CALIBIR™ GX2
Uncooled Infrared Cameras

PRELIMINARY

FEATURES

- Radiometric operation for precise temperature output
- Gigabit Ethernet (GigE Vision®/ GenICam® compliant)
- General-purpose opto-coupled input/output (external trigger user, count, or timer-driven triggering). Contact us for other options (MIPI-CSI2® or USB)
- Flexible general-purpose Counter and Timer functions for internal/ external controls
- Defective Pixel replacement
- Adaptive Image Enhancement
- IEEE1588-2008 Precision Time Protocol synchronization capable
- Built-in pseudo-color for enhanced visualization
- Image metadata supported
- Application development with the freely available Sapera™ LT software libraries as well as Spinnaker
- Internal mechanical shutter for remote recalibration
- Made in Canada

REGULATORY COMPLIANCE

- CE, FCC and RoHS
- MIL-STD 810G Compliant
  - Shock and vibration
  - Thermal Shock

NON-ITAR, Subject to Canadian Export Regulations. The Calibir GX cameras are currently classified as a "Dual Use" item under Group 1 (1-6.A.3.b.4.b) of the Canada Export Control List and Category 6 (6.A.3.b.4.b) under the Wassenaar Arrangement on Export Control for Conventional Arms and Dual-Use Goods and Technologies.

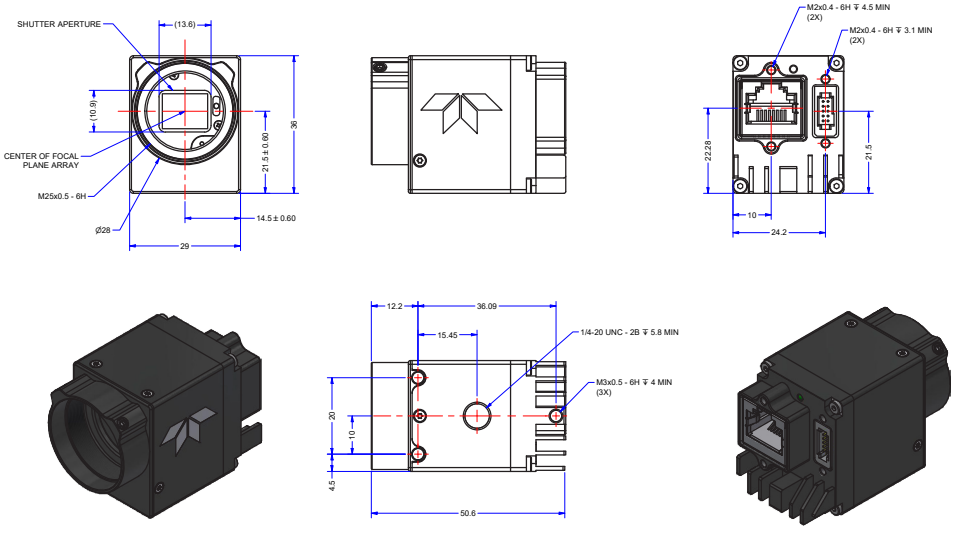
Teledyne's Latest Microbolometer Technology

The GX2 camera is our new release of the Calibir GX family. It embeds our improved microbolometer sensor, designed, manufactured, and packaged in our own MEMS foundry. The embedded shutter provides a rapid image output on power up while delivering uniform response over the entire operating temperature range, making it ideal for thermal imaging applications requiring best in class image quality. The GX2 series still integrates our own advanced and proprietary 21-bit ADC design for unparalleled intra-scene dynamic range without the need for gain reduction. This unique feature provides the best possible NETD over a vast range of temperatures (>600°C).

Calibir GX2 integrates non-uniformity correction and comes factory-calibrated for precise, accurate radiometric performance that provides reliable absolute temperature data. Contact sales for more information if needed.

