Image Sensor Solutions
CMOSIS

am
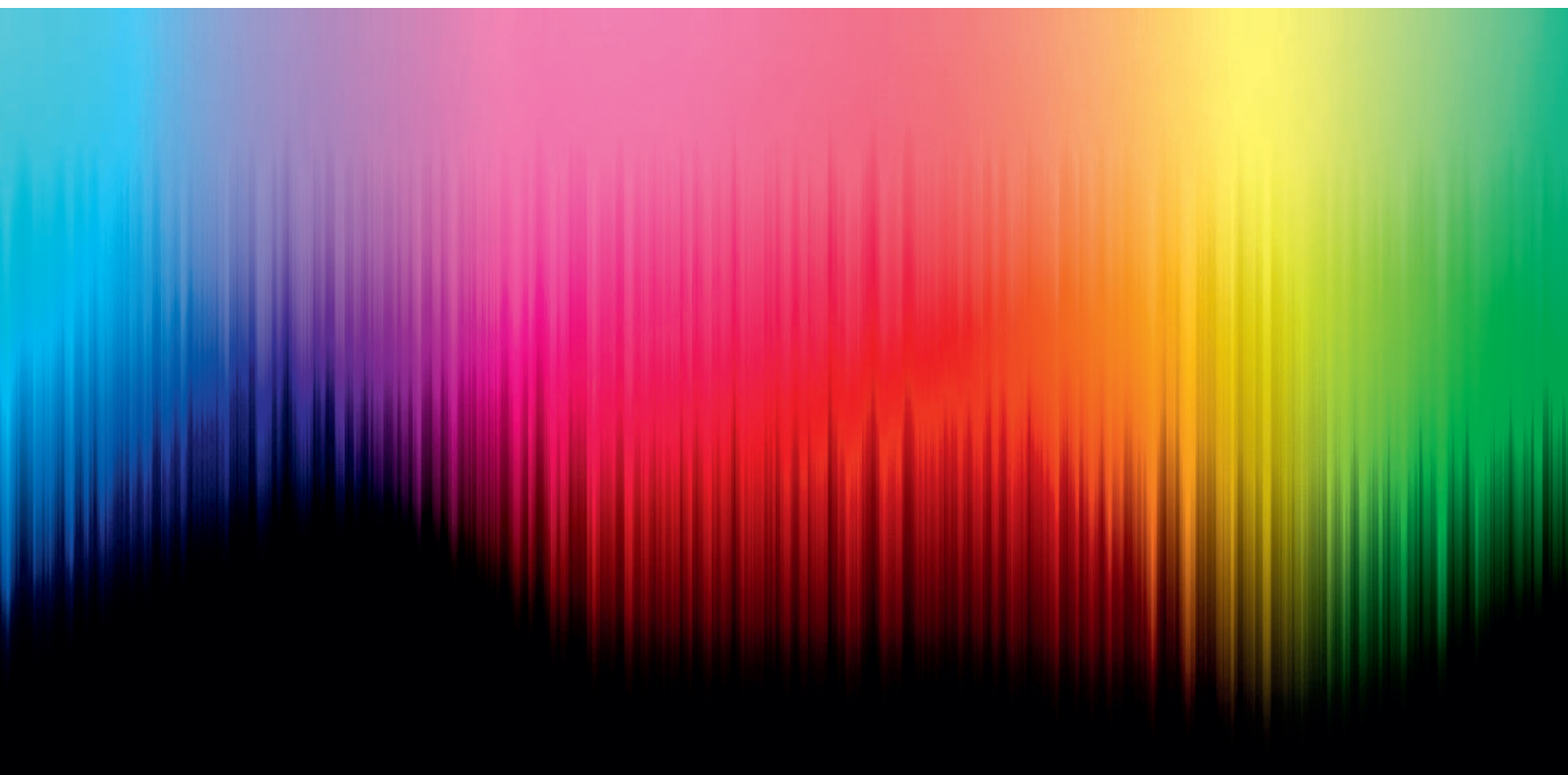
Sensing is life.

We provide advanced sensor solutions for the most challenging applications.

Our portfolio

ams is a global leader in the design and manufacture of advanced sensor solutions. Leading manufacturers around the globe rely on ams' sensing know-how for advanced systems design technology smarter, safer, and easier-to-use and more environment-friendly. ams' sensor solutions are at the heart of ams products and technologies that define our world today – from smartphones and mobile devices to smart homes and buildings, industrial automation, medical technology and connected vehicles. Our products drive applications requiring small form factor, low power, highest sensitivity and multi-sensor integration. We offer sensors (including optical sensors), interfaces and related software.

Our expertise

We offer our customers a deep system understanding and application know-how and give them the differentiation that is needed to be successful in many markets.

Focus on research and development

With over 30 years' ASIC experience, we have a thorough understanding of analog and TDC design. A strong focus on research and development and the continuous expansion of our existing product portfolio allows us to always offer our customers cutting-edge technology.
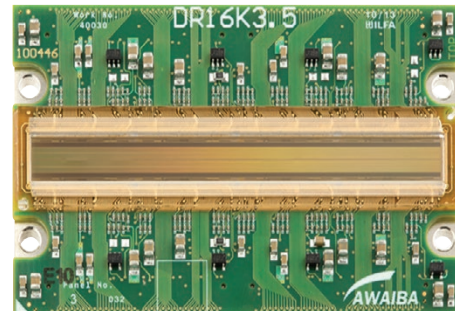
Dragster

General Description

With the Dragster series of digital line scan sensors, CMOSIS offers the most complete family of line-scan sensors available in the market. All sensors share the same electrical interface and are pin compatible with each other. The Dragster sensors are highly scalable which make them ideal for various applications. In addition, they can easily be integrated in standard cameras or image processing boards due to their simple, all digital interface.

