

Product Datasheet - Technical Specifications



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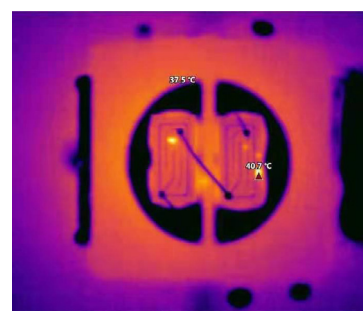
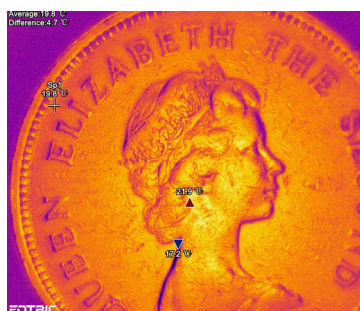
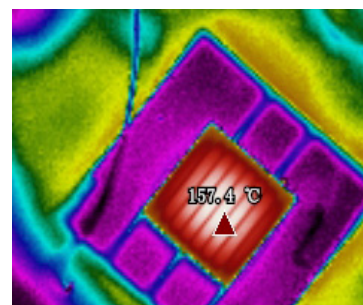
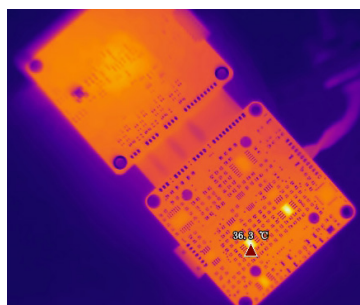
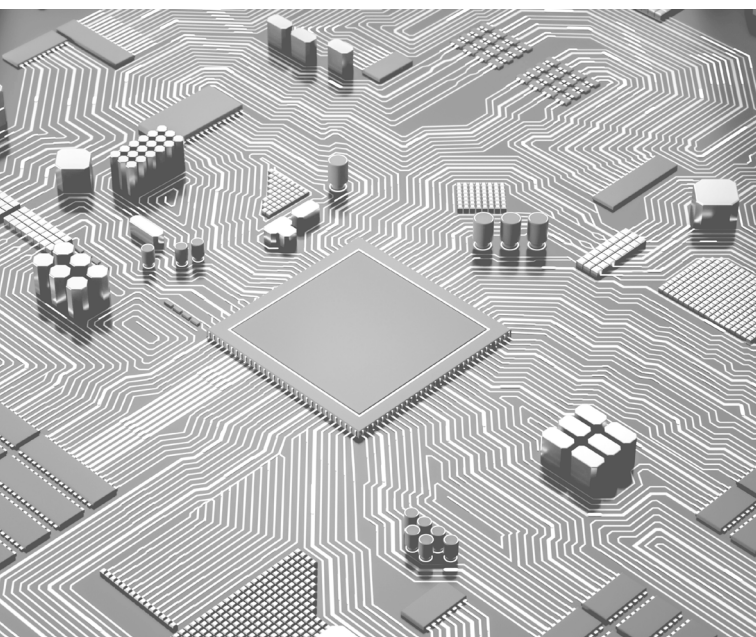
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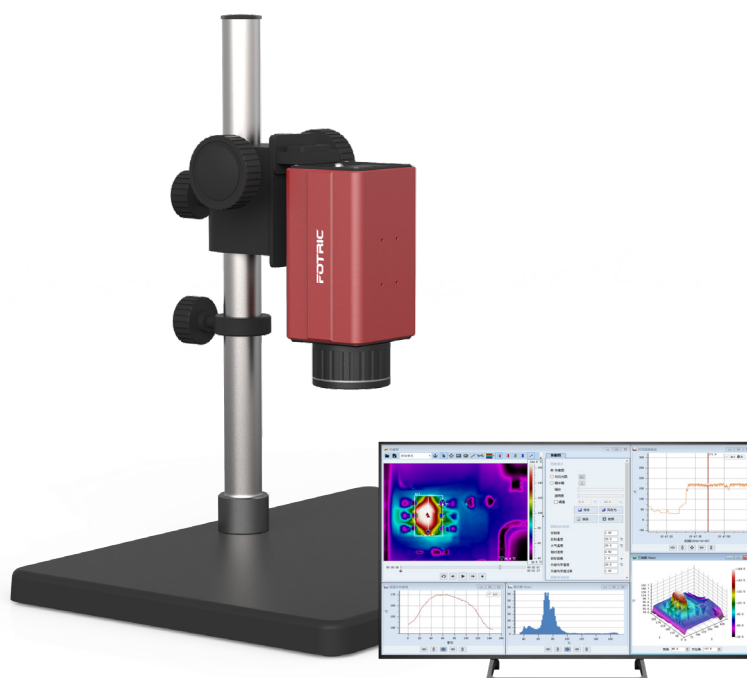
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FOTRIC 220 Link

