AVT Dolphin F-145C

A new standard in the world of digital cameras.

The AVT Dolphin F-145C is a color IEEE 1394 SXGA+ C-Mount camera, equipped with a Megapixel SONY 2/3" type progressive CCD- array.

With onboard color conversion and correction, it operates in 8-bit mode. With RAW-image transfer 8 or 10 bit images can be transferred, ensuring extremely high quality images.

The camera is equipped with 16 internal frame buffers to decouple frame grabbing from transmission. Up to 63 user definable Lookup Tables are used for smart pre-processing. With frame rates up to 15 fps (full resolution), the AVT Dolphin F-145C is ideal for demanding color image processing and factory automation tasks. Easy to integrate due to powerful and flexible API (option).
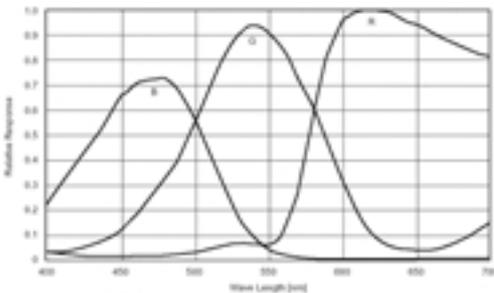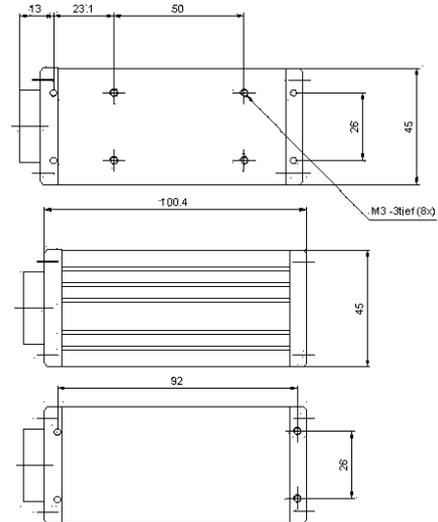
Highlights

- SXGA+ 1392 x 1040 pixel progressive 2/3" color CCD
- ext. async. trigger/shutter
- manual gain up to +24 dB
- manual shutter (20µs to 4s)
- 8 bit output
- 16 bit output (10 bit data)
- true partial scan (frame rate increasing)
- 16 frame buffers FIFO
- up to 63 progr. Lookup Tables
- on board color conversion
- on board color correction
- industrial IEEE 1394 connector
- C-Mount
- Hirose 12-pin
- 3 inputs, 3 outputs; configurable
- incl. 4,5m cable

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AVT Dolphin F-145C

Pin	Description	Use
1	Ground	
2	Power	8-30 V DC
3	Input 3	TTL-compatible
4	Input1/Trigger	TTL-comp., Edge, progr.
5	Output 3	
6	Output 1 / Flash	TTl-comp., level
7	Input Ground	
8	RxD	
9	TxD	
10	Output Ground	
11	Input 2	TTl-compatible
12	Output 2	

Connections

Sensor Specifications (extracted from the data sheet of the sensor - excluding lens and filter)

Image Device	2/3 Type progressive scan color SONY IT CCD
Effective Picture Elements	1392 (H) x 1040 (V)
Lens Mount	C-Mount
Picture Sizes	320 x 240 pixel (Format 0; Mode 1) - 640 x 480 pixel (Format 0; Mode 2, 3, 5 and 6)
	800 x 600 pixel (Format 1; Mode 0, 2 and 6)
	1024 x 768 (Format 1; Mode 3, 5 and 7)
	1280 x 960 (Format 2; Mode 0, 2 and 6)
	1392 x 1040 (Format 7; Mode 0) - 1392 x 1038 (Format 7; Mode 1)
Cell Size	6,45 µm x 6,45 µm
ADC	12 Bit
Data Path	8 Bit or 10 Bit
Frame Rates	1,875 fps - 15 fps External Trigger
Gain Control	Manual 0 – 24 dB (0,035 dB/step)
Shutter Speed	1-4095 x Timebase (20µs default)
	Advanced feature: Timebase 1, 2, 5, 20, 50, 100, 200, 500, 1000µs
External Trigger	Trigger (Format 1; Mode 0)
	Advanced feature: Image Transfer by command
Internal Memory	16 frames
# Look Up Tables	up to 63, user programmable (12Bit -> 10/8 Bit); Gamma (0,45)
Smart Functions	Image sequencing, color conversion, color correction, three configurabel inputs/outputs
Transfer Rate	400 Mb/s
Digital Interface	IEEE 1394; DCAM V1.3
Power Requirements	DC 8V – 30V via IEEE 1394 cable or 12-pin HIROSE
Power Consumption	Less than 3,5 Watt (at 12V DC)
Dimensions	115mm x 45mm x 45mm (L x W x H); w/o tripod and lens
Mass	230 gr (without lens)
Operating Temperature	+5 - 45 ° Celsius
Storage Temperature	-10 – 60 ° Celsius
Regulations	EN 55022; EN 61000-6-2; FCC Class A
Options	Host Adapter Card, API (FirePackage)

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