

RasaAndishan Moj Pardaz

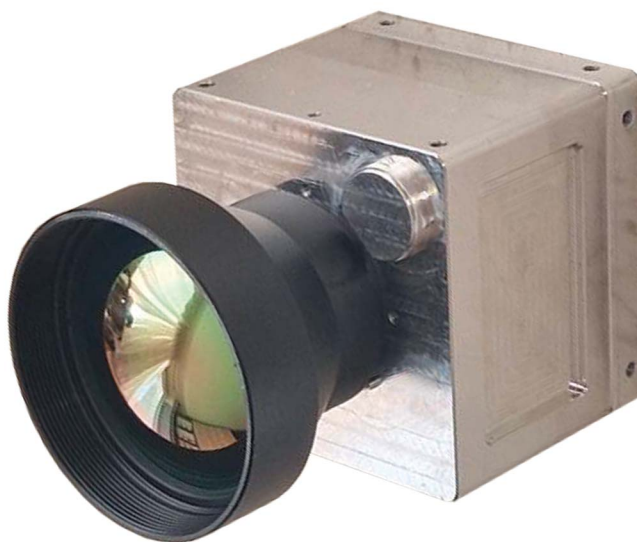
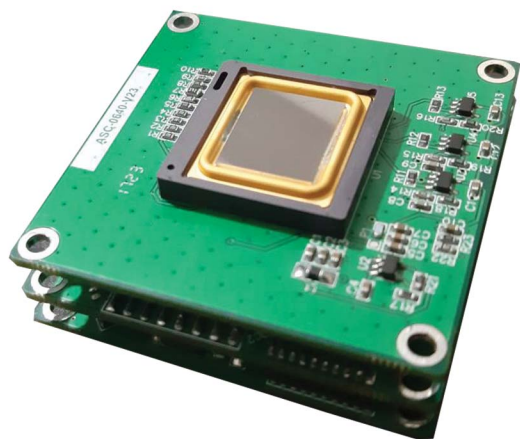
(دانش بنیان)

رسا اندیشان موج پرداز



طراح و سازنده تجهیزات پیشرفته تصویربرداری

- Robust & Reliable Hardware & Software Architecture
- Multi Interface Connectivity (USB2.0,USB3.0,Ethernet)
- Cross Platform – Linux & windows Application Support
- Plugin Based API and Sophisticated FlowGraph Structure
- VariousSDK(C#,C++,MATLAB,VB.Net,Python,LabVIEW)Included



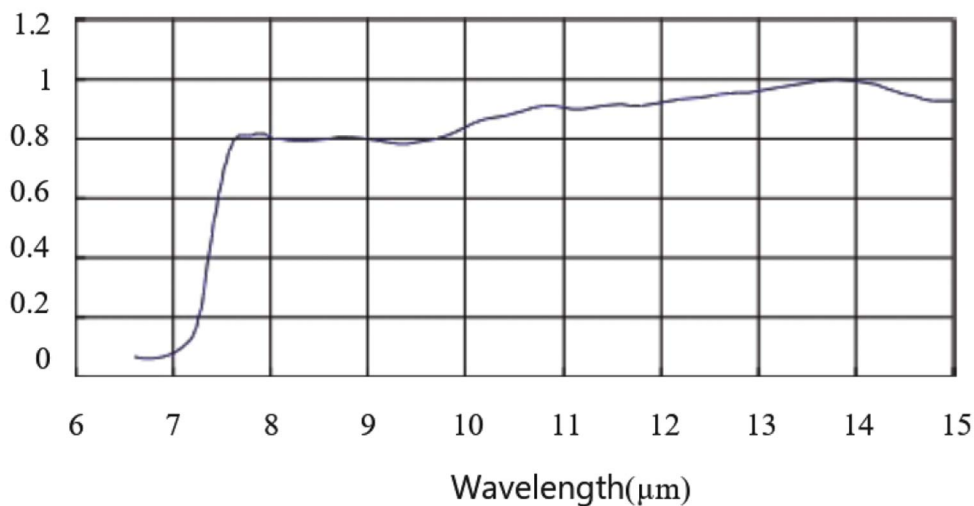
Overview

RA-ThermaPro-640X-2500D is a USB 3.0 bus powered and high-performance Infrared Imaging Device designed for precise Multi-Point Temperature Measurement, equipped with a 12 μm pixel pitch uncooled Vanadium Oxide Microbolometer FPA. It operates in the 8–14 μm spectral range, delivering accurate Thermal Imaging across a wide Temperature span from 0 °C to 2500 °C. The Camera supports simultaneous Temperature Measurement at up to 10 independent points. With a frame rate of 40 Hz, it provides smooth, Real-Time Thermal Visualization. Users can select from multiple Color Palettes, including White-Hot, Black-Hot, IronBow, RainBow, and others.

Application

- ✓ High Temperature Measurement During Melting, Forming, and Heat-Treatment Processes.
- ✓ Continuous Temperature Monitoring in Furnaces and Foundries.
- ✓ Thermal Analysis for Material Testing and Combustion Research.
- ✓ Detection of Hot Spots and Thermal Inefficiencies in Industrial Systems.
- ✓ Monitoring of Transformers, Generators, and Electrical Connections for Overheating.
- ✓ Preventive Maintenance and Fault Detection in Electronic and Mechanical Components.
- ✓ Ensuring Uniform Heating and Process Stability in Manufacturing Lines.

Relative Spectral Response Measurement Curve



Specification

Camera Spec	
Sensor Type	UnCooled VOX FPA
Light Spectrum	LWIR (8-14 μm)
Effective Pixels	640 x 512
Pixel Size	12 μm x 12 μm
Lens Type	Athermalized / 50 mm Focal Length
F Value	F#1.0
Horizontal FOV	8.78 °
Vertical FOV	7.04 °
Max Frame Rate	40 fps
NEDT	≤ 50mk ,F#1.0, @ 300K
Pixel Resolution	14 Bit
Imaging Functions	Both OnChip and Software NUC, Shutter Control
Pseudo Color	White Hot, Black Hot, IronBow, Rainbow, etc
Detection Range	2040 Meter, By Johnson Criteria - Human (1.8m x 0.5m)
Recognition Range	680 Meter, By Johnson Criteria - Human (1.8m x 0.5m)
Identification Range	340 Meter, By Johnson Criteria - Human (1.8m x 0.5m)
Offset Adjustment	512 Analog Steps
Gain Adjustment	1024 Analog Steps
Trigger Signal	TTL 5V/3.3V Or 24V
Trigger Mode	Free Running, Software Trigger, Hardware Trigger
Hardware Trig Polarity	Rising Edge, Falling Edge, Both Edges, High Level, Low Level
Trigger Factor	0 To 65535
Max Power Usage	4.5 Watt No External Power Requirements
Min Trigger Pulse Length	30 ns
Trigger Delay	0 to 16 Min - in 1 us Steps
Interface	Super Speed USB 3.0 (234 Mbit/s)
Weight Dimension IP	190 gr (Without Lens) 67 mm x 67 mm x 60 mm IP53
Temperature Range	- 40 to + 85 (°C)

رسا اندیشان موج پرداز (دانش بنیان)



حکیمیه، میدان فجر، خیابان خرم، خیابان سحر، کوچه پگاه ۶، پلاک ۱۱، واحد ۷

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