

CORSIGHT

Decentralized Smart Vision Solution



TECHNICAL DATA

Matrix scan models*	Sensor type	Image sensor	Resolution [px]	Format	Frames per second [fps]	Pixel size [µm]	Shutter
CO7109M3	monochrome	LUX1310	1280 x 1024	2/3"	1.050**	6.6	global
CO4206M2	monochrome	EV76C570	1600 x 1200	1/1.8"	50	4.5	global; rolling; global reset
CO4206C2	color	EV76C570	1600 x 1200	1/1.8"	50	4.5	global; rolling; global reset
CO2239M2	monochrome	IMX174	1920 x 1200	1/1.2"	60	5.86	global
CO2239C2	color	IMX174	1920 x 1200	1/1.2"	60	5.86	global
CO2305M3	monochrome	IMX252	2048 x 1536	1/1.8"	216**	3.45	global
CO2305C3	color	IMX252	2048 x 1536	1/1.8"	216**	3.45	global
CO2312M3	monochrome	IMX265	2048 x 1536	1/1.8"	55	3.45	global
CO2312C3	color	IMX265	2048 x 1536	1/1.8"	55	3.45	global
CO2504M3	monochrome	IMX250	2448 x 2048	2/3"	163	3.45	global
CO2504C3	color	IMX250	2448 x 2048	2/3"	163	3.45	global
CO2511M3	monochrome	IMX264	2448 x 2048	2/3"	35	3.45	global
CO2511C3	color	IMX264	2448 x 2048	2/3"	35	3.45	global

Line scan model*	Sensor type	Pixel count	Pixel size [µm]	Line scan rate [kHz]	Sensor length [mm]
COL6270M2	monochrome	2048	7.00	66	14.33

IMAGE PROCESSING

	2nd model series	3rd model series
CPU	Intel Atom E3845, Quad Core 1.91 GHz	Intel Atom E3940, Quad Core 1.60 GHz
RAM	4 GB DDR3-1333	8 GB DDR4-2133 Dual Channel
SSD	16 GB	32 GB
FPGA	Artix 7 -75 @150MHz via PCIe 2.0 x1	Artix 7-100 @200MHz via PCIe 2.0 x4 NET Open Camera Concept
Supported operating systems	Windows 10 IoT CentOS 7, optional: RTOS	
Supported image libraries	Zebra Aurora™ Vision Studio, HALCON, VisionPro, OpenCV, MATLAB, MIL, Common Vision Blox, Coake® 7	

* The last digit of the camera name indicates the model series.

** Application note (see page 3)

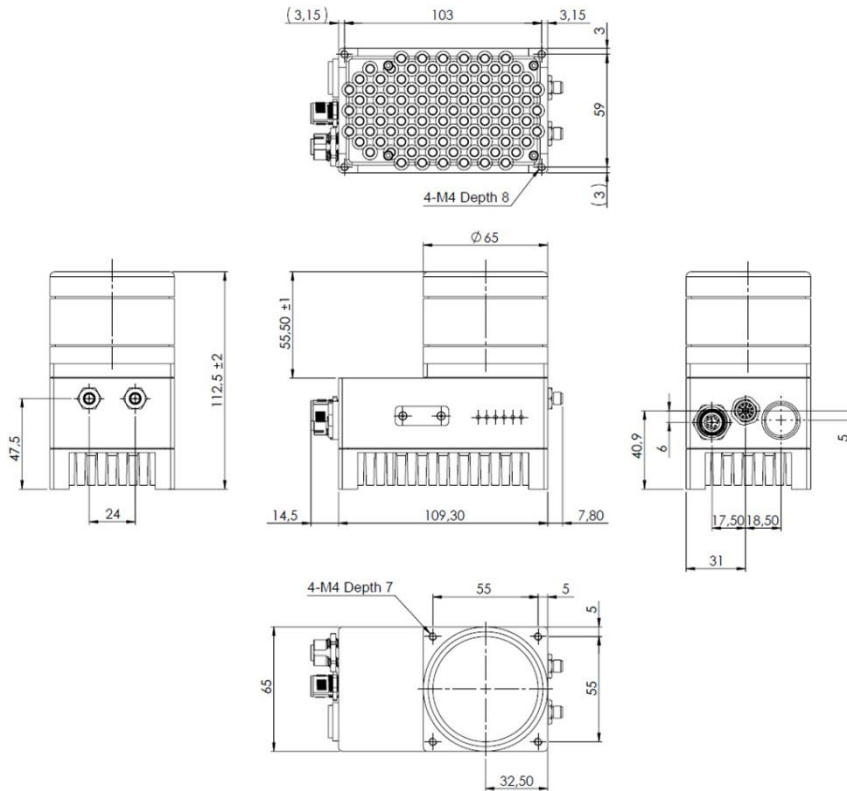
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MACHINE VISION

LAYOUT



Unit: mm

Lens mount	C
Strobe Ring	integrated strobe ring with a dedicated control interface (optional)
Dimensions (WxHxD) [mm]	65 x 109 x 73
Housing	IP67

Weight [g]	516
Power consumption [W]	24 VDC +/- 10%, 18W or PoE+
Operating temperature [°C]	0 to +45 Corsight III: See operation manual for details
Certification	CE, FCC

INTERFACES

Networking	Gigabit Ethernet, Wi-Fi, Bluetooth, GSM (optional)
Digital input / output	4x optocoupled (max. 100KHz), 1x TTL (max. 10MHz)
USB	1x USB 2.0
Serial	1x RS232
Display	2. Model series: DisplayPort 1.1 3. Model series: DisplayPort 1.2
SD card	Micro SD HC

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Dezentrale Smart Vision Lösung



MACHINE VISION

**APPLICATION NOTE / CS3 POWER CONSUMPTION

The Corsight 3 (CS3) has an integrated sensor interface that allows high-speed or high-resolution sensors to be transmitted to the FPGA via 16 LVDS and the image data to be sent to the CPU via the internal PCIe bus.

With the Luxima LUX 1310 sensors with 1.3MP and 1050 frames per second and the two Sony sensors IMX 250 and IMX 252, we reach data transfer rates that result in a power dissipation of 20-24 watts. The temperature of the FPGA can rise to over 100 degrees. At a FPGA temperature of 115 degrees, the system switches off automatically.

Factors for raised operating temperature:

- Reading rate of the sensor
- Environment temperature
- Type of application and the resulting processing power
- Missing or bad heat dissipation in the mechanical connection

Measures against an increased operating temperature:

- The heat can be avoided by using an active cooling system with a ventilator that supplies the cooling surfaces with an air flow. With active cooling, the CS3 can be operated permanently and at full frame rate
- If active cooling is not possible, the CS3 can be operated intermittently. With an on cycle of 2:10, 2sec frame rate to 10sec no frame rate, the CS3 with LUX 1310 sensor can be operated permanently at full frame rate without active cooling. With the SONY IMX250 and IMX252 sensors, an on cycle of 1:1, 5sec frame rate to 5sec break is enough, to work permanently at full frame rate without active cooling
- A permanent use is possible with the 50% lower scanning speed of possible frame rate
- Improved heat dissipation for the mechanical connection