Inspection**CAM**

INSPECT ELECTRICAL COMPONENTS WITH HIGH-RESOLUTION THERMAL IMAGING

KEY CAMERA SPECS

- 320 x 240 Thermal Sensor
- Adjustable 9.1mm f/1.0 lens
- ± 5°C Temperature Accuracy
- 52 μm per pixel at minimum focus
- Imagery, data, and power over USB
- Qualified for laboratory use

Seek ™
thermal

thermal.com

IQ-AAA

Seek Inspection Camera is a low-cost, high-resolution thermal imaging solution that enables fast, detailed analysis of electronic components. The data and heat signature provided by a thermal image can reveal undesired operating states, such as excessive thermal stress, damaged boards and components, and other potential failure points invisible to the naked eye. Seek Inspection Camera eliminates the difficulty and time-consuming task of identifying these failures using other test and measurement equipment.

Seek Inspection Camera is ideal for first article and incoming quality inspection, monitoring tight spaces, and general testing and scientific research.
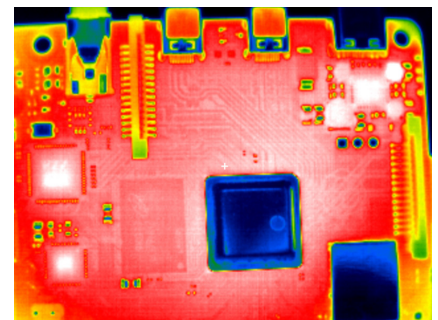
Designed and Manufactured in the USA with Global Components. NDAA Compliant.
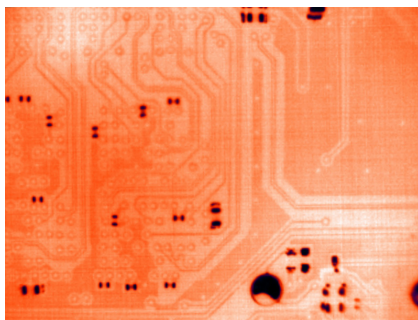
BOARD TRACES
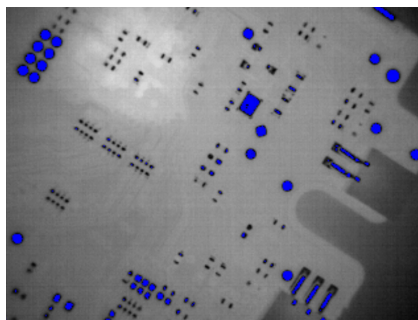
SOLDER POINTS

BOARD PERFORMANCE

KEY FEATURES

320 x 240 High-Resolution Thermal Sensor
76,800 temperature pixels for maximum image clarity and sensitivity

Adjustable 9.1mm Lens
4cm minimum focal distance with a spot size of 52μm per pixel

Dual-Gain Smart Pixels
Observe very high and low temperatures simultaneously with clarity and accuracy

+2 Million Data Points a Second
Access 3 data lines per pixel for every frame (digital, display, and temperature) via Seek Thermal SDKs

Certified for Laboratory Use
EN IEC 61326-1 certified for laboratory use

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BENEFITS

Thermal Provides Fast & Accurate Analysis
See electrical flow and layout of an entire board in seconds

Confirm Electrical Repairs are Successful
Use temperature data and thermal images to ensure electronics are working as designed

See Detail Up Close
Evaluate performance in high detail with a large lens and small minimum focus distance

Use Thermal Data for Automation
Process millions of data points a second in a variety of machine learning and AI algorithms

Easy Integration
Use pre-built software or take advantage of SDKs for custom integration with existing systems

