



# HR21-L612K

## 640×512 Uncooled LWIR Thermal Imaging Module

Compact uncooled infrared module assembly for OEM thermal imaging integration. The HR21-L612K series combines a low-power image processing chipset with onboard image processing algorithms and multiple external interface options for intelligent platforms.



Product rendering from Camcoda WordPress media library.

Configuration note: Interface availability depends on the selected core, interface board, firmware, and project configuration. Confirm USB, CVBS, SDI, MIPI, LVDS / CameraLink, RS-232, RS-422, and TTL requirements during RFQ.

## Key Specifications

<b>Product model</b>	HR21-L612K
<b>Detector type</b>	Vanadium oxide uncooled infrared focal plane detector
<b>Resolution</b>	640 × 512
<b>Detector frame rate</b>	50 Hz
<b>Pixel pitch</b>	12 μm
<b>Spectral response</b>	8–14 μm
<b>NETD</b>	≤35 mK @ 25°C, F#1.0
<b>Temperature measurement range</b>	-20°C to 150°C
<b>Temperature accuracy</b>	±2°C or ±2%, whichever is greater

## Image Control and Processing

<b>Intensity control</b>	0 to 10 adjustable settings
<b>Contrast control</b>	0 to 10 adjustable settings
<b>Enhancement</b>	0 to 10 adjustable settings
<b>Color palettes</b>	White hot, black hot, iron red, red saturation, and other palettes
<b>Image processing</b>	Non-uniformity correction, temporal filtering, spatial noise reduction, digital detail enhancement, and histogram light adjustment

# Lens, Interface, Power, and Environmental Data

## Lens Options

Parameter	4.6 mm	9.1 mm	13 mm	19 mm	25 mm	35 mm	50 mm
IFOV	2.609	1.318	0.923	0.632	0.480	0.343	0.240

Focus adjustment: Manual / automatic, depending on selected lens configuration.

## Electrical and Interface Data

Supply voltage	5 V ±0.5 V; source note also lists 5 V–12 V configuration range
Typical power consumption	<1.0 W @ 25°C
Digital video	BT656 / LVDS (CameraLink) interface; MIPI / USB / CVBS / SDI available with applicable interface board or configuration. Confirm during RFQ.
Communication interface	RS-232 / RS-422 / TTL

## Mechanical and Environmental Data

Physical size	21 mm x 21 mm x 20.21 mm, excluding lens and flange
Weight	<15 g
Operating temperature	0°C to +50°C
Storage temperature	-10°C to +60°C
Humidity	5% to 95%, non-condensing
Vibration	6.06 g random vibration, all axial directions
Shock	80 g @ 4 ms, rear peak sawtooth wave, 3 axes / 6 directions

## Recommended RFQ Checklist

For faster technical matching, include target application, selected lens or FOV, interface requirement, communication protocol, host platform, power budget, mechanical constraints, quantity, destination market, and any CVBS / NDAA / special lens request.

Source basis: rebuilt from the supplied HR21-L612K module PDF. Specifications should be confirmed against the final product configuration, purchase order, and engineering review before procurement or integration commitments.