CMC-1300 / C

High-Speed High-Resolution CMOS Camera
485 Frames/Sec. at 1280 x 1024 Pixels

Features

- 1280 (H) x 1024 (V) square pixels
- 485 fps at full resolution
- Full-frame-shutter
- Real time image pre-processing with FPGA
- 9-bit digital output (RS-644) up to 48 fps or
  8-bit real time Camera Link output up to 485 fps
- Programmable image section output (ROI)
- Control via RS-232
- Power supply: 12 V, 350 mA
- Pin-to-pin compatible to the CCD-1300 camera line

At a resolution of **1280 x 1024** pixels the **CMC-1300** is a further new member of our high speed and high resolution CMOS camera family.

The **CMC-1300** impresses by the full-frame-shutter and the image rate of **485 fps** which is reached at full resolution. The data rate of **660 Mbyte/s** can be transmitted by a “Camera Link” interface to a suitable imaging system.

Alternatively an image pre-processing or a data reduction can be carried out in a powerful FPGA inside the camera. Then the reduced data flow is transmitted to a usual PC-Grabber by a standard RS-644 interface with 33 or 66 MHz. With the FPGA it is possible to reach several **GOPs** calculation power. VDS also develops customer-specific programs for the FPGA for OEM-customers.

The camera offers the possibility to output image sections (ROI) for further increase of the image rate. The start line, end line and an increment can be defined. At the output of only one line (line camera) line frequencies up to 250 KHz can be achieved.

All parameters are entered via the RS-232 interface and stored in an EEPROM. So they are available again after the switching-on.

Furthermore the camera is suitable as alternative to our CCD-1300 if extreme overexposures are expected. In this case the CMOS technique demonstrates its advantages. The **CMC-1300** is plug and function compatible to the CCD-1300 family and has a frame rate of approx. 24 fps at 33 MHz.

Technical Data

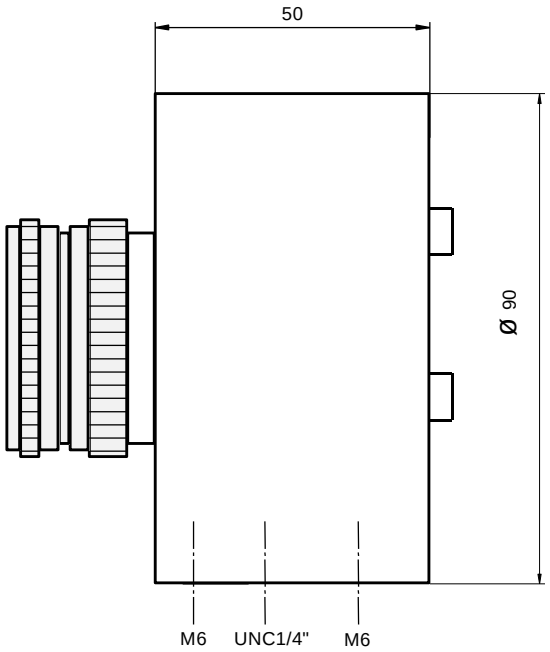
- Resolution: 1280 (H) x 1024 (V) pixels
- Up to 485 fps at full resolution
- Full-frame-shutter
- Real time image processing by FPGA
- 9-bit RS-644 digital output up to 48 fps or 8-bit camera-link output up to 485 fps
- programmable image section output (ROI)
- CMOS sensor (linear Photobit MV13)
- Exposure: from 2 µs...to approx. 1 s
- Pixel size: 12 µm x 12 µm
- Active sensor size: 15.4 (H) x 12.3 (V) mm (20 mm diagonal)
- Sensor saturation: 100000 e
- Sensitivity: saturation at approx. 500 LUX and 2 ms exposure (550 nm)
- Output data rate:
  RS-644 = 33 or 66 Mpixels/s
  Camera Link = 330 or 660 Mbyte/s
- Serial interface: RS-232, 9.6 ...57 kbaud, 8-bit
- Optional: Color-sensor (Bayer-filter)
- Power supply: + 12 V, approx. 0.35 A
- Ambient air temperature: 0° to 40° C
- Lens mount: C-mount or F-mount with adapter
- CE standard
- Made in Germany

RS-644 / Camera Link Digital Output (37-pin D-SUB Jack)

Pin	RS-644	CL	Pin	RS-644	CL
1	PCLK	XCLK	20	/PCLK	/XCLK
2	LEN	X0	21	/LEN	/X0
3	FEN	X1	22	/FEN	/X1
4	—	X2	23	—	/X2
5	—	X3	24	—	/X3
6	—	YCLK	25	—	/YCLK
7	D0 (LSB)	Y0	26	/D0 (LSB)	/Y0
8	D1	Y1	27	/D1	/Y1
9	D2	Y2	28	/D2	/Y2
10	D3	Y3	29	/D3	/Y3
11	D4	ZCLK	30	/D4	/ZCLK
12	D5	Z0	31	/D5	/Z0
13	D6	Z1	32	/D6	/Z1
14	D7	Z2	33	/D7	/Z2
15	D8 (MSB)	Z3	34	/D8 (MSB)	/Z3
16	GND		35	GND	
17	/TREX		36	TREX	
18	Reserved		37	Mode	
19	Reserved				

Power and Control Input (15-pin D-SUB Jack)

Pin	Function
1, 2	+ 12 V DC
3, 4	GND
5	CTS
6	RTS
7	RXD (RS-232)
8	TXD
9	Mode
10, 11	Trigger Input (Opto-Coupler)
12, 13	Exposure Output (Opto-Coupler)
14	Reserved
15	Reserved



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