



Vanadium Oxide (VOx) Microcalorimeter

# FPV Thermal Imaging Camera

FS640

640 × 512R

×1, ×2, ×4, ×8

## KEY FEATURES

- High Sensitivity Detector: Vanadium Oxide Non Cooled Detector, Supporting 256 x 192 Resolution
- Signal Output: Support Analog Signal Output
- Calibration & Correction: Support Automatic, Manual Calibration, And Background Correction
- Compact Design: Compact Design for Easy Integration
- Overview: The thermal imaging module is a miniaturized integrated product characterized by small size and low power consumption.

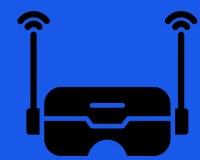


## APPLICATIONS

- Integration of Drone Pods, Intelligent Equipment, Such As Robotic Gimbals, Individual Helmets, Pods, etc.

## TECHNICAL INDICATORS INTRODUCTION TO THE RESOLUTION OF INFRARED THERMAL IMAGERS





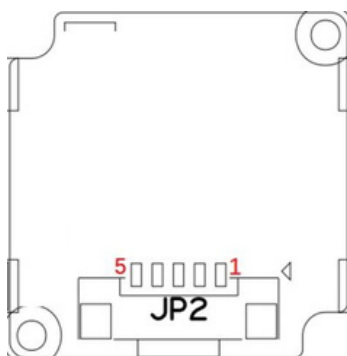
## TECHNICAL INDICATORS

Thermal Imaging	
Sensor Type	Vanadium Oxide (VOx) Microcalorimeter
Resolution	640 × 512
Pixel Pitch	12μm
Response Band	8~14 μm
NETD	≤50 mK(@25 °C,F#1.0)
Lens Parameters	9.1 mm
FOV (H*V)	48.3°(H) ×38.6°(V), 62.4°(D)
Minimum Focusing Distance	2m
Max Aperture Value	F1.0
Image Display	
Output Resolution	720 × 576
Electronic Amplification	×1, ×2, ×4, ×8
Electronic Amplification	Support
Bad Point Correction	Support
Image	Off, Vertical, Horizontal, Center
Image Detail Enhancement	Support
AGC Mode	Histogram
Brightness Adjustment	Support
Pseudo Color Mode	Supports 15 modes including White Heat, Black Heat, Fusion 1, Rainbow, Fusion 2, Iron Red 1, Iron Red 2, etc.
Contrast Adjustment	Support
System Function	
Interface	CVBS
System Parameter	
Storage Temperature	-45°C ~ + 75°C
Storage Humidity	<90% RH
Vibration Shock	Vibration: Sinusoidal Vibration, 10m/s <sup>2</sup> , 3-axis Shock: Half Sine Wave, 15g/11ms, 3-axis 6-way
Working Temperature	-40 °C~80 °C
Weight	≤23g
Size	≤37.82mm×20mm×20mm
Power	≤0.8 W
Power Input	DC 5V-17V



### INTERFACE DEFINITION

Interface Board Diagram:



Pin Definition:

1	POWER	DC 5~16V Power supply
2	GND	GND
3	CVBS	CVBS
4	UART_TXD	Module UART Sending 3.3V
5	UART_RXD	Module UART Reception 3.3V

### CONNECTOR PARAMETERS

POLES	PN	A	B	C
2	1.25T-1-LT-2A	1.25	4.25	7.55
3	1.25T-1-LT-3A	2.50	5.50	8.80
4	1.25T-1-LT-4A	3.75	6.75	10.05
5	1.25T-1-LT-5A	5.00	8.00	11.30
6	1.25T-1-LT-6A	6.25	9.25	12.55
7	1.25T-1-LT-7A	7.50	10.50	13.80
8	1.25T-1-LT-8A	8.75	11.75	15.05
9	1.25T-1-LT-9A	10.00	13.00	16.30
10	1.25T-1-LT-10A	11.25	14.25	17.55
11	1.25T-1-LT-11A	12.50	15.50	18.80
12	1.25T-1-LT-12A	13.75	16.75	20.05
13	1.25T-1-LT-13A	15.00	18.00	21.30
14	1.25T-1-LT-14A	16.25	19.25	22.55
15	1.25T-1-LT-15A	17.50	20.50	23.80
16	1.25T-1-LT-16A	18.75	21.75	25.05

**Technical Drawing (SPECIFICATIONS)**

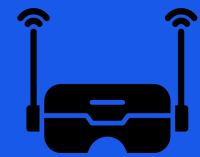
- 额定电压: 125V AC DC
- Voltage rating: 125V AC DC
- 额定电流: 1.0A AC DC(2AWG)
- Current rating: 1.0A AC DC(2AWG)
- 额定电压: 250V AC(Insulate)
- Withstand voltage: 250V AC(Insulate)
- 绝缘电阻: 100MΩ MIN
- Insulation resistance: 100MΩ MIN
- 接触电阻: 0.02Ω MAX(初始)
- Contact resistance: 0.02Ω MAX(initial)
- 工作温度: -40°C~+85°C
- Working Temperature: -40°C~+85°C
- 间距: 1.25 mm
- Pitch: 1.25 mm

**材料 (MATERIAL)**

- 绝缘体: 尼龙 UL94V-0
- Insulator: PA6T UL94V-0
- 接触片: 磷青铜镀锡
- Contact PIN: Phosphor bronze TIN-Plating
- 焊片: 磷青铜镀锡
- Solder tab: Phosphor bronze TIN-Plating
- 端子: 尼龙
- CAP: PA

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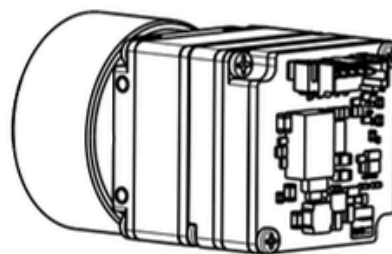
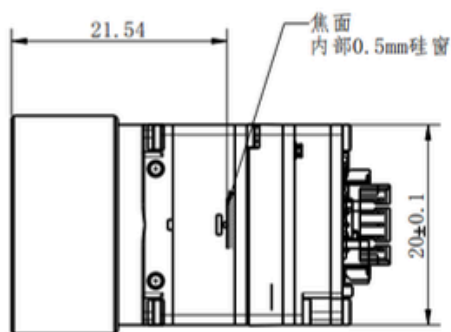
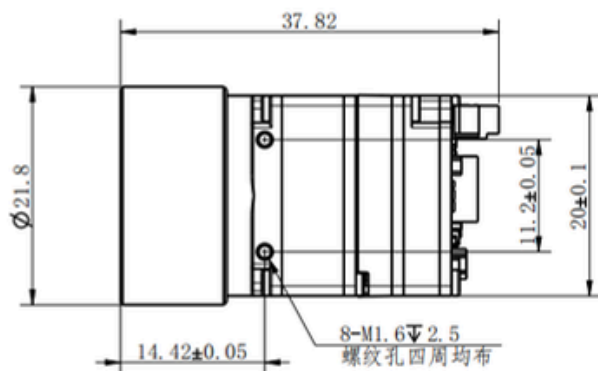
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640 × 512R

×1, ×2, ×4, ×8

STRUCTURE SIZE: ≤39mm×20mm×20mm



## DISCLAIMER



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