AVT Marlin F-033B / F-033C

Your Entrance into the World of Digital Cameras.

The AVT MARLIN F-033B (b/w) and AVT MARLIN F-033C (color) are very compact, space-saving IEEE 1394 VGA C-mount cameras, equipped with a highly-sensitive SONY 1/2" progressive CCD sensor. The camera offers an external asynchronous trigger shutter and operates in 8-bit or 10-bit mode. At full image resolution, the AVT MARLIN F-033B/C offers up to 74 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 for by use of the MARLIN.

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

Highlights

- VGA 656 x 494 progressive CCD
- up to 74 fps
- True Partial Scan (higher frame rates by smaller AOI)
- Format 7 support (flexible AOI, flexible speed)
- Opto-coupled asynchronous image trigger
- Image preprocessing features:
  - Auto controlled Gain, Exposure, White Balance
  - Color Correction, HUE, Saturation
  - Realtime Shading Correction
  - Programmable LUT
  - and lots more ...
- Smart Framegrabber Features:
  - Image FIFO Memory (17 frames)
  - Image Mirror
  - Single Shot/Multi Shot/Free Run
  - 2 programmable Inputs
  - 2 programmable Outputs
  - and lots more ...
- B/W and Color
- Very good Image Quality, natural color response
- Very high frame rate
- Super compact size
- C-Mount, CS-Mount
- angle head and customised housings

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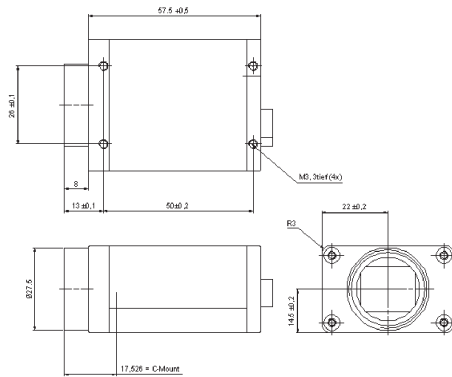
AVT Marlin F-033B / F-033C
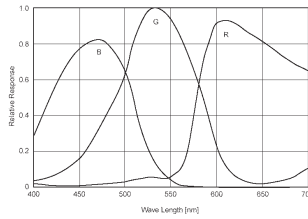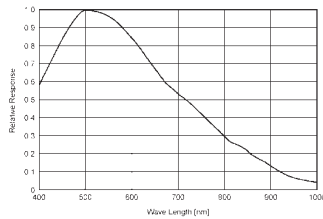
Sensor Specifications b/w; color
(extracted from the data sheet of the sensor -
excluding lens and filter)

Aoi_HEIGHT	fps	Tf/ms
494	74,15	13,49
480	76,02	13,15
400	88,79	11,26
320	106,71	9,37
240	133,71	7,48
120	215,48	4,64
20	439,41	2,28

Pin	Descriptions	Use
1	Ground	
2		
3		
4	Input1/Trigger	TTL, Edge, progr.
5		
6	Output 1 / Flash	Open emitter
7	Input Ground	
8	RxD	
9	TxD	
10	OutVCC	
11	Input 2	TTL
12	Output 2	Open emitter

Connections   Dimensions
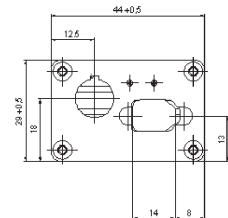
Camera Specifications

	MARLIN F-033B (b/w)	MARLIN F-033C (color)
Image Device	1/2 " (Diag 8 mm) type progressive scan SONY IT CCD	
Effective Picture Elements	656 (H) x 494 (V): Raw8	656 (H) x 492 (V) : YUV
Picture Size	640 x 480 pixel (Format_0); 656 x 494 (Format_7)	656 x 494 (Format_7; Mode0)
Cell Size	9,9 µm x 9,9 µm	
Resolution Depth	8 Bit / 10 bit (b/w only)	
Lens Mount	C-Mount	
Digital Interface	IEEE 1394; DCAM V1.30	
Transfer Rate	100, 200, 400 Mb/s	
Frame Rates	up to 74 Hz in Format_7	68Hz YUV4:1:1 (51 Hz YUV4:2:2)
Gain Control	Manual: 0-24 dB; Auto Gain	Manual: 0-24 dB; Auto Gain
Shutter Speed	11µs...67s; Auto Shutter; Level Mode 00	
External Trigger Shutter	Trigger_Mode_0, Trigger_Mode_1, Advanced feature: Trigger_Mode_15 (bulk); image transfer by command; Trigger delay	
Smart Features	Real time shading correction; built in FIFO Memory up to 17 frames; one user programmable Look Up Table; 2 configurable inputs, 2 configurable outputs; Delayed Image Transfer; sequencing; image mirror (L-R / R-L); serial port (IIDC v. 1.31)	
Power Requirements	DC 8V – 36V via IEEE 1394 cable	
Power Consumption	Less than 3 Watt (@ 12V DC)	
Dimensions	58 mm x 44 mm x 29 mm (L x W x H); w/o tripod and lens	
Mass	<120 gr (without lens)	
Operating Temperature	+5 - 45 ° Celsius	
Storage Temperature	-10 – 60 ° Celsius	
Regulations	EN 55022, EN61000, EN 55024, FCC Class A; DIN ISO 9022	
Options	Removable IR-Cut-Filter; API (FirePackage); TWAIN+WDM (Direct FirePackage); Linux (Fire4Linux)	

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