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 30 mK NETD and a spatial resolution of up to 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 Standrad 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	50Hz with 8/16 Bit image data outputa 30Hz with 8/16/24 Bit image data output (only on request) ≤ 9Hz (few 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 or YCbCr 4:4:4 or RGB 24 bit
Thermal sensitivity	≤ 30 mK
Video interface	GigE-Vision version ≥ 2.2 (1 Gbit Ethernet)
Control interface	UART-RS232, command line based, see section 0 / GigE-Vision
Supply Voltage	9…36V DC or PoE
Power consumption	External power supply: ≤ 2.2W @$T_{Ambient}$ = +25°C, 12V DC Power over Ethernet: ≤ 2.8W @$T_{Ambient}$ = +25°C
Housing temperature	−40 °C… 70 °C
Max detector temperature	+85 °C
Dimensions, weight (body only)	50 x 30 x 30 mm³ (width x height x length)
Weight	≤ 66g (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) Coating: Anti Reflection or DLC (on request for Viewer)	H_{FoV} x V_{FoV}: 17.6° x 13.2° 32.0° x 24.0° 75.0° x 55.0°	Focal length: 25.0 mm 13.6 mm 6.2 mm	F-Number: f/1.0 f/1.0 f/1.1

EVIDIR® alpha - GigE camera as Viewer

Spatial resolution	GigE Vision 640 Viewer: 640 x 480 pixels
Visualization Range	-40 °C… +70 °C
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: -40 °C… +120 °C | measurement range 2: 0 °C… +600 °C
Measurement Accuracy	measurement range 1: ± 3 K for T_{object} = -10 °C... 120 °C; @ $T_{housing}$ = 20 °C... 50 °C measurement range 2: ± 5 K or ± 2% whichever is greatest; @ $T_{housing}$ = 20 °C... 50 °C
Radiometer functions	Three output options: 1. Processed Viewer image (8/16 bit B/W or 16/24 bit false color) with additional termperature information(8 isothermsand 3 operator defi ned 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
Non-Uniformity Correction	Shutter based NUC with mechanical shutter

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