General Specifications	
Resolution	320 (H) x 240 (V) pixels, 640 (H) x 480 (V) pixels
Frame Rate	60 Hz/30Hz
Pixel Size	17 µm
Temp. Accuracy	+/- 3°C or +/- 3% from -20 to 60°C (operating temp)
NETD	≤50 mK; F/1.0, at 60 fps
Size	29 mm x 37 mm x 56 mm
Mass	65 g (without lens)
Operating Temp.	-40°C to 80°C
I/O Options	GigE Vision, CSI-2, USB
Tripod mounting	UNC ¼"-20

DIMENSIONS



SPECIFICATIONS

FEATURES	CALIBIR GX2 FAMILY	
Temperature Zone	10 Overlapping, independent controls and stats for min, max, average and std	
Contrast Enhancement	ROI Based Adaptive Contrast Enhancement Engine	
Alarms	1 per Temp. Zone Software message and/or electrical output	
Overlay	Text (stats/frame count), Temp. scale, bounding box or cross-hair	
Electronic zoom	2x,4x, 8x 16x	
Pseudo-color	Built or User supplied	
Pixel Formats	Mono: 8 or 16-bit/pixel	Color: YUV
MECHANICAL INTERFACE		
Camera with M25/M34 Lens Mount (W x H x L)	29 mm x 36 mm x 56 mm (with lens mount)	
Mass (without lens)	65 g	
Power Connector	via Samtec 10-pin connector (or optionally using PoE)	
ELECTRICAL INTERFACE		
Data and Video	Gigabit Ethernet with Power Over Ethernet (POE)	
Input Voltage	12/24 V DC (min 9 V, max 57 V)	
POWER CONSUMPTION	Typical (typically due to shutter activation)	Maximum (typically due to shutter activation)
12 V	2.8 W	
24 V	2.8 W	
Power over Ethernet (48 V)	3.5 W	
ENVIRONMENTAL CONDITIONS		
Operating Relative Humidity	maximum 80% non-condensing	
Storage Temperature	-40°C to +85°C	
Storage Relative Humidity	maximum 80% non-condensing	
SENSOR INFORMATION		
Spectral Response	8-14 µm (LWIR)	
Pixel Pitch	17 µm	
Focal Plane Array	320 x 240 (QVGA)	640 x 480 (VGA)
Frame rate (/ frame reduction)	90 Hz	60 Hz/30Hz
Lens line up (see next page) / fixed focus	From 17° HFOV to 48°	From 18° HFOV to 80°

SUPPORTED LENSES: CALIBIR GX2 640X480 (VGA)

Model Part Numbers	Lens Mount	EFL (mm)	F/number	HFOV (degrees)	VFOV (degrees)	Lens Weight (g)	Min Focus Distance (meter) (*)
IR-G2ZG-4600700	M25	7.0	1.0	82°	63°		TBD
IR-G2ZG-4600800	M25	8.5	1.0	67°	52°		TBD
IR-G2ZG-4601400	M25	14.0	1.0	46°	34°		TBD
IR-G2ZG-4601900	M25	19.0	1.0	32°	24°		TBD
IR-G2ZG-4602500	M25	25.0	1.0	24°	18°		TBD
IR-G2ZG-4603500	M25	35.0	1.0	18°	13°		TBD

SUPPORTED LENSES: CALIBIR GX2 320X240 (QVGA)

Model Part Numbers	Lens Mount	EFL (mm)	F/number	HFOV (degrees)	VFOV (degrees)	Lens Weight (g)	Min Focus Distance (meter)
IR-G2QG-3600600	M24	6.0	1.0	48°	38°		TBD
IR-G2QG-3601000	M24	10.0	1.0	30°	23°		TBD
IR-G2QG-3601400	M24	14.0	1.0	22°	17°		TBD
IR-G2QG-3601800	M24	18.0	1.0	17°	13°		TBD

Contact our sales for more info on other lens options. (*) with no refocus

FOR MORE INFORMATION CONTACT:

THE AMERICAS Boston, USA | +1-978-670-2000 | TDI_sales.americas@teledyne.com
EUROPE Munich, Germany | +49-89-89-54-57-3-80 | TDI_sales.europe@teledyne.com
JAPAN & ASIA PACIFIC Tokyo, Japan | +81-3-5960-6353 | TDI_sales.asia@teledyne.com
SHANGHAI OFFICE Shanghai, China | +86-21-60131571 ext. 801 | saleschina@teledyne.com

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