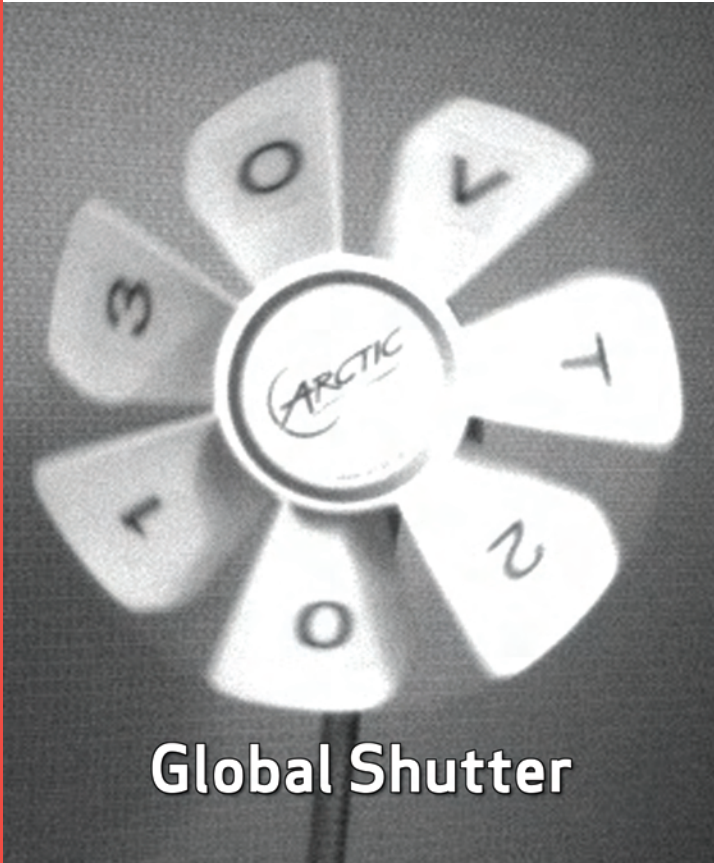
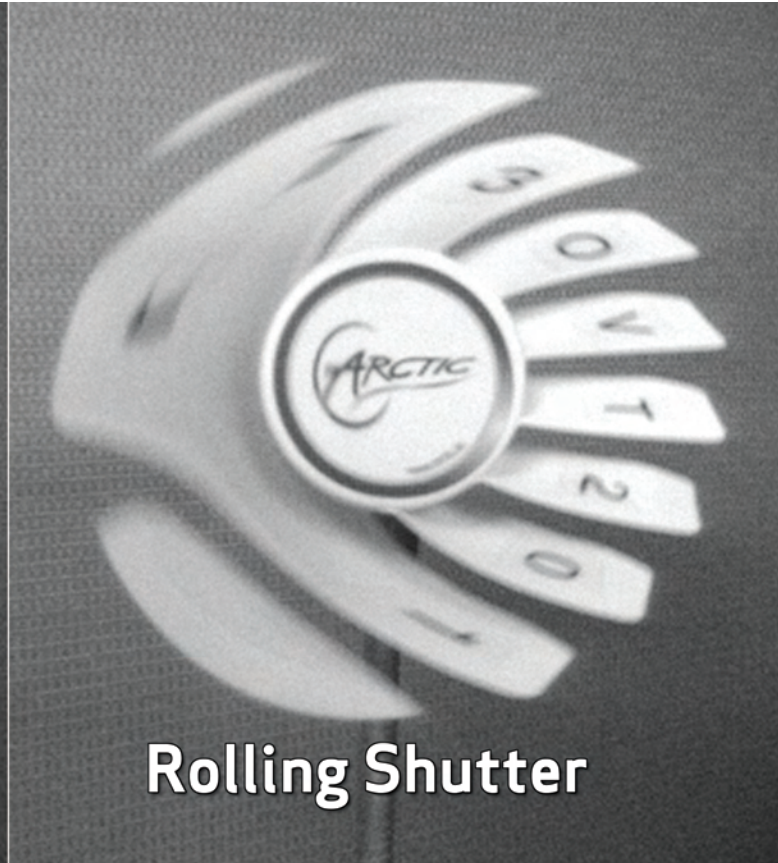


OVM6211 400x400 product brief



Global Shutter



Rolling Shutter

Compact Global Shutter CameraCubeChip™ Brings Computer Vision to Mobile Devices, Notebooks and Wearables



available in
a lead-free
package

OmniVision's high performance OVM6211 offers a number of advanced features, including gesture recognition, eye tracking and motion detection in the industry's smallest global shutter package. Its advanced functionality, easy adoption and compact form-factor make it an ideal camera solution for advanced space-constrained devices, such as smartphones, tablets, notebooks and wearables.

Featuring a 3-micron OmniPixel3-GS™ global shutter pixel, the OVM6211 is capable of capturing full resolution (400 x 400 pixels) video at 120 fps and features two low-power modes: light sensing mode and ultra-low power mode.

The OVM6211 CameraCubeChip™ will be available in two packages. The OVM6211-RADA is intended for human interface systems including eye tracking and will have a narrow field of view (FOV) at approximately 50 degrees. The OVM6211-RAHA is a complementary product intended for applications including gesture recognition and wearable devices and uses a lens with FOV wider than 90 degrees.