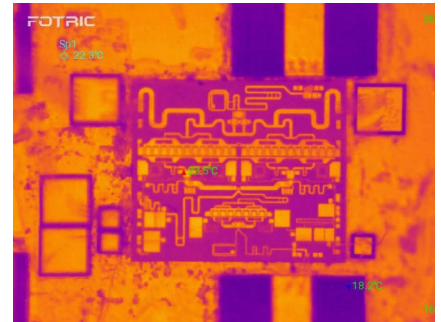
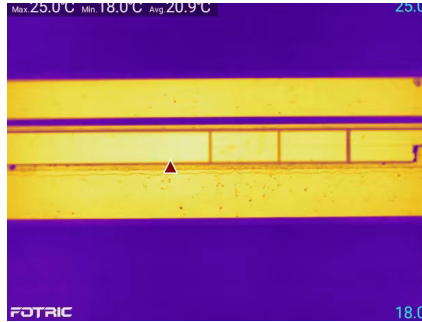
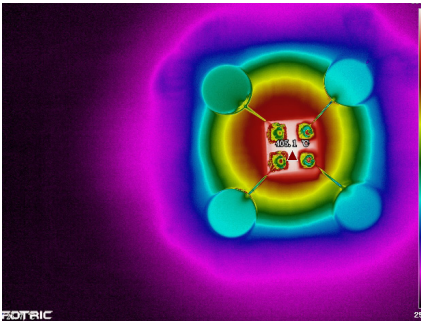


FOTRIC 220Link

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 standard lens for comprehensive overview, or with optional 20 μ m, 50 μ m or 100 μ m 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.

Outstanding performance

FOTRIC 600 R&D's excellent hardware configuration, combined with extraordinary imaging algorithms, results in superior product performance.

- The infrared detector of up to 640*480 pixel provides a thermal map with over 300,000 temperature points as data matrix
- State of the art imaging algorithm significantly reduces noise and boosts image clarity
- Thermal sensitivity of up to 0.03 $^{\circ}$ 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 600 R&D 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 macro lenses help users obtain thermal maps of microstructure temperature distribution and detailed temperature data.
- Manual focus offers flexible and accurate focusing and fine thermogram acquisition.

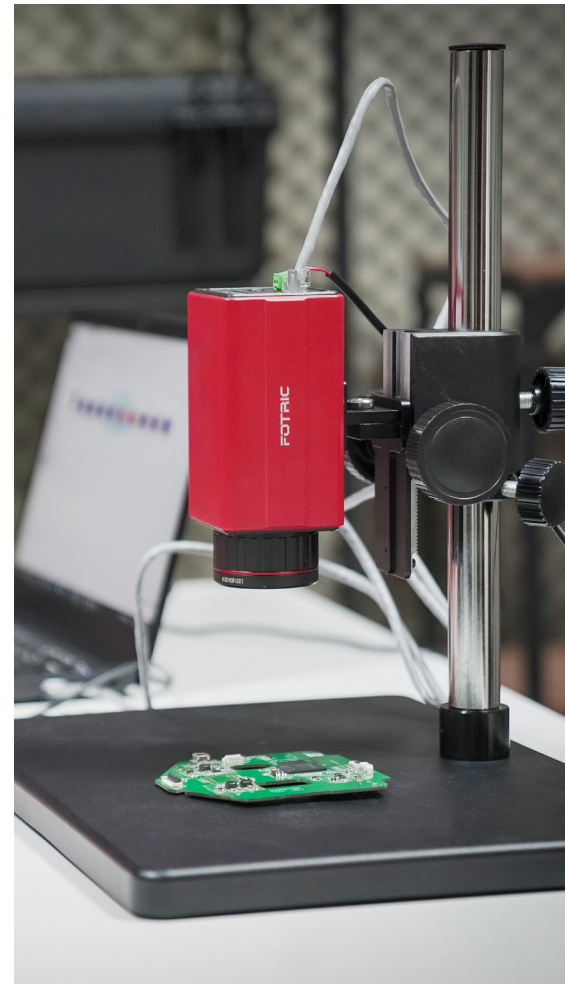
Powerful software support

AnalyzIR, thermal analysis software, is a professional thermal analysis software that matches the FOTRIC 600 R&D Thermal Camera.

