

RasaAndishan Moj Pardaz

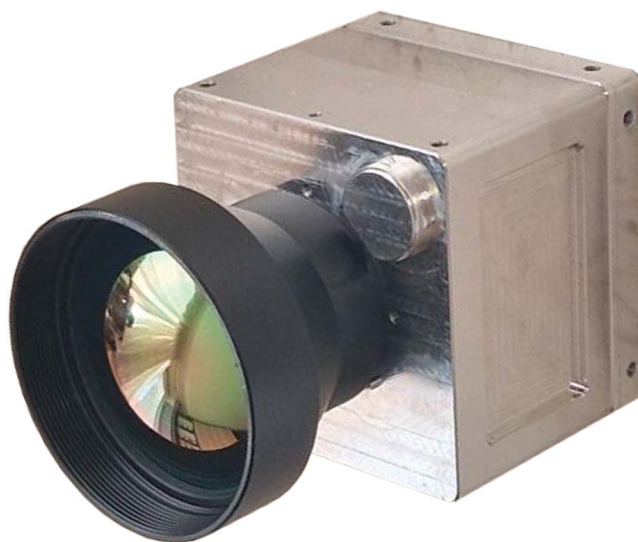
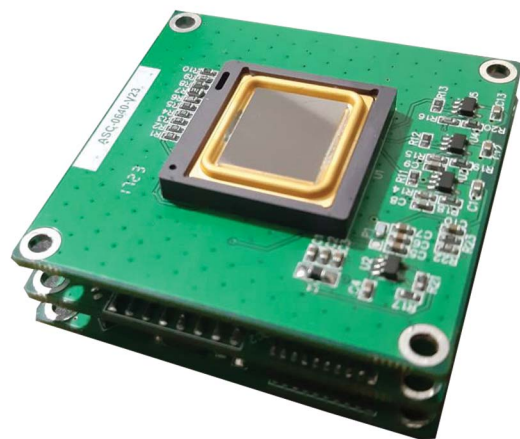
(دانش بنیان)

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



RA-ThermoPro-640X-ColorSense



Overview

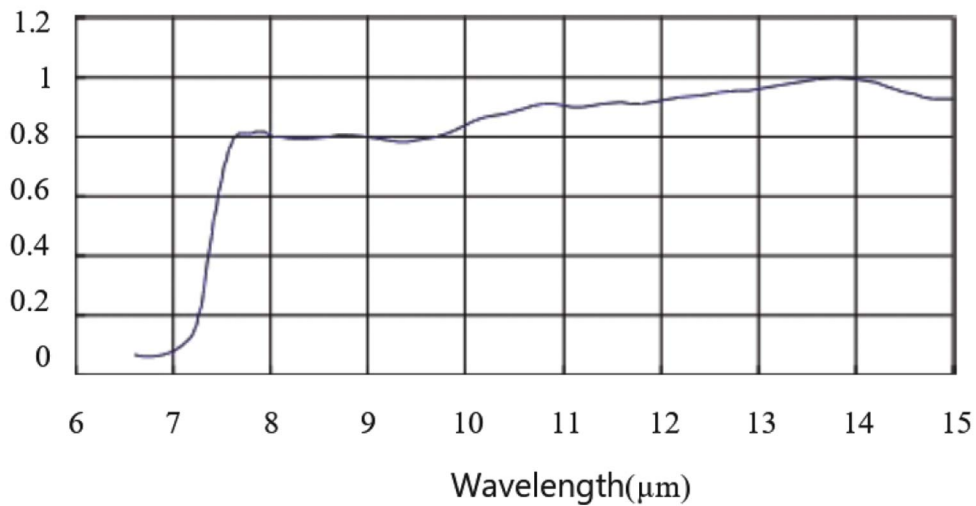
RA-ThermoPro-640X-ColorSense is a USB 3.0 bus-powered high-performance Infrared Imaging Device designed for visualizing temperature distribution rather than precise measurement. It is equipped with a $12\mu\text{m}$ pixel pitch uncooled Vanadium Oxide Microbolometer FPA and operates in the $8\text{--}14\mu\text{m}$ spectral range, delivering accurate thermal visualization across a wide temperature span. The camera supports multiple Color Palettes, including White-Hot, Black-Hot, IronBow, Rainbow, and others, allowing users to clearly distinguish thermal contrasts and patterns. Thanks to adjustable exposure settings, **ColorSense** can operate effectively across a wide range of thermal conditions, from relatively cool to very high temperatures, without requiring exact point measurements. With a frame rate of 40Hz, it provides smooth real-time thermal imagery, making it ideal for applications in security, building inspection, industrial monitoring, and scientific visualization where thermal patterns and gradients are more important than precise numeric temperature readings

Application

- ✓ High-Temperature Visualization in Industrial Processes
- ✓ Inspection of Furnaces and Kilns
- ✓ Building and Energy Audits
- ✓ Research and Educational Visualization
- ✓ Scientific Visualization in Laboratories



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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