

AVT Marlin F-201B / F-201C



Your entrance into the world of digital cameras.

The AVT MARLIN F-201B (b/w) and AVT MARLIN F-201C (color) are very compact, space saving IEEE 1394 UXGA C-Mount cameras, equipped with a highly sensitive SONY type 1/1.8 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-201B/C offers up to 12.5 fps and is thus particularly suited for use in industrial image processing and product automation.

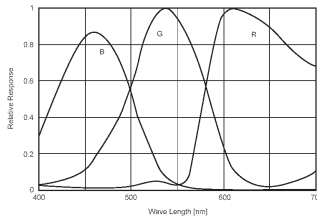
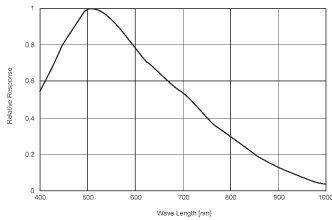
The extensive built-in image processing possibilities (image pre-processing) result in outstanding image quality, reduced retouching, less load on the system and higher performance overall. The integrated smart functions take over essential functions of the frame grabber, which is compensated by use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

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

Highlights

- UXGA 1628 x 1236 progressive CCD
- Up to 12.5 fps
- True partial scan (higher frame rates by smaller AOI)
- Format_7 support (flexible AOI, flexible speed)
- Optocoupled asynchronous image trigger
- Binning
- Image pre-processing features:
 - Auto controlled gain, exposure, white balance
 - Color correction, hue, saturation
 - Real-time shading correction
 - Programmable LUT
 - And lots more ...
- Smart frame grabber features:
 - Image FIFO memory (2 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
- Super compact size
- C-Mount, CS-Mount
- Angled head and customized housings

AVT Marlin F-201B / F-201C



Sensor specifications b/w; color (extracted from the data sheet of the sensor - excluding lens and filter)

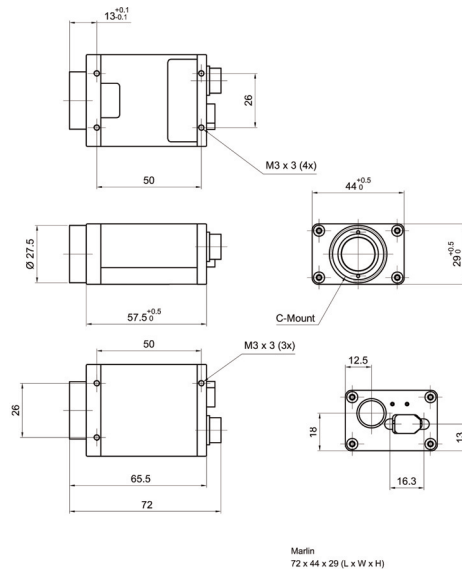
| Aoi height / pixel | Frame rate / fps |
|--------------------|------------------|
| 1200 | 12.8 |
| 1024 | 14.7 |
| 960 | 15.5 |
| 600 | 22.9 |
| 480 | 27.2 |
| 240 | 43.3 |
| 120 | 61.6 |

Format_7 Raw8/Mono8

| Pin | Descriptions | Use |
|-----|---------------------|------------------------------|
| 1 | Ground | |
| 2 | Power In (CCD only) | GND for RS232 and ext. power |
| 3 | | |
| 4 | Input1/Trigger | TTL, Edge, progr. |
| 5 | | |
| 6 | Output 1 /IntEna | Open emitter |
| 7 | Input Ground | |
| 8 | RS232 RxD | common ground for inputs |
| 9 | RS232 TxD | |
| 10 | OutVCC | |
| 11 | Input 2 | Common VCC for outputs |
| 12 | Output 2 | Open emitter |



Connections



Dimensions

Camera Specifications

| | MARLIN F-201B (b/w) | MARLIN F-201C (color) |
|----------------------------|--|---|
| Image device | Type 1/1.8 (diag. 9 mm) progressive scan SONY CCD | |
| Effective picture elements | 1628 (H) x 1236 (V): mono | 1628 (H) x 1236 (V): @ Raw8; 1628 (H) x 1234 (V): @ YUV, RGB |
| Picture size | Up to 1600 x 1200 pixels (Format_2); supporting all smaller fixed formats; up to 1628 x 1236 pixels (Format_7 Mode_1) | |
| Cell size | 4.4 µm x 4.4 µm | |
| Resolution depth | 8 bit / 10 bit (b/w only); 12 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 12.5 Hz in Format_7 Mode_0; 5 Hz (RGB8) | |
| Gain control | Manual: 0-24 dB (0.035 dB/step); auto gain (select. AOI) | |
| 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 | Real-time shading correction; image sequencing; built in FIFO memory up to 2 frames; one user programmable look-up table; 2 configurable inputs, 2 configurable outputs; image mirror (L-R<->R-L), binning, secure image signature (SIS), user profiles, 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 | Removable IR cut filter; host adapter card, IEEE 1394 cable, AVT FirePackage / Direct FirePackage / Fire4Linux | |