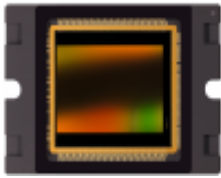


# CMV12000

AREA SCAN SENSORS



The CMV12000 is a high sensitivity pipelined global shutter CMOS image sensor with a resolution of 4096 x 3072 pixels (super

HD format). Pipelining means that exposure during read out is possible. The state-of-the-art pixel design makes true correlated double sampling (CDS) possible which reduces the fixed pattern noise and dark noise significantly. The imager integrates 64 LVDS channels each running at 300Mbps resulting in a 150fps frame rate at full resolution (10 bits per pixel). Driving and read-out programming can be set over a serial peripheral interface. An internal timing generator produces the signals needed for read-out and exposure of the image sensor while external exposure triggering remains possible.

## SPECIFICATIONS

<b>Part status</b>	Production
<b>Resolution</b>	12MP - 4096(H) x 3072(V)
<b>Pixel size</b>	5.5 x 5.5
<b>Optical format</b>	APS-like
<b>Shutter type</b>	Global shutter
<b>Frame rate</b>	300 fps (10 bit) 132 fps (12 bit)
<b>Output interface</b>	64 LVDS outputs @ 600 Mbps multiplexable to 32, 16, 8, 4, 2 or 1 output(s)
<b>Sensitivity</b>	4,64 V/lux.s
<b>Conversion gain</b>	0.075 LSB/e-
<b>Full well charge</b>	13500 e-
<b>Dark noise</b>	13 e- (RMS)
<b>Dynamic range</b>	60 dB
<b>SNR max</b>	41,3 dB
<b>Parasitic light sensitivity</b>	1/50000
<b>Extended dynamic range</b>	Yes, up to 90 dB
<b>Dark current</b>	125 e-/s (25 degC)
<b>Fixed pattern noise</b>	< 1 LSB (<0,1% of full swing)
<b>Chroma</b>	Mono and RGB
<b>Supply voltage</b>	1,8V / 3,3V
<b>Power</b>	4200 mW
<b>Operating temperature range</b>	-30 to +70 degC (TBC)
<b>RoHS compliance</b>	Yes (TBC)
<b>Package</b>	237 pins $\mu$ PGA

## ORDERING INFO - CMV12000

Part Number	Version	Chroma	Microlens	Package	Glass
CMV12000-2E5M1PA	5 um epi	mono	Yes	ceramic 237pins $\mu$ PGA	double sided AR coated
CMV12000-2E5C1PA	5 um epi	color	Yes	ceramic 237pins $\mu$ PGA	double sided AR coated
CMV12000-2E12M1PA	12 um epi	mono - NIR enhanced	Yes	ceramic 237pins $\mu$ PGA	double sided AR coated
CMV12000-2E5M1PN	5 um epi	mono	Yes	ceramic 237pins $\mu$ PGA	removable