Applications

- Motion capture
- High-end barcode scanning
- LCD and PCB inspectionfinders, Laser scanners, Magnetostrictive positioning, ATE

Main Features

|	
Resolution	2 K to 24 K
Pixel Depth	13 bit
Pixel Size	7 x 7 µm² or 3.5 x 3.5 µm²
Fill Factor	100 %
Max Frame Rate	80 kScan/s
Data Output	Tap Parallel / LVCMOS TTL
Chroma	Mono and RGB
Power	400 mW / 2k pixels
Operating Temperature	0ºC to 50ºC
Responsivity nominal gain	77 DN/nJ/cm² @12bit
Full Well Capacity	46000 e-
Dynamic Range	68 dB
DSNU / PRNU Rms	4 DN / 0.7 %
Temporal Noise Dark Rms	1.5 DN
Packages	Invar, Ceramic
RoHS Compliance	Yes

Dragster Evaluation Board

General Description

The evaluation system features a highly configurable hardware which enables an easy setup of CMOSIS's Dragster linescan family for a quick sensor evaluation. Image data is transferred to a frame grabber over high speed camera link. Any grabber that supports at least a camera link base configuration can directly acquire data from any Dragster version. The system controls sensor operation using an FPGA to define the state machine timings. It acquires data synchronously and multiplexes that data up to 2 Camera-Link Full interfaces. Over an RS232 serial interface, the user can have access to the state machine configuration and all sensor registers. The evaluation board supports all sensors from 2k to 16k. Please refer to the serial communication section for further details of the serial communication protocol.

Main Features

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PC Interface Protocol	4X Camera Link
Programmable Unit	FPGA - XILINX / Spartan 3
Power Supply	12V
Dimensions (mm)	165 x 120 x 40
Sensors	1x Dragster
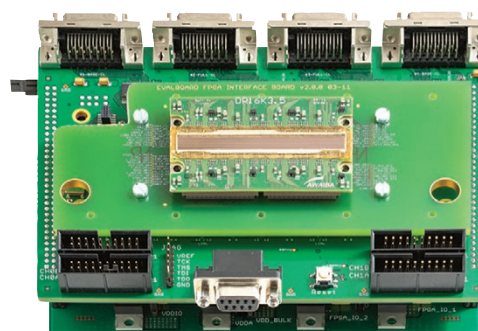
Orion

General Description

ORION is a digital high speed line scan sensor with configurable photo-diode size. Over the SPI interface the photo-diode size can be configured to a 10μm x 10μm size or 10μm x 200μm size. Independently from the photo-diode, the conversion capacitance can be configured over SPI interface. The larger conversion capacitance, resulting in a full well capacity of 300ke provides outstandingly high SNR. The smaller conversion capacitance, resulting in a full well capacity of 30ke- provides very high sensitivity, ideal for high speed scanning applications or detecting extremely low signal levels. The high aspect ratio photo-diode makes the Orion sensors ideal for spectrometric and OCT applications where the light is gathered over a wide area. To enhance dynamic range, multiple non destructive readouts are possible.

Applications

- OCT/Spectrometry
- Low light scanning
- Laser distance measurement

Main Features

|	
Resolution	2 K
Pixel Depth	13 bit
Pixel Size	10 x 10 μm² and 10 x 200 μm²
Fill Factor	100 %
Max Frame Rate	70 kScan/s
Data Output	Digital LVDS / bit serial
Chroma	Mono
Power	400 mW
Operating Temperature	0ºC to 50ºC
Responsivity nominal gain	211 DN/nJ/cm² @12bit
Full Well Capacity	30000 to 300000 e-
Dynamic Range	59 dB
DSNU / PRNU Rms	2 DN / 2.4 %
Temporal Noise Dark Rms	2 DN
Packages	CLCC 2 K
RoHS Compliance	Yes
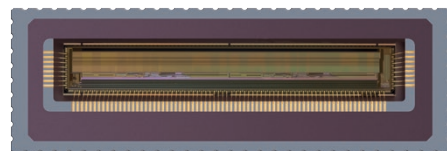
Orion Evaluation Board

General Description

The Orion evaluation kit is a two board system used to evaluate the Orion 2K line CMOS image sensor. The kit consists of the CMOS image sensor and a circuit board containing all support circuits necessary to operate the CMOS image sensor.

In addition, the kit includes a software that permits any user to acquire data and configure the system through an USB3 interface. For pricing and lead time please contact ISS.CIS_info@ams.com

Main Features

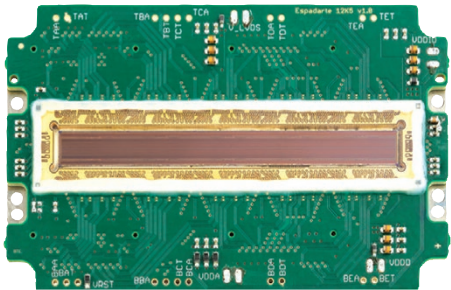|	
PC Interface Protocol	USB3
Programmable Unit	FPGA - XILINX / Spartan 6
Power Supply	USB3 5V
Dimensions (mm)	82 x 47 x 23
Sensors	1x Orion
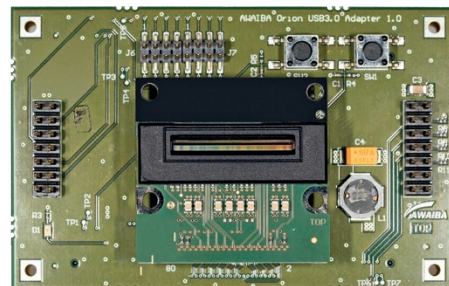
4LS

