adept electronic
adept electronic solutions
The Machine Vision and Imaging Speciaists
Perth: +61 (08) 9242 5411
Sydney: +61 (02) 9979 2599
Melbourne: +61 (03) 9555 5621
Email: adept@adept.net.au
Web: http://www.adept.net.au

# AVT STINGRAY F-146B / F-146C
# AVT STINGRAY F-146B / F-146C fiber

## STINGRAY. The Transformer Camera

The STINGRAY falls into the mid-range in terms of price, but offers a breadth of functions unrivaled in its class and an unbeatable price/performance ratio. The six different versions are equipped with a fast FireWire IEEE1394b interface and high-end CCD sensors in color and monochrome, with resolutions from VGA up to 2 megapixels. To meet the highest requirements in the industry, the STINGRAY comes optionally in a version with a copper daisy chain connection or 1 x copper combined with 1 x GOF connector (2 x optical fiber on LCLC). The camera is loaded with typical AVT intelligent functions for image pre-processing, like lookup tables, shading corrections, white blance and 2 to 8x binning for enhanced photosensitivity. Grabber functions, including an internal memory and deferred transport mode, make the STINGRAY ideal for multi-camera operations, while the sequence mode enables lightning-fast parameter changes. The STINGRAY is designed to be modular and flexible, offering a wide selection of lens-mounts, sensors, case variations, interfaces and cable outputs, which can be flexibly configured using building-block principles.

### Highlights

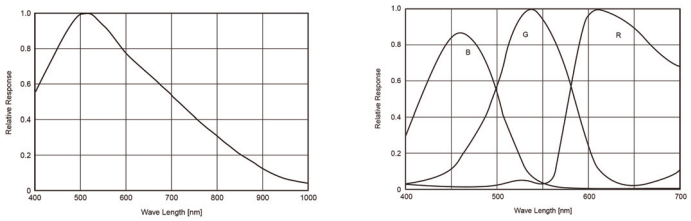
- IEEE 1394b (S 800 daisy chain)
- 1388 (H) X 1038 (V)
- Up to 15 fps (full resolution)
- Progressive scan CCD, monochrome and color
- Image pre-processing features:
  - LUT
  - Real-time shading correction
  - High SNR mode
  - Hue, saturation
  - Color debayering
  - 2x ... 8x binning / sub-sampling
  - Auto gain, exposure, white balance
  - And lots more ...
- Smart frame grabber features:
  - 32 MB on-board
  - Deferred image transport
  - Trigger delay
  - Multi-shot, mirror image
  - SIS (secure image signature)
  - Sequence mode, user sets
  - And lots more ...
- Industry proven and robust housing
- C-Mount / CS-Mount
- Angled head, board level version (on request), peltier cooling device (soon)
- Medical design on request

ALLIED VISION TECHNOLOGIES GMBH
Taschenweg 2a | D-07646 Stadtroda | Germany
Phone: +49 (0)36428 6770 | Fax: +49 (0)36428 677-24
www.alliedvisiontec.com | info@alliedvisiontec.com

Adept Electronic Solutions
www.adept.net.au

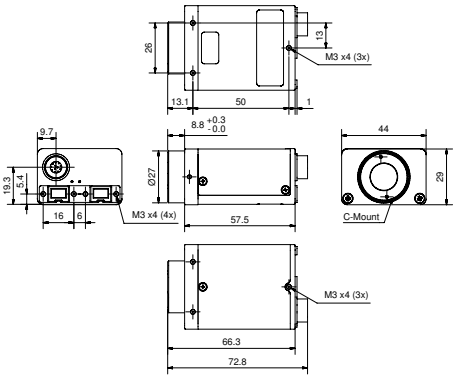
ALLIED Vision Technologies

# AVT STINGRAY F-146B / F-146C
# AVT STINGRAY F-146B / F-146C fiber




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

| AOI height / pixel | Frame rate / fps |
|---|---|
| 1038 | 15 |
| 960 | 16 |
| 768 | 20 |
| 640 | 22 |
| 480 | 27 |
| 240 | 41 |
| 120 | 53 |
| 30 | 70 |
| 10 | 75 |
| 2 | 78 |




Dimensions

Stingray (2x IEEE 1394b)
72.8 x 44 x 29 (L x W x H)

*Copper / Daisy Chain*
*Copper / GOF connections*

| Pin | Signal |
|---|---|
| 1 | External GND |
| 2 | External Power (8...36 V DC) |
| 3 | GP Output 4 |
| 4 | GP Input 1 (Default: Trigger) |
| 5 | GP Output 3 (Default: Busy) |
| 6 | GP Output 1 (Default: IntEna) |
| 7 | GP Input GND |
| 8 | RxD (RS-232) |
| 9 | TxD (RS-232) |
| 10 | GP Output Power(max. 36 V DC) |
| 11 | GP Input 2 (CMOS/TTL) |
| 12 | GP Output 2 |

## Camera Specifications

| | STINGRAY F-146 B/C | STINGRAY F-146 B/C fiber |
|---|---|---|
| Image device | Type 1/2 (diag. 8 mm), progressive scan CCD, SONY ICX 267 | |
| Picture size | 1388 (H) x 1038 (V) | |
| Cell size | 4.65 µm x 4.65 µm | |
| Resolution depth | 8 bit / 14 bit (16 bit in High SNR mode) | |
| Lens mount | C-Mount / CS-Mount | |
| Digital interface | IEEE1394b, (IIDC V1.31) S 800 daisy chain | |
| Transfer rate | 100 Mbit/s, 200 Mbit/s, 400 Mbit/s, 800 Mbit/s | |
| Frame rates | Up to 15 fps (full resolution) | |
| Gain control | Manual: 0...24 dB, auto gain | |
| Shutter speed | 38 µs ... ~ 67 s, auto shutter | |
| Image pre-processing | LUT; shading correction; High SNR mode; white balance; color interpolation (debayering); local color anti aliasing; hue; saturation; sub-sampling; 2x - 8x binning (only b/w) or sub-sampling; seperate reference AOI for auto features | |
| Grabber features | 32 MB on-board memory; deferred image transport; trigger delay; multi-shot; mirror image; several trigger modes; SIS (secure image signature); sequence mode; storable user sets | |
| Power requirements | DC 8 V - 36 V; < 3.5 W @ 12 V | |
| Dimensions | 72.8 mm x 44 mm x 29 mm (L x W x H) | |
| Mass | 92 g (without lens) | |
| Operating temperature | + 5 ... + 45° Celsius | |
| Storage temperature | - 10 ... + 60 ° Celsius | |
| Regulations | CE, FCC Class B, RoHS (2002/95/EC) | |
| Options | Angled head, board level version (on request), peltier cooling device (soon),cable tails, optical filters medical design on request; AVT FirePackage / Active FirePackage / Fire4Linux | |

* available with upcoming firmware release

ALLIED VISION TECHNOLOGIES GMBH
Taschenweg 2a | D-07646 Stadtroda | Germany
Phone: +49 (0)36428 6770 | Fax: +49 (0)36428 677-24
www.alliedvisiontec.com | info@alliedvisiontec.com

Design and specification of the described product(s) are subject to change without notice.
© 5/2008

ALLIED Vision Technologies