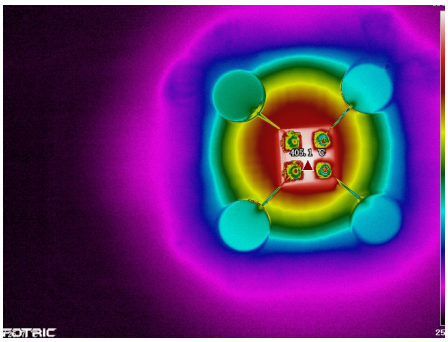
FOTRIC 616c

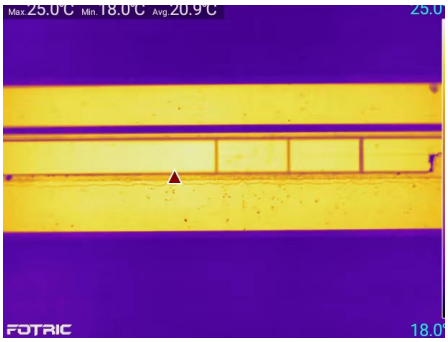
R&D Station

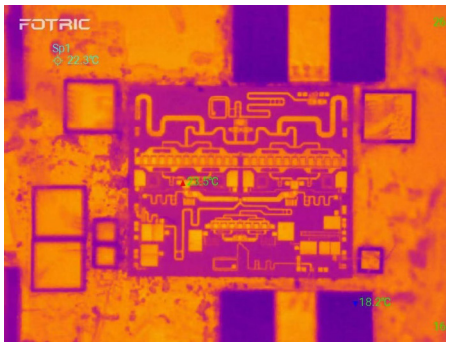
The device adopts cutting-edge hardware including infrared detector, main processing chip, FPGA, power supply chip, etc., which guarantee the quality, performance and stability of the camera.

The thermal imaging camera can be equipped with 30° standard lens for comprehensive overview, or with 50μm macro lenses to obtain temperature distribution and detailed data of microstructures such as chips.

The thermal imaging camera is equipped with a dedicated R&D test platform, allowing researchers to observe and analyze in a flexible, fine and stable manner.







World-class hardware

FOTRIC is committed to using the best hardware to make the best products.

- France Lynred infrared detector
- SAMSUNG main processing chip
- Xilinx FPGA (USA)
- TI (Texas Instruments) power supply chips

Outstanding performance

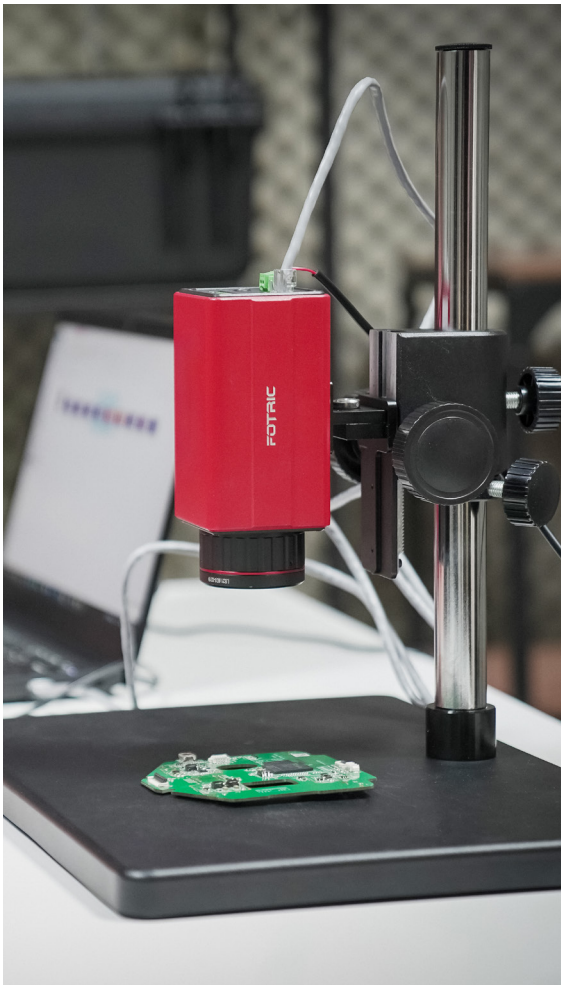
FOTRIC 616C's excellent hardware configuration, combined with extraordinary imaging algorithms, results in superior product performance.

- The 384*288 pixel infrared detector provides a thermal map with over 110,000 temperature points as data matrix
- State of the art imageing algorithm significantly reduces noise and boosts image clarity
- Thermal sensitivity of 0.05°C , more sensitive to temperature change and makes more accurate temperature measurement
- High EMC compatibility, effectively prevent electromagnetic interference and electrostatic breakdown

Designed with R&D purposes in mind

FOTRIC 616C is designed for education and research related applications. The simple and elegant design that makes operations intuitive and efficient.