General Description

The 4LS sensor is a quad linear line scan sensor for colour imaging applications with two pixels types. The data from the 4 lines is provided at the same time for all the outputs. The sensor features a low noise pixel with true CDS and global shutter for interleaved readout during integration. Each line has its own column parallel ADC which can be configured individually for each of the 4 lines to equalize colour miss match or enable wide dynamic range. The readout is performed over LVDS bit serial taps which can be multiplexed to reduce output tap count for slower scanning speed applications. The sensor provides up to 160kHz line rate in full resolution and can increase the line rate when using partial readout mode (ROI). The Black and white version of the sensor is ideal for 4:1 digital TDI. The Colour version which offers Red Green Blue and Clear channels allows to combine the colour information with NIR information, revealing otherwise hidden details.

Applications

- High end document and print inspection
- High-speed TDI scanning
- Surface and web inspection

Main Features

|	
Resolution	2.5 K; 5 K; 7.5 K; 10 K; 15 K
Pixel Depth	12 bit
Pixel Size	5.6 x 5.6 µm²
Fill Factor	89.00 %
Data Output	LVDS
Chroma	Mono, RGB + clear
Power	1370 mW / per 2.5k segment
Operating Temperature	0ºC to 50ºC
Responsivity nominal gain	10 DN/nJ/cm² @12bit
Full Well Capacity	56000 e-
Dynamic Range	62 dB
DSNU / PRNU Rms	16 DN / 1 %
Temporal Noise Dark Rms	2.5 DN
Packages	Invar, BGA, Ceramic for shorter versions
RoHS Compliance	Yes

4LS Evaluation Board

General Description

The evaluation system features a highly configurable hardware which enables an easy setup of 4LS linescan family for a quick sensor evaluation. Image data is transferred through USB3. The system controls sensor operation using an FPGA to define the state machine timings, it acquires data synchronously and multiplexes that data up to the USB3 interface.

Main Features

| PC Interface Protocol	USB3
Programmable Unit	FPGA - XILINX / Spartan 6
Power Supply	5V
Dimensions (mm)	165 x 120 x 40
Sensors	1x 4LS
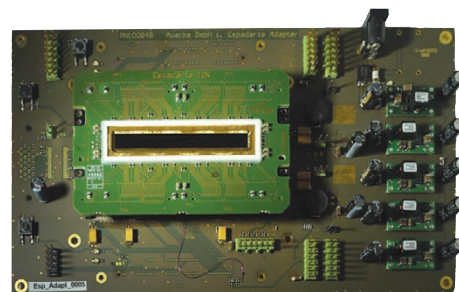
Naneye

General Description

The NanEye 2D and NanEye Stereo sensors provide a true system on chip camera head with fully self timed readout sequencing, AD conversion to 10 bit and bit serial data transmission over LVDS. AWAIBA's proprietary data interface technology permits cable length's up to 3m without any additional components at the distal end. Due to the low energy dissipation on the interface, no complicated shielding is required to meet EMC norms. With it's 250 x 250 pixels at 3um pitch, the sensors provide clear and sharp images with outstanding MTF in a very compact size. A frame rate of 44Fps permit synchronization to any type of display. The NanEye sensor provides delay free, smooth video operation resulting in a safe operation and a clear diagnosis. The sensors are connected to minimal diameter cabling solutions. As an option, a small lens can be assembled to the chip, this option does not increase the total diameter of the sensor, making it the world's most compact digital camera.

Applications

- Medical Endoscopy
- Dental imaging
- Surgical robotics
- Eye tracking

Main Features

Resolution	62.5 KPix - 250(H) x 250(V)
Pixel Depth	10 bit
Pixel Size	3 x 3 µm²
Frame Rate	42 - 55fps
Data Output	10 bit digital LVDS
Chroma	Mono, RGB
Power	4.2 mW at nominal supply 2.1V
Operating Temperature	0ºC to 60ºC
Sensitivity	11.5 DN/nJ/cm² at maximum gain
Full Well Capacity	15800 e-
Dynamic Range	58 dB
FPN / PRNU	< 0.5 % / < 1 % (software corrected)
Temporal Noise Dark Rms	1.1 DN
Footprint including lens	1.0 x 1.0 x 1.7 mm³
Lens Options	90FOV/f2.7 , 90FOV/f4.0, 90FOV/f6.0, 120FOV/f2.8, 120FOV/f4.0, 160FOV/f2.4
RoHS Compliance	Yes
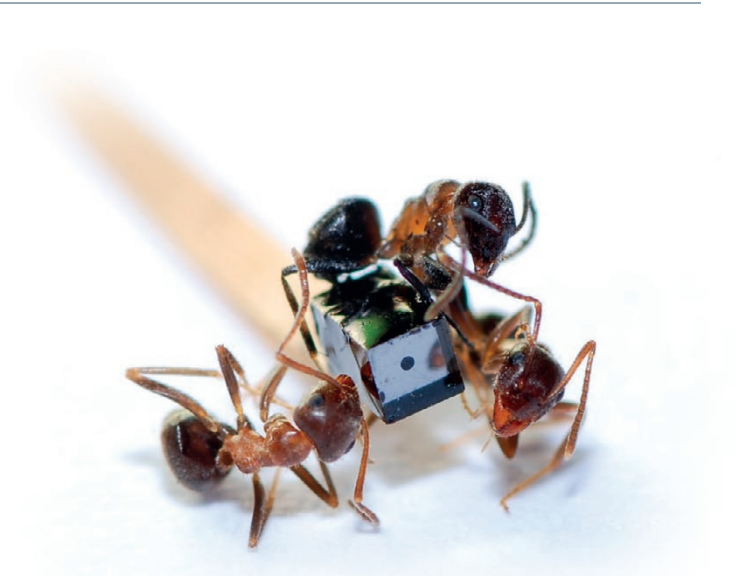
Nano USB2 Evaluation Board

