

GO-5000M-USB-UV

Technical Datasheet



See the possibilities

Lince5M



Apex Series

USBTM
VISION

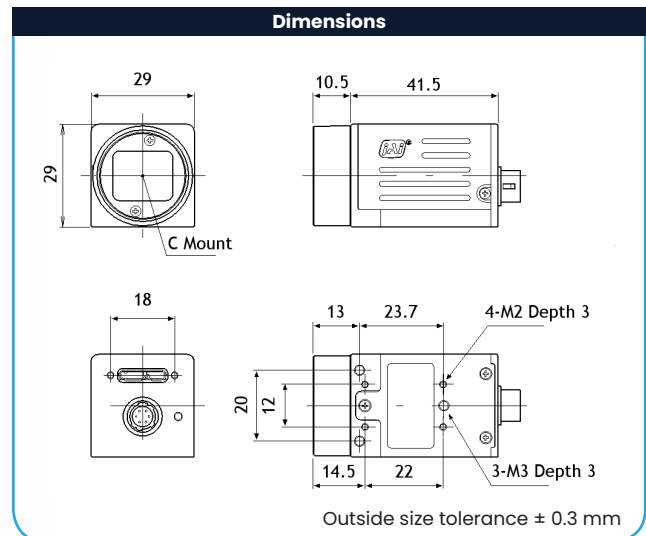
JAI's Go Series delivers an exceptional blend of small size, high versatility, and excellent performance, all at an entry-level price, making the cameras a perfect starting point for a wide range of machine vision applications.

CMOS technology, low-noise pixels, global shutters, sequencer functions, and other advanced features help ensure image quality and operational flexibility beyond entry-level expectations.

Specification Highlights


SENSOR:	Lince5M	SHUTTER:	Global Shutter
FORMAT:	1"	FRAME RATE:	62 fps
PIXEL SIZE:	5.0 x 5.0 μ m	INTERFACE:	USB3 Vision (PoUSB)
LENS MOUNT:	C-Mount	RESOLUTION MP:	5 MP
SPECTRUM:	Monochrome (Visible + UV)	RESOLUTION WxH:	2560 x 2048 px

Specifications		GO-5000M-USB-UV
Sensor		1" CMOS global shutter (Lince5M) with no microlenses
Sensor protective covering		Quartz glass with double AR coating
Pixel clock		48 MHz
Frame rate, full frame		62 frames/sec. @ 8-bit
Active area		12.8 mm (h) x 10.2 mm (v), 16.39 mm diagonal
Cell size		5.0 μ m (h) x 5.0 μ m (v)
Active pixels		2560 (h) x 2048 (v)
Read-out modes		
Full ROI		2560 (h) x 2048 (v) up to 62 fps Any start line, any height in 1-line steps, with X offset and width in 16-pixel steps
Binning		1x2, 2x1, 2x2, 2x4, 4x2, 4x4 (monochrome only)
Traditional SNR*		>55 dB (0 dB gain)
Video signal output		8/10/12-bit monochrome
Gain (digital)		Manual/automatic 0 dB to +24 dB
Gain (analog)		1x, 2x, 4x
Gamma		0.45, 0.6, 1.0 or 32-point LUT
Synchronization		Internal
Trigger input		Opto In, Pulse Generators, Software, User Output (NAND gates)
Trigger modes		EPS, Trigger Width, Timed RCT (with ALC), Sequence
Electronic shutter		
Timed exposure		10 μ s to 8 sec in 1 μ s steps
Auto shutter		1/62 to 1/10000 sec.
Auto level control (ALC)		Shutter range from 1/62 to 1/10000, gain range from 0 dB to +24 dB. Tracking speeds and max values adjustable.
High Dynamic Range function		4 built-in HDR slopes. Selectable up to -100 dB.
Pre-processing functions		Flat field correction, blemish compensation (256 pixels)
Operating temperature		-5°C to +45°C
Storage temperature		-25°C to +60°C
Humidity		20 – 80% non-condensing
Vibration		10 G (20 Hz to 200 Hz XYZ)
Shock		80 G
Regulations		CE (EN61000-6-2, EN61000-6-3), FCC Part 15 Class B, RoHS/WEEE
Power	6-pin connector USB 3.0	12V to 24V DC \pm 10%. 2.8W typical @ 12V 720mA, 3.6W typical @ 5V
Lens mount		C-mount
Dimensions (H x W x L)		29 mm x 29 mm x 41.5 mm (excl. lens mount)
Weight		46 g
Ordering Information		
GO-5000M-USB-UV		Monochrome UV camera with USB3 Vision

