

AVT Marlin F-131B / F-131C



Your entrance into the world of digital cameras.

The AVT MARLIN F-131B (b/w) and AVT MARLIN F-131C (color) are very compact, space saving IEEE 1394 SXGA C-Mount cameras, 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-131B/C 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
 - Dark signal non uniformity (DSNU) correction
 - Programmable LUT
 - And lots more ...
- Smart frame grabber features:
 - Image FIFO memory (4 frames)
 - Image mirror
 - Single-shot, multi-shot, free-run
 - 2 programmable inputs, 2 programmable outputs
- B/w and color
- Very good image quality
- Very high frame rate
- Super compact size
- C-Mount
- Angled head and customized housings

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



Dimensions

	MARLIN F-131B (b/w)	MARLIN F-131C (color)
Image device	Type 2/3 (diag. 11 mm) global shutter CMOS sensor	
Effective picture elements	1280 (H) x 1024 (V)	
Picture size	1280 x 960 pixels (Format_2); supporting all smaller fixed formats; 1280 x 1024 pixels (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 1394 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	20...67.108.864 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	EN 55022, EN 61000, EN 55024, FCC Class B; DIN ISO 9022; RoHS (2002/95/EC)	
Options	Host adapter card, locking IEEE 1394 cable, API (FirePackage), AVT FirePackage / Direct FirePackage / Fire4Linux	