Find out more at www.ovt.com.



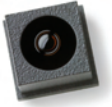
Applications

- Cellular Phones
- Tablets
- Digital Video Camcorders (DVC)
- Security/Surveillance
- PC Multimedia
- Gaming

Product Features

- 3 μm global shutter pixel
- programmable SCCB device ID
- automatic black level calibration (ABLCL)
- one-lane MIPI serial output interface
- programmable controls for:
 - frame rate
 - mirror and flip
 - cropping and windowing
- embedded 128 bits of one-time programmable (OTP) memory for part identification, etc.
- supports output formats: 8/10-bit RAW
- two on-chip phase lock loop (PLL)
- programmable I/O drive capability
- supports images sizes:
 - 400 x 400
 - 200 x 200
 - 100 x 100
- built-in 1.5V regulator for core
- PWM
- fast mode switching
- built-in strobe control
- supports horizontal and vertical 2:1 and 4:1 monochrome subsampling
- ultra low power mode for ambient light sensor
- supports 2x2 monochrome binning
- standard serial SCCB interface

OVM6211



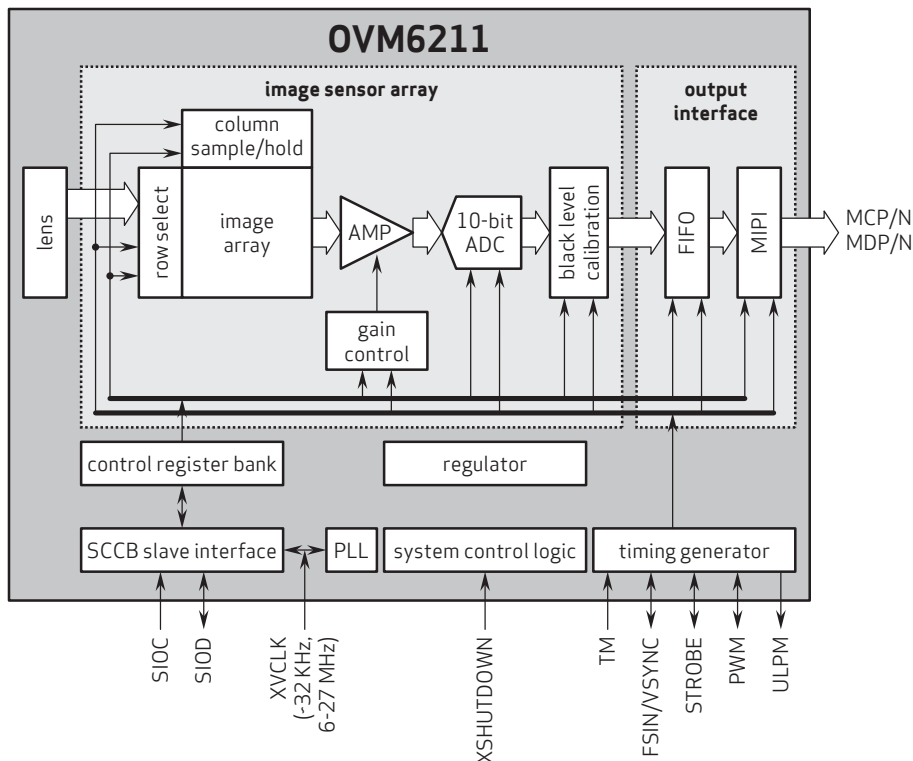
Ordering Information

- OVM6211-RADA** (B&W, lead-free, CameraCubeChip™ with black coating, 50° FOV)
- OVM6211-RAHA** (B&W, lead-free, CameraCubeChip™ with black coating, 90° FOV)

Product Specifications

- active array size:** 400 x 400
- f no.:**
 - OVM6211-RADA: 3.1
 - OVM6211-RAHA: 2.4
- power supply:**
 - analog: 2.6 - 3.0V
 - core: 1.5 VDC $\pm 5\%$
 - I/O: 1.7 - 3.0V
- power requirements:**
 - active: 85 mW @ 120 fps
 - standby: 15 μA for AVDD, 40/700 μA for DOVDD with/without input clock
 - XSHUTDOWN: 5 μA for AVDD, 5 μA for DOVDD
- temperature range:**
 - operating: -30°C to +70°C junction temperature
 - stable image: 0°C to +50°C junction temperature
- output formats:** 8/10-bit RAW
- optical format:** 1/10.5"
- input clock frequency:** 6 - 27 MHz
- focal length:**
 - OVM6211-RADA: 1.681 mm
 - OVM6211-RAHA: 0.776 mm
- scan mode:** progressive
- maximum image transfer rate:**
 - 400x400: 120 fps
 - 200x200: 220 fps
 - 100x100: 380 fps
- max S/N ratio:** 37.5 dB
- dynamic range:** 66.5 dB @ 8x gain
- maximum exposure interval:** 434 x t_{row}
- pixel size:** 3 μm x 3 μm
- image area:** 1248 μm x 1248 μm

Functional Block Diagram



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