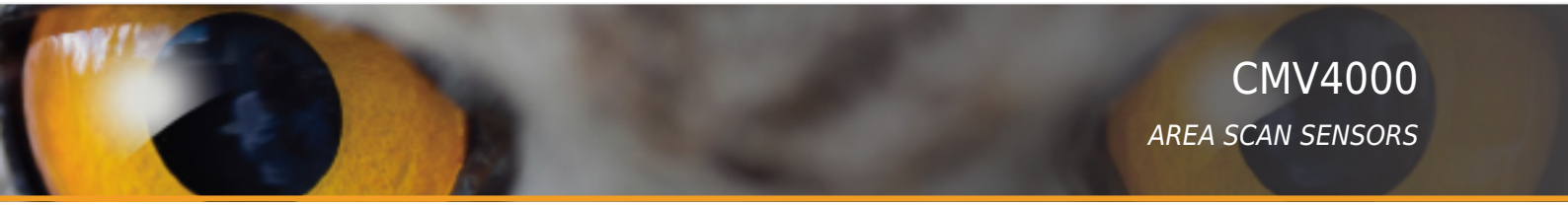
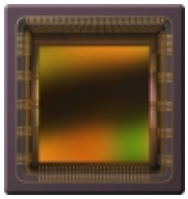


CMV4000

AREA SCAN SENSORS



The CMV4000 is a high sensitivity, pipelined global shutter CMOS image sensor with 2048 x 2048 pixel resolution capable of HD format. Pipelining allows exposure during read out. The state-of-the-art pixel architecture offers true correlated double sampling (CDS) reducing the fixed pattern noise and dark noise significantly. The imager integrates 16 LVDS channels each running at 480 Mbps resulting in a 180 fps frame rate at full resolution at 10 bit per pixel. Driving and read-out are programmed over a serial peripheral interface. An internal timing generator produces the signals needed for read-out and exposure control of the image sensor. External exposure triggering remains possible. A 12 bit per pixel mode is available at reduced frame rate.

SPECIFICATIONS

Part status	Production
Resolution	4MP - 2048(H) x 2048 (V)
Pixel size	5.5 x 5.5
Optical format	1''
Shutter type	Global shutter
Frame rate	180 fps (10 bit) 37 fps (12 bit)
Output interface	16 LVDS outputs @ 480 Mbps
Sensitivity	5,56 V/lux.s
Conversion gain	0,075 LSB/e-
Full well charge	13500 e-
Dark noise	13 e- (RMS)
Dynamic range	60 dB
SNR max	41,3 dB
Parasitic light sensitivity	1/50000
Extended dynamic range	Yes, up to 90 dB
Dark current	125 e-/s (25 degC)
Fixed pattern noise	< 1 LSB (<0,1% of full swing)
Chroma	Mono and RGB
Supply voltage	1,8V / 3,3V
Power	600 mW
Operating temperature range	-30 to +70 degC
RoHS compliance	Yes
Package	Ceramic 95 pins uPGA/LGA or 92-pins LCC
Socket	Andon Electronics (http://www.andonelectronics.com) 679-92A-SM-G10-L14-1 (LCC) 10-12-06-095-400T4-R27-S14 (PGA, thru-hole) 10-12-06-095-414T4-R27-S14 (PGA, surface mount)

ORDERING INFO - CMV4000

Part Number	Version	Chroma	Microlens	Package	Glass
CMV4000-3E5M1PP	version 3	mono	Yes	ceramic 95pins µPGA	plain
CMV4000-3E5C1PP	version 3	RGB Bayer	Yes	ceramic 95pins µPGA	plain
CMV4000-3E12M1PP	version 3	mono - NIR enhanced (12 µm epi)	Yes	ceramic 95pins µPGA	plain
CMV4000-3E5M1LP	version 3	mono	Yes	ceramic 95pins LGA	plain
CMV4000-3E5C1LP	version 3	color	Yes	ceramic 95pins LGA	plain
CMV4000-3E12M1LP	version 3	mono - NIR enhanced (12 µm epi)	Yes	ceramic 95pins LGA	plain
CMV4000-3E5M1CA	version 3	mono	Yes	ceramic 92pins LCC	double side AR-coated
CMV4000-3E5C1CA	version 3	color	Yes	ceramic 92pins LCC	double side AR-coated
CMV4000-3E12M1CA	version 3	mono - NIR enhanced (12 µm epi)	Yes	ceramic 92pins LCC	double side AR-coated
CMV4000-3E5M1PN	version 3	mono	Yes	ceramic 95pins µPGA	removable