General Description

The base station is the hardware between the camera and the PC and does the deserialisation of the bit serial LVDS data stream coming from the NanEye sensors and translates it to a USBII protocol that will interface over a standard USBII connection to a PC. The supplied viewer software controls the NanEye camera, and displays the video images. The software gives full control over all sensor settings and allows to test different image correction and enhancement algorithms, such as corrections for offset and gain error, colour reconstruction, etc. The base station can also drive the optional LED illumination.

Main Features

|	
PC Interface Protocol	USB2
Programmable Unit	FPGA - XILINX Spartan 3E
Power Supply	USB2 5V
Dimensions (mm)	40 x 8 x 5
Sensors	1x NanEye

NanoUSB3 Evaluation Board

General Description

The NanoUSB3 evaluation board performs the same as the NanoUSB2, however using a USB3 type interface and permitting the synchronized operation of up to 4 NanEye 2D, which makes it ideal to use together with NanEye Stereo, or arrays of NanEye 2D cameras.

Main Features

PC Interface Protocol	USB3
Programmable Unit	FPGA - XILINX Spartan 6
Power Supply	USB3 5V
Dimensions (mm)	80 x 40 x 5
Sensors	1 - 4x NanEye 2D/ 2x NanEye Stereo NanEye_RS
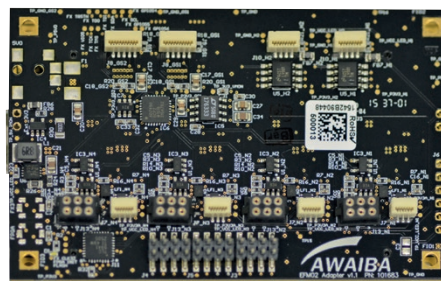
Naneye Fiber Light Source

General Description

The evaluation unit with combined fibre light source provides the same functionality as the NanoUSB2 evaluation unit, however it integrates an LED powered white light fibre coupled illumination source. The source can be controlled manually or over the USB interface. For fast and easy evaluation the NanEye sensor is assembled together with a POF light guide in a miniature tip and can be handled over a 1.4m long lumen. This kit is ideal to perform fast concept validations and feasibility set-ups without the need to worry about illumination and electronics integration.

Main Features

PC Interface Protocol	USB2
Programmable Unit	FPGA - XILINX Spartan 3E
Power Supply	USB2 5V
Dimensions (mm)	40 x 8 x 5
Sensors	1x NanEye
Lens Options	90FOV/f2.7, 90FOV/f4.0, 90FOV/f6.0, 120FOV/f2.8, 120FOV/f4.0, 160FOV/f2.4

Nano HDMI

General Description

NanoHDMI is a fully embedded all in one image processing unit that interfaces the NanEye® micro camera head signals and gives out a 1080p/60 format HDMI video signal which can be directly plugged to a display monitor. No additional PC or image processing is required. Nano-HDMI is the ideal solution for all NanEye® sensor customers who use their own illumination solution and fix the NanEye camera module in their own endoscopic mechanics.

Main Features

| Interface	HDMI Direct Interface
Power Supply	12V DC
Dimensions (cm)	13 x 8 x 3
Sensors	1 x NanEye 2D

CMV300

General Description

The CMV300 is a high speed CMOS image sensor developed for machine vision applications. The image array consists of 7.4 µm2 x 7.4 µm2 „Pipelined" global shutter pixels allowing exposure during read out and CDS operation. The user can choose between four digital LVDS serial outputs of 12 bits each, or one 10-bit parallel CMOS output. The image sensor integrates a programmable gain amplifier and offset regulation. Higher frame rates can be achieved in row-windowing or row-subsampling mode. All modes are programmable using the SPI interface. All internal exposure triggers, read-out timings and high speed clocks are generated by a programmable on-board sequencer and PLL. External triggering and exposure programming is also possible. Extended optical dynamic range can be achieved by multiple integrated high dynamic range modes.

Applications

- 3D imaging
- Machine Vision
- Motion Capture
- Bar and 2D code

Main Features

|	
Resolution	0.3MP - 640 (H) x 480(V)
Pixel size	7.4 x 7.4 µm2
Optical format	1/3"
Shutter type	Global shutter
Frame rate	480 fps (LVDS 12 bit), 120 fps (CMOS 10 bit)
Output interface	4 LVDS outputs @ 480 Mbps - 10-bit CMOS output @ 40 Mhz (120 fps)
Sensitivity	6 V/lux.s
Conversion gain	0.2 LSB/e- (12 bit)
Full well charge	20000 e-
Dark noise	20 e- (RMS)
Dynamic range	60 dB
SNR max	43 dB
Parasitic light sensitivity	1/50000
Extended dynamic range	Yes, up to 90 dB
Dark current	125 e-/s (25°C)
Fixed pattern noise	< 4 LSB (<0.1% of full swing)
Chroma	Mono and RGB
Supply voltage	1.8V / 3.3V
Power	700 mW
Operating temperature	-30°C to +70°C
RoHS compliance	Yes
Package	58 pins BGA
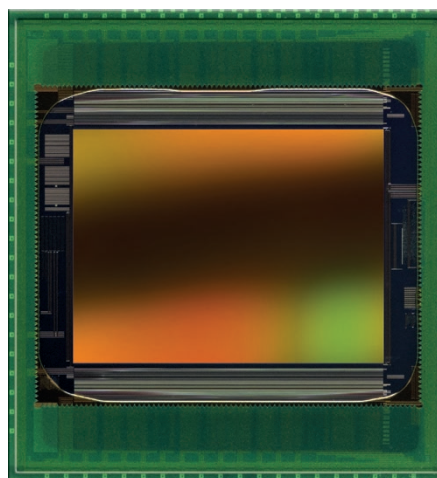
CMV2000

General Description

The CMV2000 is a high sensitivity, pipelined global shutter CMOS image sensor with 2048 x 1088 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 340 fps frame rate at full resolution at 10 bit per pixel. Read-out is 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.

