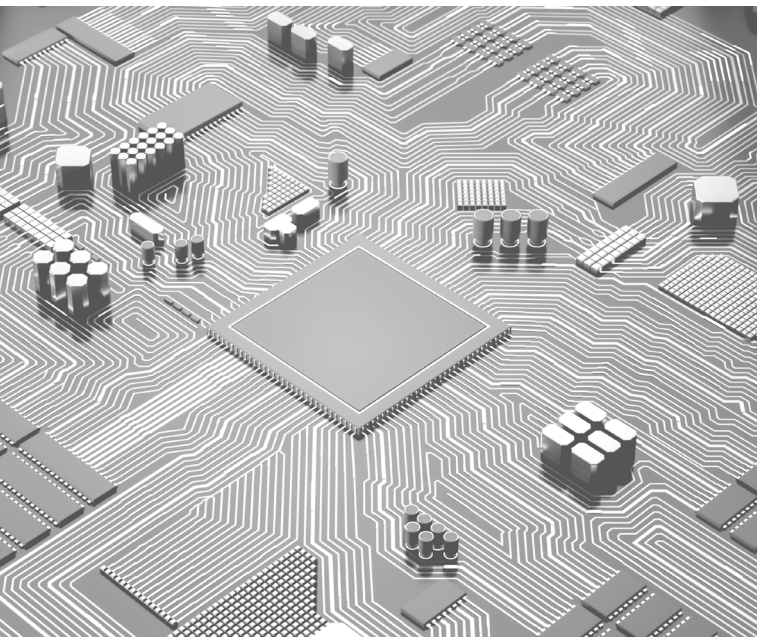
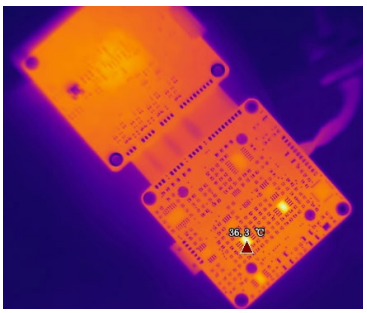
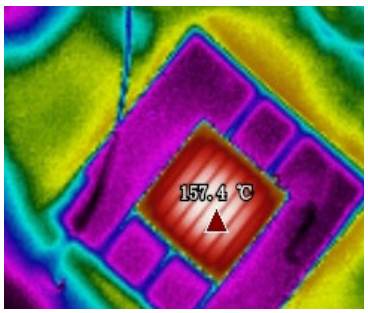
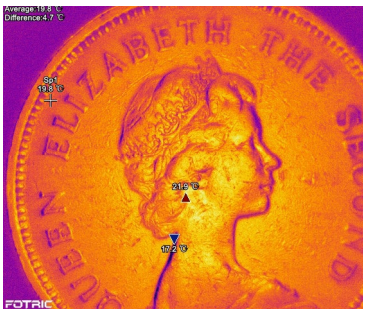
FOTRIC

