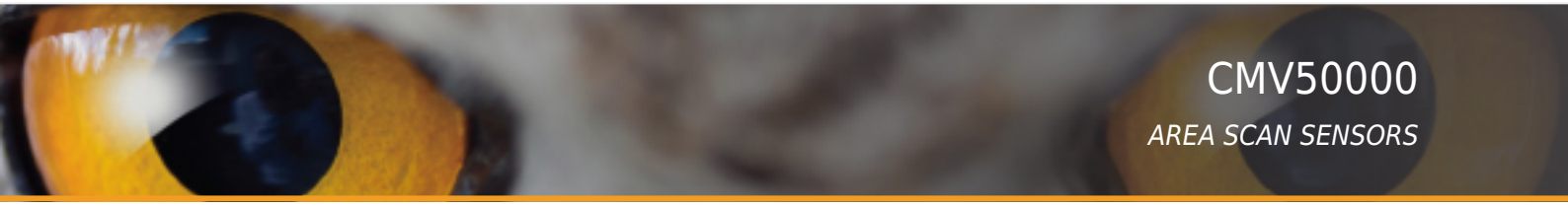

CMV50000

AREA SCAN SENSORS

The CMV50000 is a high speed CMOS image sensor with 7920 x 6004 effective pixels (47.5Mp) developed for machine vision and video applications. The image array consists of 4.6µm pipelined 8T global shutter pixels which allow exposure during read out, while performing true CDS (Correlated Double Sampling) operation. The image sensor has 22 12bit sub-LVDS data outputs. The image sensor also integrates a programmable analog gain amplifier and offset regulation. Each output channel runs up to 830 Mbps maximum which results in 30 fps frame rate at full resolution in 12 bit. Higher frame rates can be achieved in row-windowing mode or row-subsampling mode. These modes are all programmable using the SPI interface. All internal exposure and read out timings are generated by a programmable on-board sequencer. External triggering and exposure programming is also possible. Extended optical dynamic range can be achieved by a dual exposure HDR mode.

SPECIFICATIONS

Part status	Sampling
Resolution	48MP - 7920 (H) x 6004 (V)
Pixel size	4.6 x 4.6
Optical format	35 mm (36.43 x 27.62 mm2)
Shutter type	Global shutter
Frame rate	30 fps
Output interface	22 LVDS @ 830 Mbps
Sensitivity	5 V/lux.s (@ 550 nm)
Conversion gain	TBC
Full well charge	14000 e- (with binning 58000 e-)
Dark noise	8.5 e-
Dynamic range	64dB (binning: 68dB)
SNR max	41.4dB (binning: 47.6dB)
Parasitic light sensitivity	1/20000
Extended dynamic range	Yes, odd/even read out
Dark current	TBC
Fixed pattern noise	6.5 DN rms
Chroma	Mono and RGB
Power	3.05W
Operating temperature range	-30°C to 70°C
RoHS compliance	Yes (TBC)
Package	141 pins PGA ceramic package
Socket	Andon Electronics (http://www.andonelectronics.com) 575-20-19A-141-01M-R27-L14 (thru-hole) 575-20-19A-141-93M-R27-L14 (surface mount)

ORDERING INFO - CMV50000

Part Number	Version	Chroma	Microlens	Package	Glass
CMV50000-1E3M1PA	3 um epi	mono	Yes	ceramic 141 pins PGA	double sided AR coated
CMV50000-1E3C1PA (available Q1 2017)	3 um epi	color	Yes	ceramic 141 pins PGA	double sided AR coated