Applications

- 3D imaging
- ITS
- Machine Vision
- Motion Capture
- Video/Broadcast
- Bar and 2D code
- Biometrics

Main Features

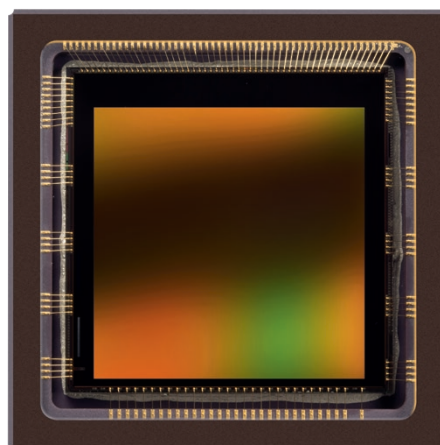|	
Resolution	2MP - 2048 (H) x 1088 (V)
Pixel size	5.5 x 5.5 µm2
Optical format	2/3"
Shutter type	Global shutter
Frame rate	340 fps (10 bit), 70 fps (12 bit)
Output interface	16 LVDS outputs @ 480 Mbps
Sensitivity	5.56 V/lux.s
Conversion gain	0.075 LSB/e-
Full well charge	13500 e-
Dark noise	13 e- (RMS)
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°C)
Fixed pattern noise	< 1 LSB (<0.1% of full swing)
Chroma	Mono, Mono, NIR enhanced and RGB
Supply voltage	1.8V / 3.3V
Power	600 mW
Operating temperature	-30°C to +70°C
RoHS compliance	Yes
Package	95 pins µPGA/LGA or 92 pins LCC
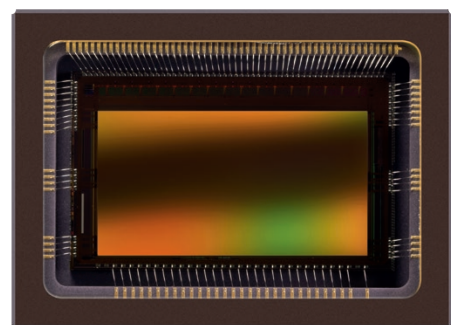
CMV4000

General Description

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. Read-out is 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. A12 bit per pixel mode is available at reduced frame rate.

Applications

- Machine vision
- Motion control
- Traffic monitoring
- High speed inspection
- Security
- 3D cameras

Main Features

|	
Resolution	4MP - 2048(H) x 2048 (V)
Pixel size	5.5 x 5.5 µm2
Optical Format	1"
Shutter Type	Pipelined global shutter with true CDS
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°C)
Fixed pattern noise	< 1 LSB (<0.1 % of full swing)
Chroma	Mono and RGB
Supply voltage	1.8 V / 3.3 V
Power	600 mW
Operating temperature	-30°C to +70°C
RoHS compliance	Yes
Package	95 pins µPGA/LGA or 92 pins LCC

CMV8000

General Description

The CMV8000 is a global shutter CMOS image sensor in a 4/3" optical format. The image array consists of 5.5 um by 5.5 um pipelined global shutter pixels, which allow exposure during read out while performing CDS operation reducing fixed pattern and dark noise significantly. The image sensor also integrates a programmable gain amplifier and offset regulation. All operation modes are programmable using a SPI interface. A programmable onboard sequencer generates all internal exposure and read out timings. External triggering and exposure programming are also possible. Extended optical dynamic range can be achieved by multiple integrated high dynamic range modes. A 12-bit per pixel mode is available at reduced frame rates.

Applications

- Machine vision
- Motion control
- Traffic monitoring
- High speed inspection
- Security

Main Features

|	
Resolution	8MP - 3360 (H) x 2496 (V)
Pixel size	5.5 x 5.5 µm2
Optical Format	4/3"
Shutter Type	Pipelined global shutter with true CDS
Frame Rate	104 fps (10 bit), 40 fps (12 bit)
Output Interface	16 LVDS outputs @ 600 Mbps
Sensitivity	5.56 V/lux.s
Conversion gain	0.077 LSB/e-
Full well charge	11700 e-
Dark noise	8.6 e- (RMS)
Dynamic range	61 dB
SNR max	41.3 dB
Parasitic light sensitivity	1/20000
Extended dynamic range	Yes, up to 90 dB
Dark current	41.2 e-/s (25°C)
Fixed pattern noise	< 1 LSB (<0.1 % of full swing)
Chroma	Mono and RGB
Supply voltage	1.8 V / 3.3 V
Power	900 mW
Operating temperature	-30°C to +70°C (TBC)
RoHS compliance	Yes (TBC)
Package	107 pins µPGA
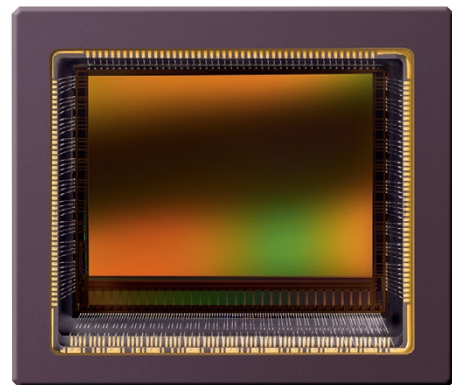
CMV12000

