

## AVT PIKE F-505B / F-505C AVT PIKE F-505B / F-505C fiber



### Fast – smart – perfect: 1394b goes PIKE.

The AVT PIKE camera family is equipped with an IEEE 1394b (S800) interface, as well as high-quality CCD sensors and comes in a surprising variety of different versions for the most demanding applications. The PIKE offers a selection of six different high-quality sensors (b/w and color) with high sensitivity and true-to-life color reproduction. To meet the highest requirements in the industry, the PIKE 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). This not only saves costs in multi-camera operations but also makes it possible to use up to 500 meters of cable. The direct fiber technology of the PIKE in the GOF version also provides for equalization of potential and EMC independence. The high data rates of the PIKE (max. 62.5 MByte/s) and a huge number of smart features ensure an extraordinary performance in PC-based image processing. The integrated image pre-processing of the PIKE not only reduces demands on PC computer power, but also cuts system costs by eliminating the now unnecessary frame grabbers.

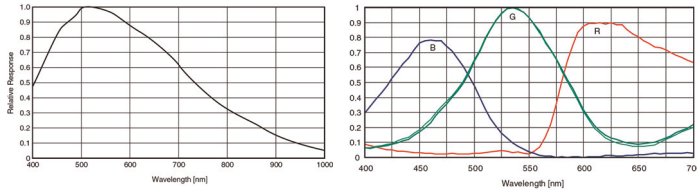
#### Highlights

- IEEE 1394b
- 5 megapixel (2452 x 2054)
- Up to 15\* fps (full resolution)
- Progressive scan CCD, monochrome and color
- True partial scan (higher frame rates by smaller AOI)
- Flexible AOI, flexible speed (full Format\_7 support)
- Optocoupled asynchronous image trigger
- Image pre-processing features:
  - Auto controlled gain, exposure, white balance
  - Anti-smear mode
  - Color correction, hue, saturation (only color)
  - Real-time shading correction, progr. LUT
  - 2x/4x/8x binning
  - And lots more ...
- Smart frame grabber features:
  - Image FIFO memory (5 full frames)
  - High SNR mode (up to 16 bit)
  - Single-shot, multi-shot, free-run
- - 2 prog. inputs, 4 prog. outputs, on-board RS-232
  - Sequence mode
  - SIS (secure image signature)
  - And lots more ...
- Industry proven and robust housing
- C-Mount / M39-Mount
- Angled head and customized housings

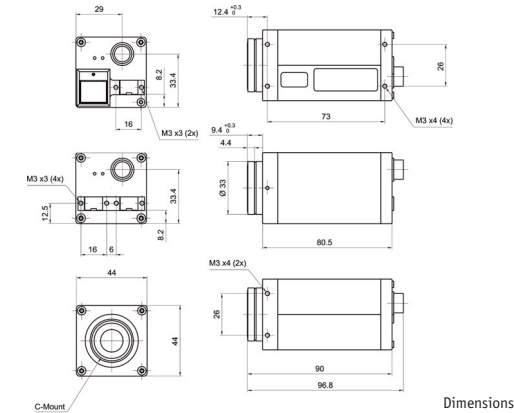
\* at 11000 bytes per packet



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



Copper / Daisy Chain  
Copper / GOF connections



AOI height / pixel	Frame rate / fps
2054	15*
1200	20
1024	22
960	23
600	28
480	30
240	36
120	40
60	43
30	44

\* at 11000 bytes per packet

Pin	Signal
1	External GND
2	External Power (8...36V 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. 35 V DC)
11	GP Input 2 (CMOS/TTL)
12	GP Output 2

## Camera Specifications

	PIKE F-505 B/C	PIKE F-505 B/C fiber
Image device	Type 2/3 (diag. 11.016 mm) progressive scan, SONY CCD	
Picture size	2452 (H) x 2054 (V) (all modes and color formats)	
Cell size	3.45 µm x 3.45 µm	
Resolution depth	8 bit / 10 bit / 12 bit / 14 bit / 16 bit (High SNR mode)	
Lens mount	C-Mount / M39-Mount	
Digital interface	IEEE1394b, 2 x bilingual (daisy chain)	IEEE1394b, 1 x bilingual, 1 x GOF connector (2 x optical fiber on LCLC)
Transfer rate	100 Mbit/s, 200 Mbit/s, 400 Mbit/s, 800 Mbit/s	
Frame rates	Up to 15* fps (Mono8, Raw8), 12* fps (YUV 4:1:1), 9* fps (YUV 4:2:2, Raw16), 6* fps (RGB8)	
Gain control	mono: Manual 0-24 dB, auto gain; color: Manual 0-24 dB, auto gain	
Shutter speed	27 µs ... ~ 67 s, auto shutter (select. AOI)	
External trigger shutter	Programmable, trigger level control, single trigger, bulk trigger, programmable trigger delay	
Smart features	AGC/AEC/AWB with autofunction AOI; only color: AWB/color correction/hue/saturation; real-time shading correction, LUT, 64 MB image memory, mirror, binning (only b/w), sub-sampling, High SNR, storable user sets, 2 progr. inputs, 4 progr. outputs, RS-232 port, SIS [secure image signature], sequence mode, anti-smear mode, 4x/8x binning, 12-bit speed increase mode	
Power requirements	DC 8 – 36 V via IEEE1394 cable or 12-pin HIROSE	
Power consumption	Typ. 5.75 watt (@ 12 V DC)	fiber: Typ. 6.50 watt (@ 12 V DC)
Dimensions	96.8 mm x 44 mm x 44 mm (incl. connectors, without lens)	
Mass	250 g (without lens)	
Operating temperature	+5 ... +50 °Celsius housing temperature (without condensation)	
Storage temperature	-10 ... +60 ° Celsius ambient temperature (without condensation)	
Regulations	CE, FCC Class B, RoHS (2002/95/EC)	
Options	IR cut/pass filter (mono), protection glass (color), host adapter card, angled head, power out (HIROSE), AVT FirePackage/Active FirePackage/Fire4Linux	

\* at 11000 bytes per packet