



MORE LIGHT

EVIDIR® alpha - GigE camera

Precisely visualize and analyze temperature distributions

EVIDIR alpha GigE

Outstanding thermal imaging quality and optimized size, weight and power characterize the family of EVIDIR alpha dedicated for various applications. Based on modern 12 μm uncooled micro-bolometer-technology, EVIDIR alpha GigE camera deliver sharp and detailed thermal images with a thermal sensitivity of better than 20 mK NETD and a spatial resolution of 640 x 480 pixels. With optional radiometric calibration, the thermographic camera delivering most accurate absolute temperature data.

- Precise thermal imaging: contactless measurement, visualization and mapping of temperature distributions
- Easy integration into numerous applications thanks to the use of the Standard GigE Vision protocol
- Perfectly suited for portable and mobile applications
- Very low latency
- High image quality even in low-contrast scenes



EVIDIR® alpha - GigE enduser interface

Detector Type	Uncooled microbolometer with 12 µm pixel pitch		
Spectral range	LWIR 8 µm ... 14 µm		
Frame rate options	50 Hz with 8/16 Bit image data output ≤ 9 Hz (fewer export regulations) with 8/16 bit image data output		
Image Data (up to 2 data streams simultaneous)	Corrected RAW 16 bit; processed Mono 8/16 bit or YCbCr 4:2:2		
Thermal sensitivity	≤ 20 mK		
Video interface	GigE-Vision version ≥ 2.2 (1 Gbit Ethernet)		
Control interface	UART-RS232, command line based / GigE-Vision		
Supply Voltage	9 ... 36 V DC or PoE		
Power consumption	External power supply: ≤ 2.2 W @ $T_{Ambient} = +25^{\circ}C$, 12 V DC Power over Ethernet: ≤ 2.8 W @ $T_{Ambient} = +25^{\circ}C$		
Housing temperature	-40 °C ... +70 °C		
Max. detector temperature	+85 °C		
Dimensions, weight (body only)	50 x 30 x 30 mm ³ (width x height x length)		
Weight	≤ 66 g (without lens)		
IP protection	Back side: IP40 with original cable accessories; Front side (Lens) sealing to IP 67		
Standard lens options (further lenses on request)	$H_{FoV} \times V_{FoV}$:	Focal length:	F-Number:
	95.0° x 70.0°	4.9 mm	f/1.1
	75.0° x 55.0°	6.2 mm	f/1.0
Coating: Anti Reflection or DLC (on request for Viewer)	50.0° x 27.5°	9.2 mm	f/1.0
	32.0° x 24.0°	13.6 mm	f/1.0
	17.6° x 13.2°	25.0 mm	f/1.0
	8.7° x 6.6°	50.0 mm	f/1.0

EVIDIR® alpha - GigE camera as Viewer

Spatial resolution	640 x 480 pixels
Visualization Range	-20°C...+60°C (see User Guide)
Non-Uniformity Correction	Shutter-based NUC with mechanical shutter ("Shutter NUC")

EVIDIR® alpha - GigE camera as Radiometer

Spatial resolution	GigE Vision 640 Radiometer: 640 x 480 pixels
Measurement range	Measurement range 1 @ $T_{housing} = +10^{\circ}C \dots +50^{\circ}C$: -40 °C ... +120 °C Measurement range 2 @ $T_{housing} = +10^{\circ}C \dots +50^{\circ}C$: -40 °C ... +600 °C
Measurement Accuracy	Measurement range 1: ±2 K for $T_{object} = -10^{\circ}C \dots +120^{\circ}C$ @ $T_{housing} = +10^{\circ}C \dots +50^{\circ}C$ Measurement range 2: ±5 K or ± 2% (the higher one) for $T_{object} = +120^{\circ}C \dots +600^{\circ}C$ @ $T_{housing} = +10^{\circ}C \dots +50^{\circ}C$
Radiometer functions	Three output options: 1. Processed Viewer image (8/16 bit B/W or 16/24 bit false color) with additional temperature information (8 isotherms and 3 operator defined regions of interest ROI), 2. Camera generates temperature data of each pixel (16 bit), 3. Viewer image (8 bit B/W) combined with radiometric data of each pixel (16 bit) only with 30 Hz option on request
Non-Uniformity Correction	Shutter based NUC with mechanical shutter