General Description

The CMV12000 is a global shutter CMOS image sensor in a APS-C optical format supporting super HD imaging (4k). The image array consists of 5.5 um by 5.5 um pipelined global shutter pixels, which allow exposure during read out while performing CDS operation reducing fixed pattern and dark noise significantly. The image sensor also integrates a programmable gain amplifier and offset regulation. All operation modes are programmable using a SPI interface. A programmable on-board sequencer generates all internal exposure and read out timings. External triggering and exposure programming is also possible. Extended optical dynamic range can be achieved by multiple integrated high dynamic range modes. A 12-bit per pixel mode is available at reduced frame rates.

Applications

- Machine vision
- Motion control
- Traffic monitoring
- High speed inspection
- Broadcast

Main Features

Resolution	12MP - 4096 (H) x 3072 (V)
Pixel size	5.5 x 5.5 µm2
Optical Format	APS-like
Shutter Type	Pipelined global shutter with true CDS
Frame Rate	300 fps (10 bit), 132 fps (12 bit)
Output Interface	64 LVDS @ 600 Mbps
Sensitivity	4.64 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℃)
Fixed pattern noise	< 1 LSB (<0.1 % of full swing)
Chroma	Mono and RGB
Supply voltage	1.8 V / 3.3 V
Power	4200 mW
Operating temperature	-30℃ to +70℃
RoHS compliance	Yes
Package	237 pins µPGA
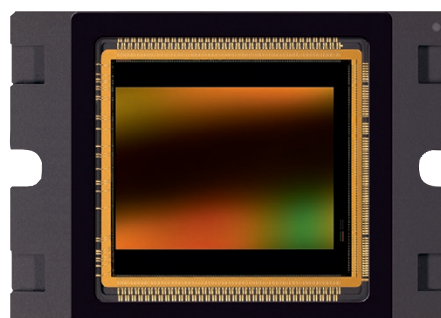
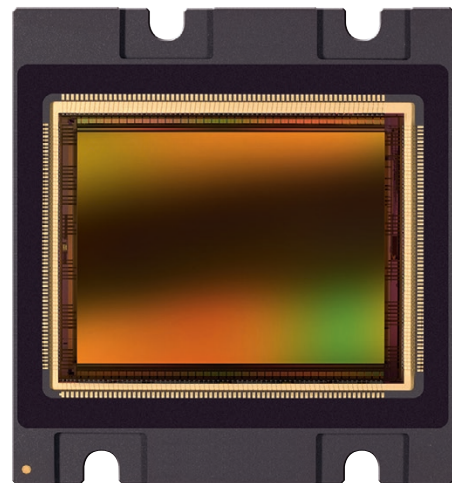# CMV20000

General Description

The CMV20000 is a global shutter CMOS image sensor in a 35 mm optical format. The image array consists of 6.4 um by 6.4 um pipelined global shutter pixels, which allow exposure during read out while performing CDS operation reducing fixed pattern and dark noise significantly. The image sensor also integrates a programmable gain amplifier and offset regulation. All operation modes are programmable using a SPI interface. A programmable on-board sequencer generates all internal exposure and read out timings. External triggering and exposure programming is also possible. Extended optical dynamic range can be achieved by multiple integrated high dynamic range modes.

Applications

- Machine vision
- Motion control
- High speed inspection
- Scientific
- Medical

Main Features

|	
Resolution	20MP - 5120 (H) x 3840 (V)
Pixel size	6.4 x 6.4 µm2
Optical Format	35 mm
Shutter Type	Pipelined global shutter with true CDS
Frame Rate	30 fps (12 bit)
Output Interface	16 LVDS channels @ 480 Mbps
Sensitivity	8.3 V/lux.s
Conversion gain	0.25 LSB/e-
Full well charge	15000 e-
Dark noise	8 e- (RMS)
Dynamic range	66 dB
SNR max	41.7 dB
Parasitic light sensitivity	1/50000
Extended dynamic range	Yes, up to 90 dB
Dark current	125 e-/s (25°C)
Fixed pattern noise	< 8 LSB (<0.2 % of full swing)
Chroma	Mono and RGB
Supply voltage	1.8 V / 3.3 V
Power	1100 mW
Operating temperature	-30°C to +70°C
RoHS compliance	Yes
Package	143 pins PGA

CMV50000

General Description

The CMV50000 is a global shutter CMOS image sensor with 7920 by 6004. The image array consists of 4.6µm square pipe-lined global shutter pixels, which allow exposure during read out while performing CDS operation reducing fixed pattern and dark noise significantly. The CMV50000 has 22 digital sub-LVDS outputs (serial) each running at 830 Mbps. This results in 30 fps frame rate at full resolution in 12-bit mode. Higher frame rates can be achieved in row-windowing mode or row-subsampling mode. The implementation of black reference pixels allows for on-chip black clamping and row noise reduction. The on-chip PLL and channel multiplexing facilitate easy integration of the chip in a camera system. Multiple internal and external triggering modes make the sensor very flexible for a variety of applications. Extended optical dynamic range can be achieved by different exposure time for odd/even columns.

