



iTL Thermal Module (For UAV Payloads /Wearable Devices)

A New Level of Compact
Lightweight Structure



Description

Oriented for fully optimized SWaP, iTL612R uncooled thermal module provides a reliable solution for infrared system integration with limited space. Its compact structure has reached top level of the same specification module. It is specially developed for the field of Predictive Maintenance, Photovoltaic Inspection, Environmental Protection, Scientific Research, Aerial Photography, Police Investigation, Disaster Relief & Rescue, Forest Fire Prevention, Urban Safety etc.

Compact & Lightweight Design

- Size: 21mm×22.3mm×27.3mm (with 9.1mm lens)
- Weight: 20.8g±1.5g (with 9.1mm lens)
- Low power consumption as low as 0.7W

Various Interfaces for Easy Integration

- DVP/LVDS/USB2.0 interfaces, RAW/YUV image data output, serial port control

Clear Image & Accurate Radiometry

- Brand new image process algorithm: NUC/3DNR/DNS/DRC/EE
- Support Windows/Linux SDK
- Support regional, point & isotherm temperature measurement

Model	iTL612/R
IR Detector Performance	
Sensitive Material	Vanadium Oxide
Resolution	640×512
Pixel Size	12μm
Spectral Range	8μm ~14μm
Typical NETD	≤40mK
Image Processing	
Frame Rate	30Hz
Start-up Time	5s
Digital Video	RAW/YUV/BT656
Image Algorithm	NUC/3DNR/DNS/DRC/EE
Image Display	Black Hot/White Hot/Pseudo Color
PC Software	
ICC Software	Module Control & Video Display
Electrical Specifications	
Standard External Interface	30Pin_HRS: DF40C-30DP-0.4V(51), (HRS, Male)
USB Expansion Board	Type-C
Communication Interface	RS232-TTL/USB2.0
Digital Video Interface	CMOS8/USB2.0
Supply Voltage	3.3V±0.1V VDC
Typical Power Consumption	0.7W
Temperature Measurement	
Operating Temperature Range	-10°C~+50°C
Temperature Measurement Range	-20°C~+150°C, 0°C~+550°C; Support Customization and Expansion
Temperature Measurement Accuracy	Greater of ±2°C or ±2% (@23°C±3°C)
Regional Temperature Measurement	Support Maximum, Minimum and Average Value of the Output Regional Temperature
SDK	Support Windows/Linux/ARM; Achieve Video Stream Analysis and Conversion from Gray to Temperature
Physical Characteristics	
Size (mm)	21×22.3×27.3 (With 9.1mm Lens)
Weight	20.8g±1.5g (With 9.1mm Lens)
Environmental Adaptability	
Operating Temperature	-40°C~+70°C
Storage Temperature	-45°C~+85°C
Humidity	5%~95%, Non-condensing
Vibration	5.35grms, 3-axis
Shock	Half-sine Wave, 40g/11ms, 3-axis 6-direction
Certificates	ROHS2.0/REACH
Optics	
Optional Lens	Fixed Focus Athermal: 9.1mm

Specifications are subject to change without prior notice.

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