InspectionCAM

1/4" - 20 Mounting Hole

Specifications	Description
Model Number	IQ-AAA
Microbolometer	Uncooled Vanadium Oxide
Pixel Pitch	12 µm
Pixel Type	Seek Thermal's Dual-Gain Smart Pixels
Spectral Response	7.8 - 12 µm
Sensor Resolution (Array Format)	320 (h) x 240 (v); 76,800 pixels
Frame Rate	<9Hz
Imaging Range	-40°C to 330°C
Sensor Sensitivity (NeDT)	<65 mK (typical) @ 25°C
Non-Uniformity Correction (NUC)	Automatic NUC (with Shutter)
Video & Data Output Interface	USB
Supply Voltage	3.3V to 5.0V
Power	300mW
Compatible Software	Seek Inspection Camera Viewer (Windows PC Required)
Compatible Seek Thermal SDKs	Linux, Windows, Android SDKs
Output Formats (via Seek Thermal SDKs)	3 Data Formats Per Pixel: Slightly Corrected / Display / Thermography
Optics & Mechanical	
Focal Length	9.1 mm
F-number (focal length/aperture)	f/1.0
Spatial Resolution (IFOV, center)	1.32
HFOV / VFOV	24° / 18°
Distance to Spot Ratio	126:1
Ingress Protection	IP40
Camera Dimensions (L x W, H)	25.8 x 46 x 36 mm
Camera Weight	60 g
Spot Size @ Minimum Focus	52 µm
Minimum Focus Distance	40 mm
Focus	Variable
Thermography	
Temperature Calibration	Calibrated Output in °C, °F, °K
Temperature Range	10°C to 300°C
Center Spot Temperature Accuracy	±5°C or 5% between 0°C to 300°C scene temperature @25°C
Temperature Boxes	Spot, Min, Max, Custom
Full Thermographic Data	Available via the Seek Thermal SDKs
Environmental	
Environmental Temperature Range	0°C to 60°C
Storage Temperature Range	-40°C to 80°C
Solar Protection	Yes
Humidity	10%-95%RH, non-condensing
Regulatory	ROHS, WEEE, REACH, NDAA, EMC, CE, UKCA EN IEC 61326-1
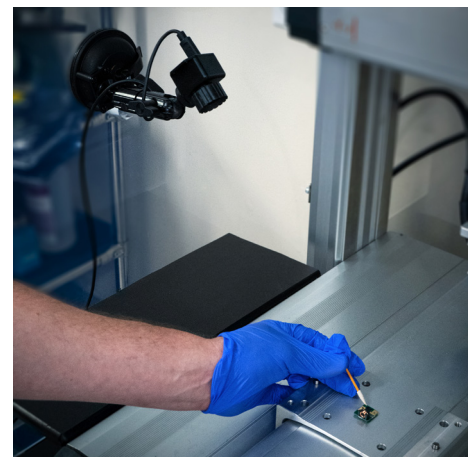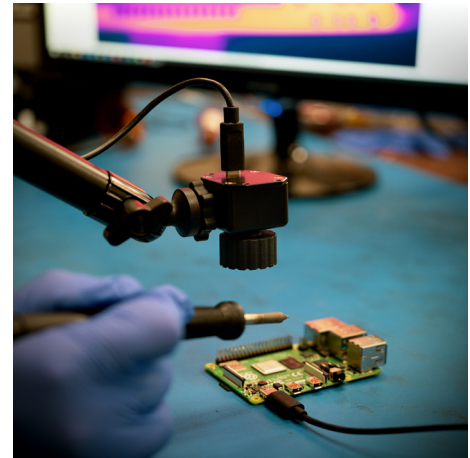
Specified for center spot at nominal 25°C ambient operating temperature and a nominal measurement distance of 12 inches. Factory default emissivity is set to 0.97.
Emissivity is adjustable using the Seek Thermal SDK.
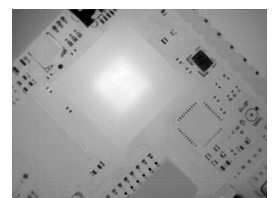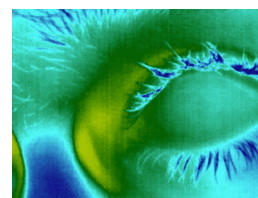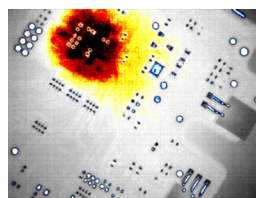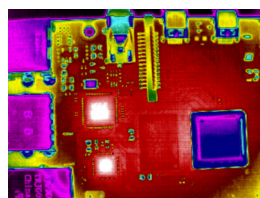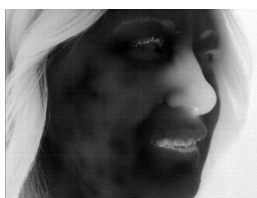
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