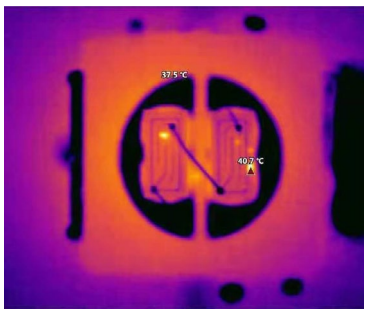
CONNECTING THE DIGITAL FUTURE



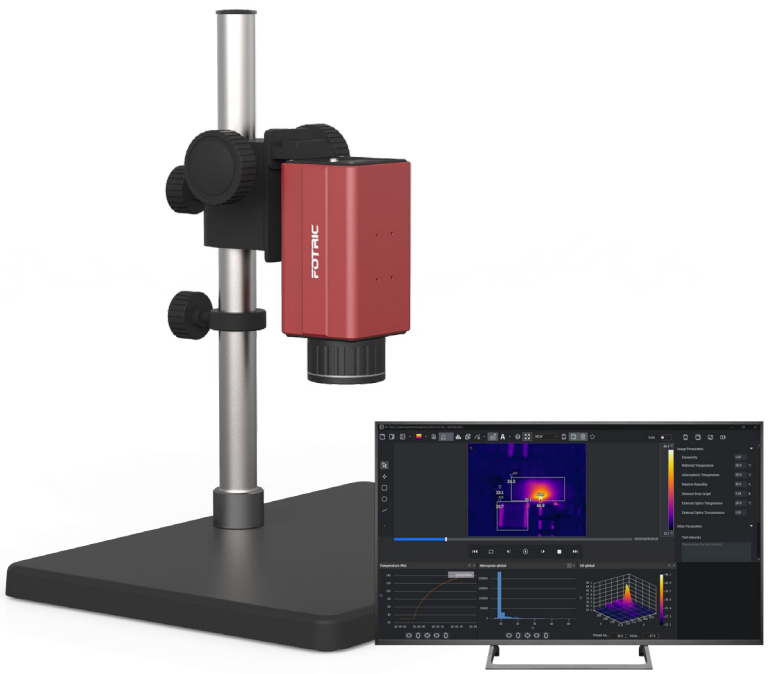








FOTRIC 220 Link

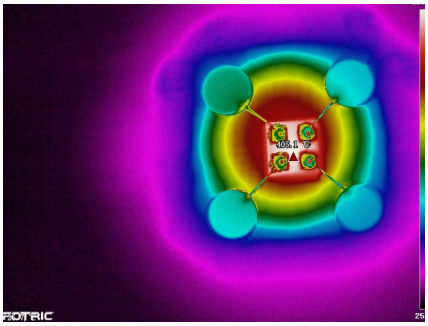


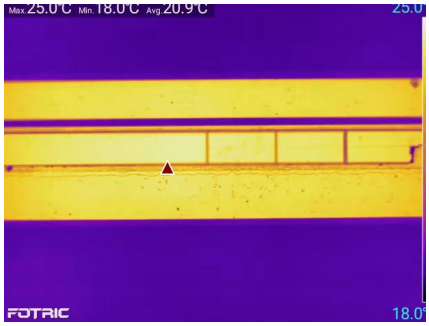
FOTRIC 220Link

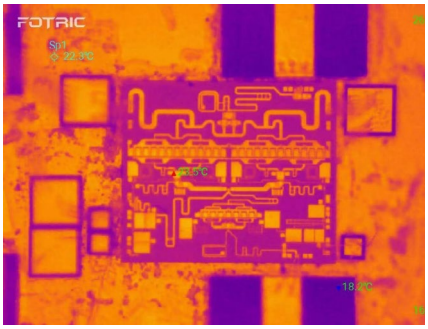
The device adopts cutting-edge hardware including infrared detector, main processing chip, FPGA, power supply chip, etc., which guarantee the quality, performance and stability of the camera.

The thermal imaging camera can be equipped with standard lens for comprehensive overview, or with optional 20μm, 50μm or 100μm 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

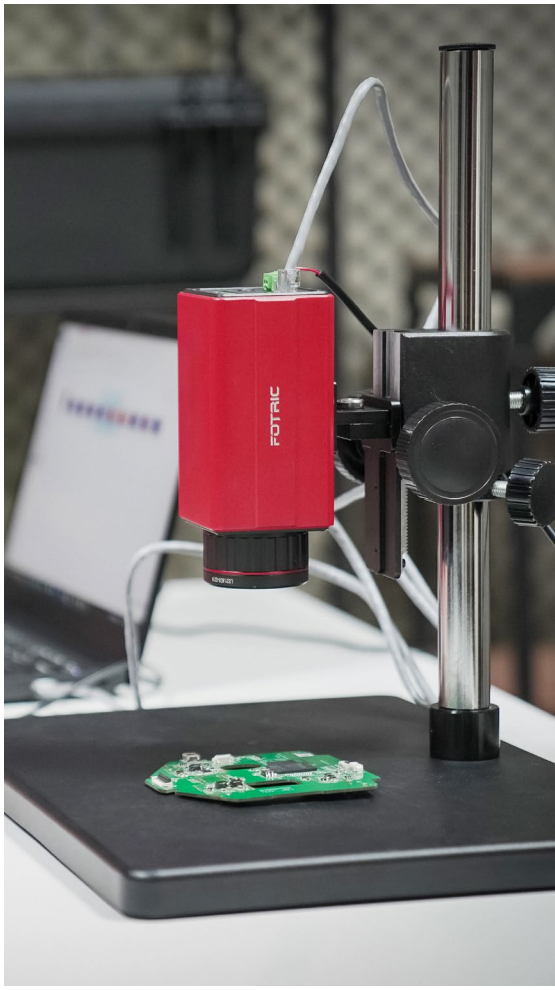
FOTRIC 220Link's excellent hardware configuration, combined with extraordinary imaging algorithms, results in superior product performance.

- 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 imageing algorithm significantly reduces noise and boosts image clarity
- Thermal sensitivity of up to 0.03°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 220Link 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 220Link 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 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

Model	228Link		226Link		223Link
Thermal Imaging Parameters					
Infrared Resolution	640 x 480		384 x 288		160 x 120
Thermal Sensitivity (NETD)	＜0.03°C @30°C , 30mk		＜0.05°C @30°C , 50mk		＜0.06°C @30°C , 50mk
FOV	29° x 22°		30° x 22°		28° x 21°
Spatial Resolution(IFOV)	0.79 mrad		1.36mrad		3.05mrad
Minimum Imaging Distance	0.1m		0.3m		0.1m
Focal Length	21.6 mm		13mm		6mm
Optional Lens	M20	M50	M34	M100	50° x 38°
Focal Length	20mm	50mm	50mm	20mm	3mm
Image Pixel Size	20μm	50μm	34μm	100μm	N/A
Lens to Object Distance	12.8mm	66.3mm	45.2mm	110.6mm	N/A
Infrared Spectral Band	8μm~14μm				
Detector Type	Uncooled infrared focal plane detector				
Detector Pitch	17μm				
Imaging Frame Rate	30 Hz		60 Hz		30 Hz
Focus Type	Manual				
Temperature Analysis					
Complete Temperature Range	-20~650°C				-20~350°C
Temperature Range	-20°C -150°C ; 0°C -650°C				-20°C -150°C ; 0°C -350°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				
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: 3.3~24V, maximum output current 35mA 1 optocoupler input: Input capacity: 3.3~24V, 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 220Link camera and test bench

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Sep 2024

www.FOTRIC.com