Applications

- High end inspection
- Document scanning
- Aerial mapping/security
- Flat panel inspection
- 8 K video production

Main Features

|	
Resolution	48MP - 7920(H) x 6004(V)
Pixel size	4.6 x 4.6 µm2
Optical Format	45.6 mm diagonal
Shutter Type	Pipelined global shutter with true CDS
Frame Rate	30 fps (12 bit)
Output Interface	22 LVDS @ 830 Mbps
Full well charge	14000 e
Dark noise	8.5 e (RMS)
Dynamic range	64 dB
SNR max	41.4 dB
Parasitic light sensitivity	1/20000
Dark current	10 e/s
Fixed pattern noise	< 0.2% of full swing
Power	3.5 W
Operating temperature	-30℃ to +70℃
Package	141 pins ceramic PGA package
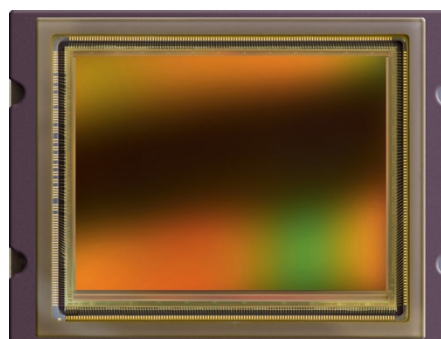
CHR70M

General Description

The CHR70M is a high resolution CMOS image sensor with 10000 by 7096 pixels. The image array consists of 3.1µm x 3.1µm 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 sub-sampling 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.

Applications

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

Main Features

Resolution	70MP - 10000 (H) x 7096 (V)
Pixel size	3.1 x 3.1 µm2
Optical Format	35mm
Shutter Type	Electronic rolling shutter with true CDS correction
Frame Rate	3 fps
Output Interface	8 analog channels
Sensitivity	1.47 V/lux.s / 0.88 V/lux.s without microlens
Conversion gain	63 uV/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	0°C to +60°C
RoHS compliance	Yes
Package	65 pins PGA
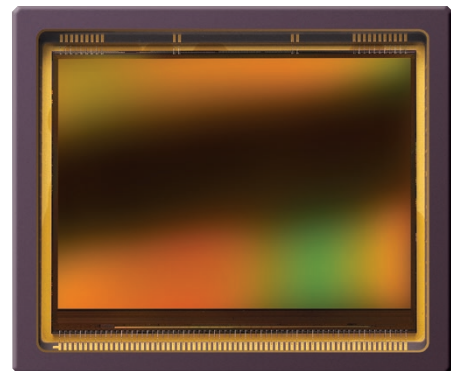
CMV + CHR Evaluation Systems

The evaluation kits can be used for testing and verifying the operation and image quality of the respective image sensor.

Evaluation Kits include:

- Camera
- Power cable
- Power adapter/Lab supply
- Lens Holder
- USB 2.0 or Camera Link interface
- USB or Camera Link cable
- Documentation (including schematics and VHDL code)
- Software

The systems allow the user to evaluate all aspects of the Sensors with full access to the sensor registers and RAW sensor data. Single or multiple image grabbing and saving is possible in multiple formats. Color processing is not supported by evaluation systems. Evaluations systems are offered as a rental system or can be purchased. In case a system is purchased a sensor must be purchased separately.

Custom Products

CMOSIS provides innovative turn-key image sensor solutions based on in-house design, characterization and qualification facilities for image sensor research, development and volume production. With our strong technology portfolio we optimize your image sensor solution to fit your exact needs and offer state-of-the art performance.

Why choose a custom solution?
• Create a unique product:
• Differentiating compared to existing solution and competition
• Outperforming off the shelf solutions
• Perfect match with your overall system needs
• Long term availability:
• Control of supply chain

Our key technology offerings:
• Global shutter pixels
• High speed read out and data conversion (array and line scan)
• High Resolution
• Large area sensors (up to wafer-scale)
• Low-noise, HDR pixels for low light imaging and professional imaging applications
• Backside Illumination (BSI) for (E)UV and visible range
• TDI imaging
• Miniature camera modules for endoscopic applications
• Ceramic and COB packaging options (PGA, BGA, CSP, …)
• Custom glass lid coatings, filters
• Extended environmental testing including industrial, space and automotive qualifications

Sensor development takes place in several phases, with milestones and review meetings in between.

A typical development flow consists of:
• Specification review and architectural study
• IC layout and verification
• Design of custom packages and cover glass
• Device prototyping
• Device characterization and qualification
• Camera design-in support
• Volume production

The development time and costs depend on the image sensor complexity. During development, the customer is in direct contact with the development team. If you would like to discuss a custom CMOS image sensor project with us please contact us by phone or by e-mail.

