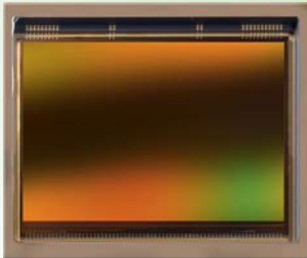




CHR70M

Ultra high resolution image sensor

SENSOR DESCRIPTION



The CHR70M is a high resolution CMOS image sensor with 10000 by 7096 pixels. The image array consists of $3.1\mu\text{m} \times 3.1\mu\text{m}$ pinned diode pixels which share a number of transistors (2 pixels sharing).

The image sensor has 8 analog outputs, each running at 30MHz. This results in a frame rate of 3fps at full resolution. Higher frame rates can be achieved in windowing mode or subsampling mode.

The image sensor also integrates a programmable gain amplifier and offset regulation. These and other settings 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.

SENSOR FEATURES

- 10000 * 7096 active pixels on a $3.1\mu\text{m}$ pitch
- frame rate 3 frames/sec
- windowing capability
- Moving window functionality
- Master clock 30MHz
- 8 analog outputs @30MHz
- On chip timing generation
- SPI-control
- Ceramic PGA package (65 pins)
- 3.3V signaling

APPLICATION FIELDS

- Ultra high resolution imaging
- Document scanning
- Flat panel, PCB inspection
- Areal photography



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SENSOR SPECIFICATIONS

Specification	Value
Full well charge	>15Ke-
Sensitivity	0.18 A/W (@555nm)
Dark noise	10e-
Conversion factor	~60 μ V/e-
Dynamic range	64 dB
Dark current	3.2 e-/s @ room temperature
Fixed pattern noise	0.09 (% of full swing)
Power consumption	360mW

ORDERING INFORMATION

(The CHR70M is derived from a custom CMOS image sensor. This sensor is not for sale for biometric applications. Please contact CMOSIS for further information)

Product number	Description
CHR70M-3E5C1PA	RGB BAYER, MICROLENS, AR COATED GLASS
CHR70M-3E5M1PA	MONOCHROME, MICROLENS, AR COATED GLASS
CHR70M-3E5M0PA	MONOCHROME, NO MICROLENS, AR COATED GLASS