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 communicate 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

Model	228Link		226Link	
Thermal Imaging Parameters				
Infrared Resolution	640 x 480		384 x 288	
Thermal Sensitivity (NETD)	< 0.03°C @30°C , 30mk		< 0.05°C @30°C , 50mk	
FOV	29° x 22°		30° x 22°	
Spatial Resolution(IFOV)	0.79 mrad		1.36mrad	
Minimum Imaging Distance	0.1m		0.3m	
Focal Length	21.6 mm		13mm	
Optional Macro Lens	M20	M50	M34	M100
Focal Length	20mm	50mm	50mm	20mm
Image Pixel Size	20μm	50μm	34μm	100μm
Lens to Object Distance	12.8mm	66.3mm	45.2mm	110.6mm
Infrared Spectral Band	8μm~14μm			
Detector Type	Uncooled infrared focal plane detector			
Detector Pitch	17μm			
Imaging Frame Rate	30 Hz		60 Hz	
Focus Type	Manual			
Temperature Analysis				
Complete Temperature Range	-20~650°C			
Temperature Range	-20°C -150°C ; 0°C -650°C			
Accuracy	± 2°C or ± 2 %, whichever is greater (ambient temp between 15°C ~35°C)			
Measurement Parameters	Emissivity; Ambient temperature; Reflected temperature; Relative humidity; Distance; External optics compensation			
ROI Emissivity	Support			
PC Software	AnalyzIR professional analysis software			
Image Display				
Palettes	9 standard palettes and 9 inverted palettes			
Image Processing	Non-uniform calibration, digital enhancement			
Image Mirroring	Left-right, up-down, centrosymmetric			
Video Stream Compression Standard	H.264			
Radiometric Stream	Support 25Hz radiometric stream			
Pan-tilt Control	Support Pelco-D protocol			
ROIs	5 points, 10 lines and 10 regions, support Modbus output			
Network Connection				
Ethernet Type	10M/100M/1000M adaptive			
Cuncurrent Access	Mainstream and substream: 10; Radiometric stream: 1			
Access Standard	ONVIF			
Electrical Connection				
Power Interface	Screw-on wire terminal			
Network Interface	Screw-on RJ45 with status indicator LED			

Alarm Input/Output Interface	1 relay output: Load capacity: 24V, 1.5A 1 optocoupler output: Output capacity: 3.324V, maximum output current 35mA 1 optocoupler input: Input capacity: 3.324V, input current 5~15mA	
Serial Port	RS-485	
Power System		
Power Supply	12V/24V DC, PoE	
Power Consumption	<4W	<3W
Certification and Reliability		
Electromagnetic Compatibility	EN 55032:2015/A11:2020 EN 55035:2017 FCC CFR47 Part15 subpart B	
Enclosure Rating	IP40	
Impact	25g, IEC 60068-2-27:2008	
Vibration	2g, IEC 60068-2-6:2007	
RoHS Compliant	Directive 2011/65/EU and amendment (EU) 2015/863	
Physical Parameters		
Operating Temperature	-20°C -65°C	
Storage Temperature	-40°C -70°C	
Relative Humidity	< 90%	
Dimensions	112mm*68mm*60mm (without lens or base)	
Weight	490g (without lens or base)	
Casing Material	Aluminum alloy	
Mounting Method	Support UNC 1/4-20 interface for tripod connection from the bottom and the top	
Standard Configuration		
Packaging	Infrared thermal camera, lens, lens cap, test bench, power adapter, network cable, document bag (packing list, calibration certificate, user manual, certificate of quality, warranty card), accessory bag (tripod adapter block, 4 M2*5 screws, hex wrench), packing box	



Whole package of 600 R&D camera and test bench

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