Notes

ams worldwide
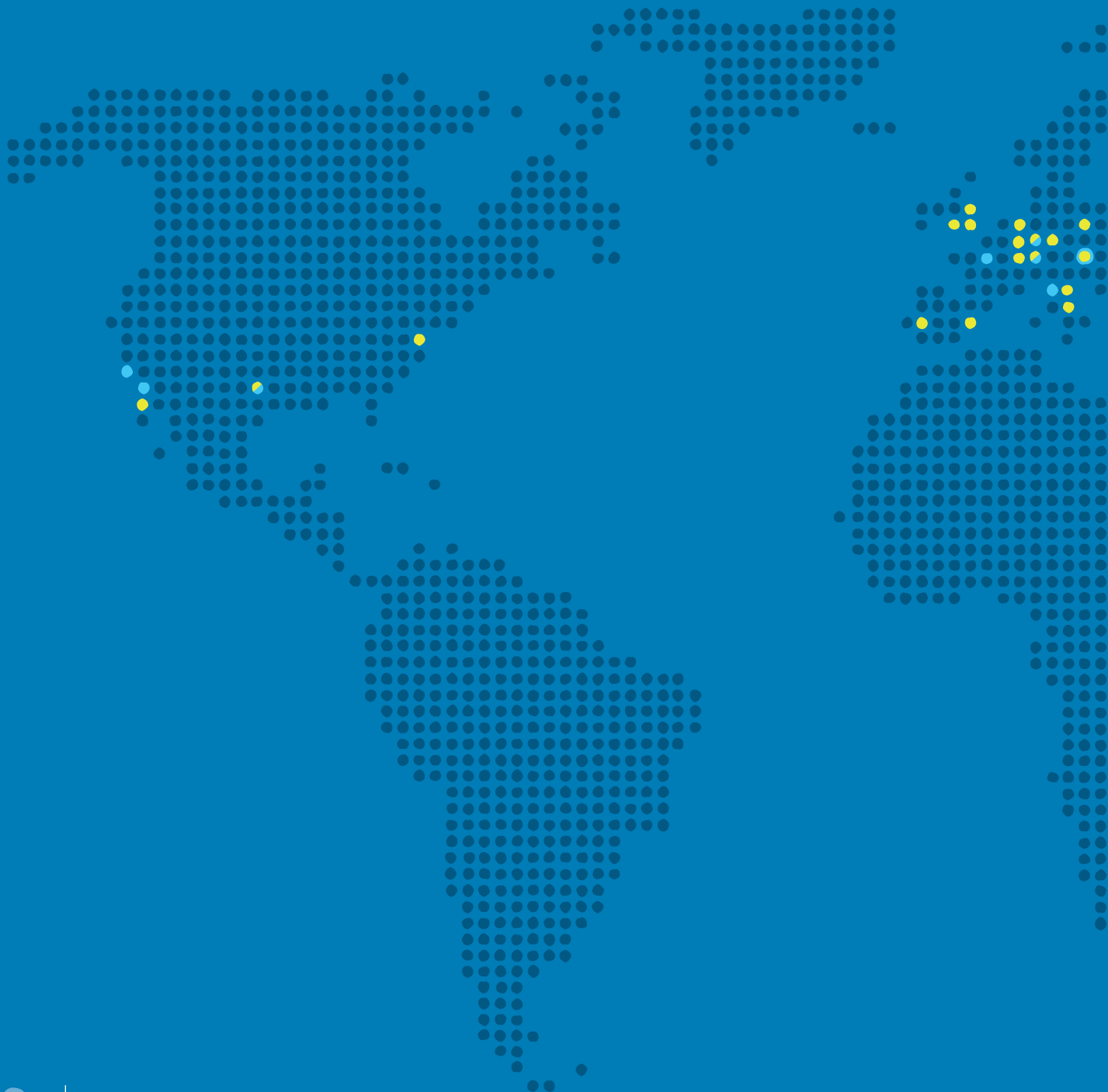
hq	headquarters
pf	production facility
dc	design center
tc	test center
so	sales office

Europe

Premstaetten, AT **hq, pf, dc**
Plymouth, GB **tc**
Antwerp, BE **dc**
Cambridge, UK **dc**
Eindhoven, NL **dc**
Funchal, PT **dc**
Jena, DE **dc**
Navacchio, IT **dc**
Nürnberg, DE **dc**
Oulu, FI **dc**

Pavia, IT **dc**
Rapperswil, CH **dc, so**
Reutlingen, DE **dc, so**
Rüschlikon, CH **dc**
Stokenchurch, K **dc**
Stutensee, DE **dc**
Valencia, **ES dc**
Corsico, IT **so**
Helsinki, FI **so**
Orléans Cedex, FR **so**

Asia

Calamba, PH **tc**
Singapore **pf, so**
Tokyo, JP **dc, so**
Hyderabad, IN **dc**
Seoul, KR **so**

Shanghai, CN **so**
Shenzen, CIN **so**
Suzhou, CN **so**
Taipei, TW **so**

USA

Hermosa Beach, CA dc
Mercerville, NJ dc
Plano, TX dc

Cupertino, CA **so**
Santa Clara, CA **so**

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NE2D_B&W_V90F4.0_2M NE2D_RGB_V90F6_LED NE2D_RGB_V120F2.8_2M NE2D_RGB_V120F4.0_2M

NE2D_B&W_F2.4_FOV160 NE2D_CHIP_B&W_SGA NE2D_RGB_V160F2.4_SG NE2D_RGB_V90F2.7_SGA

NE2D_RGB_V90F6.0_2M NE2D_B&W_V90F2.7_2M NE2D_B&W_V90F4.0_SGA NE2D_ST_RGB_V90F2.7_2M

NE2D_B&W_V120F2.8_2M NE2D_RGB_V120F2.8_LE NE2D_RGB_V90F2.7_2M NE2D_RGB_V90F4.0_2M

NE2D_RGB_V90F6.0_SGA NE2D_B&W_V90F6.0_SGA NE2D_RGB_V90F2.7_LED NE2D_RGB_V120F2.8_SG

NE2D_B&W_V120F2.8_SG NE2D_ST_RGB_V90F4.0_2M NE2D_B&W_V90F2.7_SGA NE2D_RGB_V160F2.4_LE

NE2D_CHIP_RGB_SGA NE2D_RGB_V160F2.4_2M CMV2K/4K-EVAL2 NANOUSB2.2 4LS10Kv2.1

4LS10KRGBv2.1 4LS15kB&Wv1.2 NANOUSB3ORION4KEVA NANOUSB3ORION1K2K NE2D_RGB_FOV120_F4.0