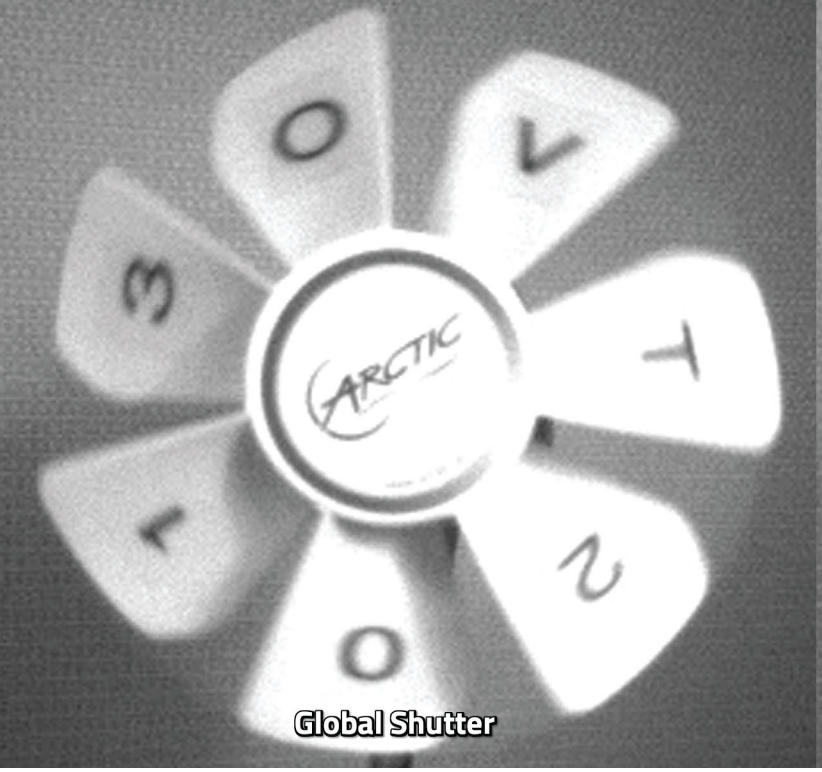
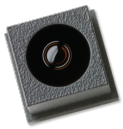


OVM6211

400 x 400 product brief



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

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 OmniPixel®3-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.

OVM6211

Ordering Information

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

Applications

- eye tracking
- wearable devices
- security and surveillance
- toys and games

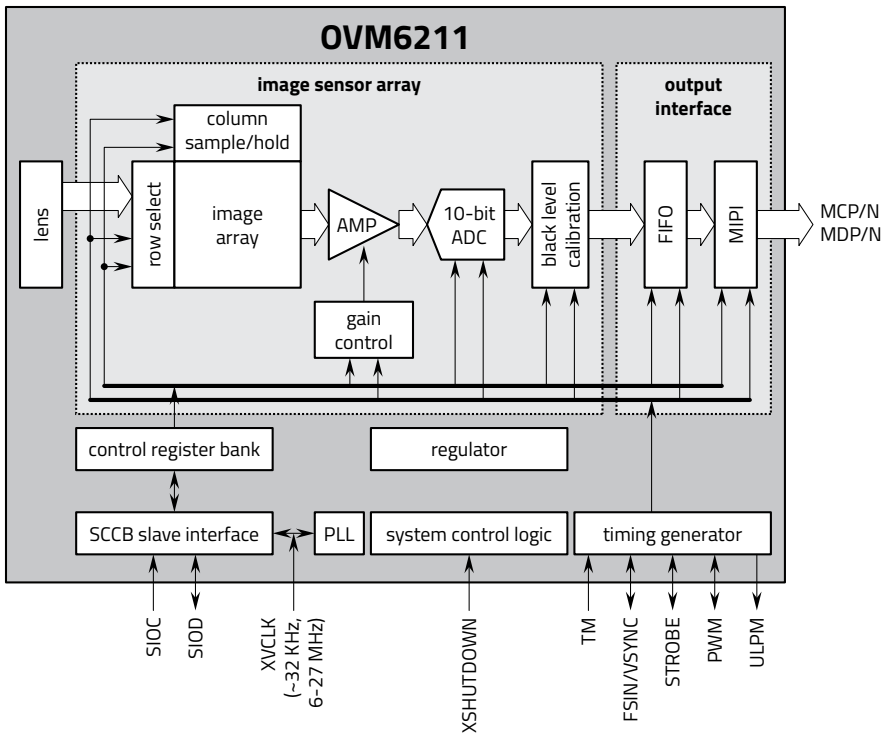
Product Features

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

Technical Specifications

- **active array size:** 400 x 400
- **maximum image transfer rate:**
  - 400 x 400: 120 fps
  - 200 x 200: 220 fps
  - 100 x 100: 380 fps
- **power supply:**
  - core: 1.5 VDC ±5%
  - analog: 2.6V ~ 3.0V
  - I/O: 1.7V ~ 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"
- **diagonal field of view (FOV):**
  - RADA: 50°
  - RAHA: 90°
- **f no.:**
  - RADA: 3.1
  - RAHA: 2.4
- **focal length:**
  - RADA: 1.681 mm
  - RAHA: 0.776 mm
- **scan mode:** progressive
- **pixel size:** 3 µm x 3 µm
- **image area:** 1248 µm x 1248 µm
- **package dimensions (including ball height):**
  - RADA: 3230 x 3230 x 2450 µm
  - RAHA: 3230 x 3230 x 3916 µm

Functional Block Diagram



Version 1.7, August 2024

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OMNIVISION®