METRA-1280-19UT

1280×1024 Radiometric LWIR Module · 19 mm · 50 Hz

Overview

METRA-1280-19UT pairs a 1280×1024 high-resolution VOx detector with a fixed 19 mm F1.0 lens for radiometric LWIR integration. Its second-generation Asic-ISP processor delivers detailed images at 50 Hz, or 30 Hz during thermometry. The lens and flange weigh 39 g ±1 g; the core measures ≤29×29 mm across the body and typically draws under 1.3 W over USB. DVP, BT1120, MIPI and USB 3.0 interfaces support UAV search, outdoor integration, handheld devices, security monitoring, wildfire detection and driving-assistance systems.



1280×1024	19 mm	≤40 mK	39 g ±1 g
RESOLUTION	FIXED LENS	NETD	LENS + FLANGE WEIGHT

Key Features

High-Resolution Imaging

- 1280×1024/12µm VOx detector with ≤40 mK typical NETD
- 50 Hz imaging (30 Hz thermometry)

Fixed 19 mm Radiometric Configuration

- 19 mm F1.0 lens with 44.2°×35.7° FOV and 0.63 mrad IFOV
- High-image-quality range −20℃ to +150℃; extended range 50℃ to +600℃

Compact Core, Rich Interfaces

- 39 g ±1 g lens + flange, ≤29×29 mm core body, typical USB power under 1.3 W
- DVP / BT1120 / MIPI / USB 3.0 digital video interfaces

Typical Applications



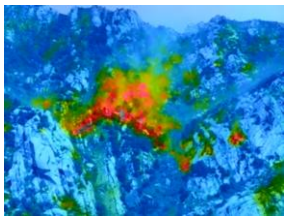
UAV Search Missions



Outdoor Integration



Mobile Handheld Devices



Wildfire Monitoring

Technical Specifications

Detector Performance

Detector Type	VOx uncooled infrared focal plane detector
Resolution	1280×1024
Pixel Pitch	12 μm
Spectral Band	8~14 μm
Detector Frame Rate	50 Hz imaging (30 Hz thermometry)
Typical NETD	≤40 mK @25℃, F#1.0, 25 Hz
Thermal Time Constant	<12 ms

Image Adjustments

NUC	Shutter correction
Brightness / Contrast	0–100 levels
Polarity / Palettes	White-hot / black-hot / multiple pseudo-color
Digital Zoom	1.0–8.0× continuous (step 0.1)
Image Mirror	Top-bottom / left-right / diagonal
Other Functions	External sync, contour overlay

Fixed Lens — 19UT Configuration

19 mm F1.0 fixed	FOV 44.2°×35.7° · IFOV 0.63 mrad Focus 7.52 m–∞ · DRI 2100/530/260 m · Weight (lens + flange) 39 g ±1 g

Electrical

Digital Video	DVP/BT1120/MIPI/USB3.0
Communication Interface	UART/I2C
Power Input	5 V
Typical USB Power @25℃	<1.3 W

Physical

Weight (lens + flange)	39 g ±1 g
Dimensions (excl. Lens)	≤29×29 mm

Thermometry

Measurement Range	High image quality: −20℃ to +150℃; extended range: 50℃ to +600℃
Measurement Accuracy	Target −20℃ to +150℃: ±2℃ or ±2% of reading (greater, @ −20℃ to 60℃ ambient); target 50℃ to +600℃: ±5℃ or ±3% of reading (greater, @ −20℃ to 60℃ ambient)

Environmental

Operating Temp.	Imaging −40℃ to +80℃; thermometry −20℃ to +60℃
Storage Temp.	−50℃ to +85℃
Humidity	5%–95%, non-condensing
Vibration	6.06 g random vibration, all axes
Shock	80 g @ 4 ms sawtooth, 3 axes 6 directions

Specifications subject to change without notice. D/R/I: detection / recognition / identification range (m) for a walking person (1.8 × 0.5 × 0.3 m) per Johnson criteria. This product is supplied in the fixed 19UT lens configuration.

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