- The test platform allows for easy lifting, rotation, fixation and other practical adjustment movements
- The 50μm lens help users obtain thermal maps of microstructure temperature distribution and detailed temperature data
- Manual focus offers flexible and accurate focusing and fine thermogram acquisition.



Powerful software support

AnalyzIR thermal analysis software is a professional thermal analysis software that matches the FOTRIC 616C.

The software allows the user to view temperature changes, overall distribution and other information, and to adjust the camera configuration.

AnalyzIR professional thermal analysis software allows the following functions to be implemented:

- Enables the camera to communicates with a PC to display, transmit, record, and analyze full radiometric video streams in real time
- Secondary analysis of the thermal image files, adding, deleting, renaming, moving measurement tools and adjusting the thermal image or full radiometric video
- Modification of the thermal parameters of the thermal image file, including emissivity, reflected temperature, atmospheric temperature, relative humidity, target distance, external optical transmittance, GPS location information, etc.
- Set partial emissivity for individual measurement tools to improve accuracy
- Display, export, save, and overlay time of temperature curves for any measurement tool
- Full radiometric thermal video supports both raw mode and temperature difference mode analysis
- The thermal image file supports histogram, 3D graph, and line temperature distribution display
- Combine thermal images into full-radiation thermal videos or split videos into images.
- Edit customized test report templates and batch process thermal image files. Batch generate of thermal image inspection reports.
- I/O external trigger recording.
- DB, TCP/IP Modbus, RS232 Modbus serial communication and data transfer with external systems.

Specification

Models	FOTRIC 616C R&D Station	
Basic Parameters		
Infrared Resolution	384*288	
Thermal Sensitivity NETD)	＜ 0.05°C @30°C	
	Standard lens	Macro lens-50
FOV	30° * 22°	12.0° * 9.1°
IFOV	1.3mrad	0.76mrad
Minimum focus distance	0.3m	50mm
Focal length	13mm	22.5mm
Infrared Spectral Band	7μm~14μm	
Detector Type	Uncooled infrared focal plane detector	
Detector Pitch	17μm	
Focus Type	Manual	
Measurement Analysis		
Temperature Measurement Range	-20°C -150°C ; 0°C -650°C	
Accuracy	± 2°C or ± 2 %, whichever is greater（ambient temp between15°C ~35°C)	
Measurement parameters	Emissivity; Ambient temperature; Reflected temperature; Relative humidity; Distance; External optics compensation	
Partial emissivity	Support	
Image display		
Palettes	10 standard palettes and 10 inverted palettes	
Image process	Non-uniform calibration, digital enhancement	
Mirror mode	Left-right, up-down, center	
Video compression standard	H.264	
Radiometric stream	Support 30Hz radiometric stream	
Pan-tilt-zoom station compatibility	Support Pelco-D protocol	
Measurement tools	5 points, 10 lines and 10 regions, support Modbus output	
Software	AnalyzIR	
Network Connection		
Ethernet type	10M/100M/1000M adaptive	
Simultaneous stream	Mainstream and substream: 10; Radiometric stream: 1	
IP connection interface	ONVIF	
Electrical connection		
Power connector	Screw-on wire terminal	
Network connector	Screw-on RJ45 with status indicator LED	
Serial port	RS-485	
Power system		
Power supply	12V/24V DC, PoE	
Power consumption	3W	
Reliability and certificates		
Safety standards	GB 4943.1-2011 | EN 62368-1:2014+A11:2017； GB/T 19870-2018	

Electromagnetic compatibility	GB/T 18268.1-2010 | EN 61326-1:2013 GB 17625.1-2012 | EN IEC 61000-3-2:2019 GB/T 17625.2-2007 | EN 61000-3-3:2013/A1:2019 GB/T 19870-2018 GB 4824-2019 EN 55032:2015/A11:2020 EN 55035:2017 FCC CFR47 Part15 subpart B
Protection level	IP40
Impact	25g，GB/T 2423.5-2019 | IEC 60068-2-27:2008
Vibration	2g，GB/T 2423.10-2008 | IEC 60068-2-6:2007
RoHS compliant	Directive 2011/65/EU and amendment (EU) 2015/863
Physical parameters	
Working temperature	-20°C -65°C
Storage temperature	-40°C -70°C
Relative humidity	＜ 90%
Size	112mm*68mm*60mm（without lens or base）
Weight	485g（without lens or base）
Outer casing material	Aluminum alloy
Standard configuration	thermal camera x1, RJ45 cable x1, Power adaptor x1, R&D test station，(Optional) 50μm macro lens

Contact FOTRIC

info@fotric.com www.fotric.com

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