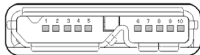


Connector pin-out

DC In / Trigger



USB 3.0 Interface`

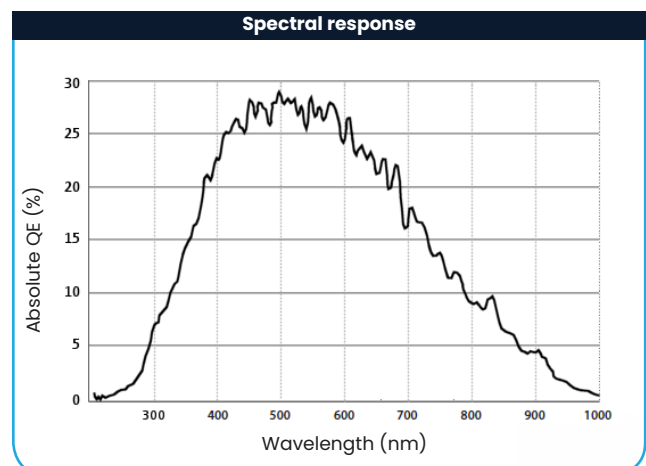


HIROSE HR10A-7R-6PB(73)

Micro B type - ZX3600-B-10P or equiv.

Pin	Signal
1	+12V to +24V DC input
2	Opto In 1
3	Opto Out 1
4	Opto Out 2
5	Opto Common
6	GND

No	I/O	Name	Note
1	I	VBUS IN	Power (VBUS)
2	I/O	DM	USB2.0 Differential pair (-)
3	I/O	DP	USB2.0 Differential pair (+)
4	-	OTG ID	USB OTG ID for identifying lines
5	-	GND	GND
6	O	FX3 SSTXM	USB3.0 Signal Transmission line (-)
7	O	FX3 SSTXP	USB3.0 Signal Transmission line (+)
8	-	GND	GND
9	I	FX3 SSRXP	USB3.0 Signal Receiving line (-)
10	I	FX3 SSRXM	USB3.0 Signal Receiving line (+)



*Traditional SNR is based on random noise in a single frame, where EMVA SNR measurements consider more comprehensive noise sources and variance over time. For a more complete description, see the manual.

Product Highlights

- Large format 5 MP CMOS imager (global shutter) with extended UV sensitivity
- Up to 62 fps at full resolution
- 5.0 μm square pixels in a 5:4 aspect ratio
- Small size (29 x 29 x 41.5 mm, excluding lens mount)
- 8/10/12-bit monochrome output
- 60 dB linear dynamic range with built-in HDR modes up to 100 dB
- Analog and digital gain control for less quantized noise in low-light situations
- Exposure control from 10 μs to 8 seconds in 1 μs steps
- 2X and 4X binning for increased sensitivity
- Single and Multi-ROI modes for flexible windowing and use of 2/3" or smaller optics
- Accepts power over USB3 Vision interface or separate 6-pin connector
- C-mount lens mount

Additional Product Images



Company and product names mentioned in this datasheet are trademarks or registered trademarks of their respective owners.

JAI A-S and Machine Vision Direct, LLC Cannot be held responsible for any technical or typographical errors and reserves the right to make changes to products and documentation without prior notice