

Marlin – Your entrance into the world of digital cameras.



Description

The AVT Marlin F-131B NIR (b/w) is a very compact, space saving IEEE 1394 SXGA C-Mount camera, equipped with a highly sensitive type 2/3 global shutter CMOS sensor. The camera offers an external asynchronous trigger shutter and operates in 8-bit mode. At full image resolution, the AVT Marlin F-131 NIR B offers up to 25 fps and is thus particularly suited for use in industrial image processing and product automation.

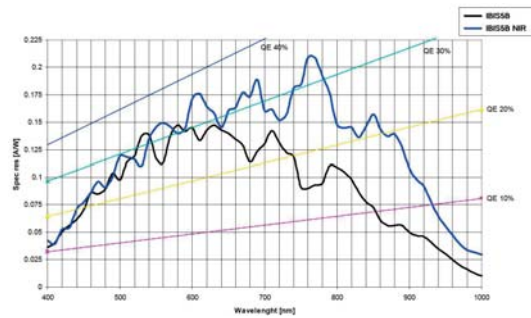
The extensive built-in image processing possibilities (image pre-processing) result in outstanding image quality, reduced retouching, less load on the system and higher performance overall. The integrated smart functions take over essential functions of the frame grabber, which is compensated by use of the Marlin.

The Marlin can be easily integrated into existing applications thanks to its powerful and flexible API.

Highlights

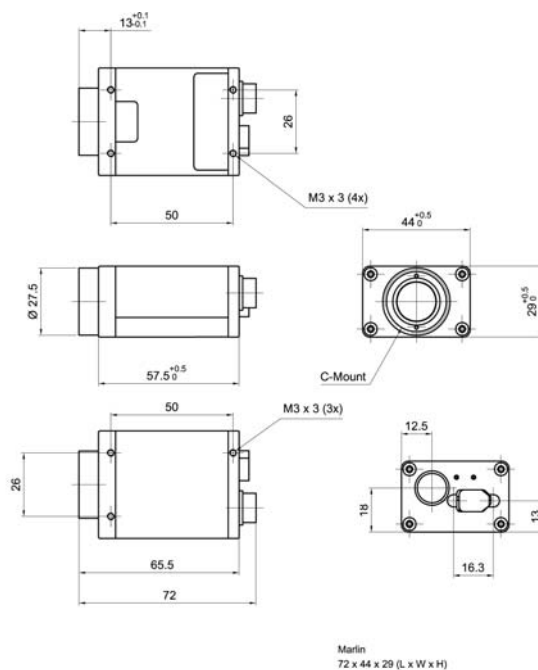
- SXGA (1280 x 1024), global shutter CMOS
- Up to 25 fps
- High dynamic range (HDR) mode
- True partial scan (higher frame rates by smaller AOI)
- Blemish pixel correction
- Sub-sampling
- Optocoupled asynchronous image trigger
- Image pre-processing features:
 - Wide range manual/programmable gain
 - Manual/auto exposure (shutter), white balance
 - Real-time shading correction
 - Programmable LUT
 - And lots more ...
- Smart frame grabber features:
 - Image FIFO memory (4 full frames)
 - Image mirror
 - Single-shot, multi-shot, free-run
 - 2 programmable inputs, 2 programmable outputs
- Very good image quality
- Very high frame rate
- Super compact size
- C-Mount
- Angled head and customized housings

Sensor Specification b/w



The sensor specifications (excluding lens and filter) are typical for this camera model.

Dimensions



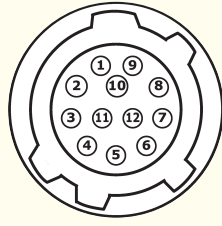
Connections Front view



Resolution / Frame rate	
AOI height / pixel	Frame rate /fps
1024	24.42
960	26.01
600	40.97
480	50.69
240	96.46
120	175.84
60	298.78

Format_7, global shutter,
1 ms integration time

I/O Connector	
Pin	Signal
1	External GND
2	CCD models only: Ext. Power (8...36V DC)
3	
4	GP Input 1 (Default: Trigger)
5	
6	GP Output 1 (Default: IntEna)
7	GP Input GND
8	RxD (RS232)
9	TxD (RS232)
10	GP Output Power (max. 36 V DC)
11	GP Input 2 (Default: -)
12	GP Output 2 (Default: -)



Camera specifications	Marlin F-131B (b/w)	Marlin F-131C (color)
Image device	Type 2/3 (diag. 11 mm) global shutter CMOS sensor FillFactory IBIS5B NIR	
Picture size	1280 x 960 pixel (Format_2); supporting all smaller fixed formats; 1280 x 1024 pixel (Format_7)	
Cell size	6.7 µm x 6.7 µm	
Resolution depth	8 bit; 10 bit (ADC)	
Lens mount	C-Mount	
Digital interface	IEEE 1394a IIDC v. 1.3	
Transfer rate	100 Mbit/s, 200 Mbit/s, 400 Mbit/s	
Frame rates	Up to 25 Hz in Format_7; 30 Hz @ SVGA and smaller	up to 25 Hz in Format_7 @ Raw8; 12 fps @ (YUV 4:2:2); 17 fps @ (YUV 4:1:1)
Gain control	Manual: 0-16 dB (13 x 1.25 dB)	
Shutter speed	10 µs ... ~ 67 s; auto shutter (select. AOI)	
External trigger shutter	Trigger_Mode_0, Trigger_Mode_1, advanced feature: Trigger_Mode_15 (bulk); image transfer by command; trigger delay	
Smart features	DSNU correction (only b/w); blemish correction; real-time shading correction; built in FIFO memory up to 4 frames; one user programmable look-up table; 2 configurable inputs, 2 configurable outputs; high dynamic range (HDR) mode; image mirror (L-R<->R-L); sub-sampling; serial port (IIDC V1.3)	
Power requirements	DC 8 V – 36 V via IEEE 1394 cable or 12-pin HIROSE	
Power consumption	Less than 3 watt (@ 12 V DC)	
Dimensions	72 mm x 44 mm x 29 mm (L x W x H); w/o tripod and lens	
Mass	<120 g (without lens)	
Operating temperature	+ 5 ... + 45° Celsius	
Storage temperature	- 10 ... + 60 ° Celsius	
Regulations	CE, FCC Class B, RoHS (2002/95/EC)	
Options	Host adapter card, locking IEEE 1394 cable, API (FirePackage), AVT FirePackage / Active FirePackage / Fire4Linux	

Design and specifications of the described product(s) are subject to change without notice.
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