



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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CMOSIS / AWAIBA

is now

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The technical content of this CMOSIS / AWAIBA document is still valid.

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CHR70M

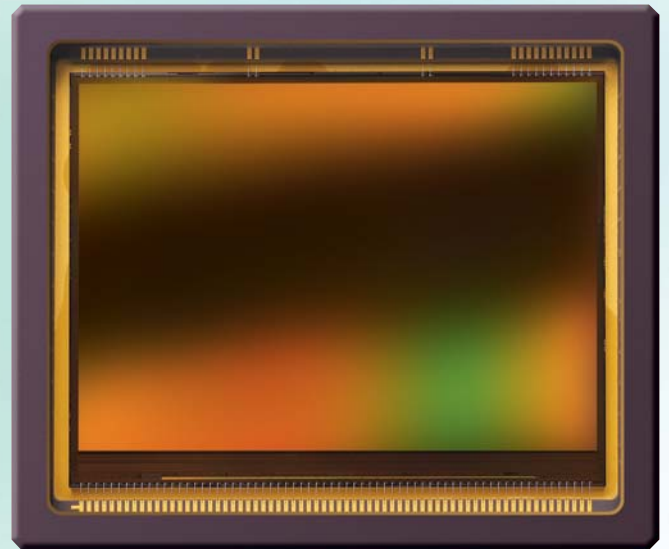
70MP ultra high resolution image sensor

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 resulting 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. A programmable on-board sequencer generates all internal exposure and read out timings. External triggering and exposure programming is also possible.

APPLICATION FIELDS

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



SENSOR FEATURES

- Electronic rolling shutter
- 10000 (H) x 7096 (V) active pixels on a $3.1\mu\text{m}$ pitch
- 3 frames/sec at full resolution
- ROI capability - moving window functionality
- Master clock 30MHz
- 8 analog outputs @ 30MHz
- On-chip timing generation
- SPI-control
- 3.3V signaling
- Monochrome and Bayer (RGB) configuration
- Ceramic PGA package (65 pins)
- 2 sided AR-coated cover glass lid

Please address all product inquiries and ordering information to:

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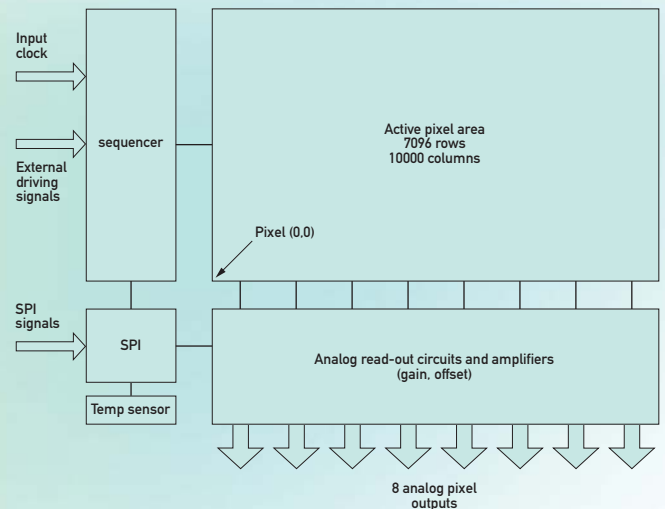


CHR70M

70MP ultra high resolution image sensor

SENSOR SPECIFICATIONS

Specification	Value
Part status	Pre-Production
Resolution	70MP - 10000 (H) x 7096 (V)
Pixel size	3.1 x 3.1 μm^2
Optical Format	35mm
Shutter Type	Electronic rolling shutter with true CDS correction
Frame Rate	3 fps
Output Interface	8 analog channels
Sensitivity	0.88 V/lux.s
Conversion gain	63 $\mu\text{V}/\text{e}^-$
Full well charge	13000 e^-
Dark noise	7 e^- (RMS)
Dynamic range	63 dB
SNR max	41.1 dB
Parasitic light sensitivity	-
Extended dynamic range	No
Dark current	3.2 e^-/s (25°C)
Fixed pattern noise	< 0.09% of full swing)
Chroma	Mono and RGB
Supply voltage	3.3V
Power	435 mW
Operating temperature range	0°C to +60°C (TBC)
RoHS compliance	Yes (TBC)
Package	65 pins PGA



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)

CHR70M	Description
CHR71000-1E5M1PA	Monochrome version
CHR71000-1E5M1PN	Monochrome version with removeable glass lid
CHR71000-1E5C1PA	RGB Bayer Color version