

## Applications

- Cellular and Picture Phones

## Product Features

- OmniPixel3-HS structure using 0.11  $\mu\text{m}$  process
- optical size of 1/13"
- automatic/manual control of automatic exposure control (AEC), automatic gain control (AGC), automatic 50/60 Hz luminance detection and automatic black level calibration (ABLC)
- support for horizontal and vertical sub-sampling
- mirror, flip, scaling, windowing
- image quality controls: color saturation, hue, gamma, sharpness (edge enhancement), lens correction, defective pixel canceling, and noise canceling
- programmable gamma correction
- support for black sun cancellation
- digital video port (DVP) parallel output interface
- MIPI serial output interface
- serial camera control bus (SCCB) interface
- programmable I/O drive capability
- on-chip phase lock loop (PLL)
- 2.8V power supply
- built-in 1.5V regulator for sensor core power
- low power consumption

# OVM7692



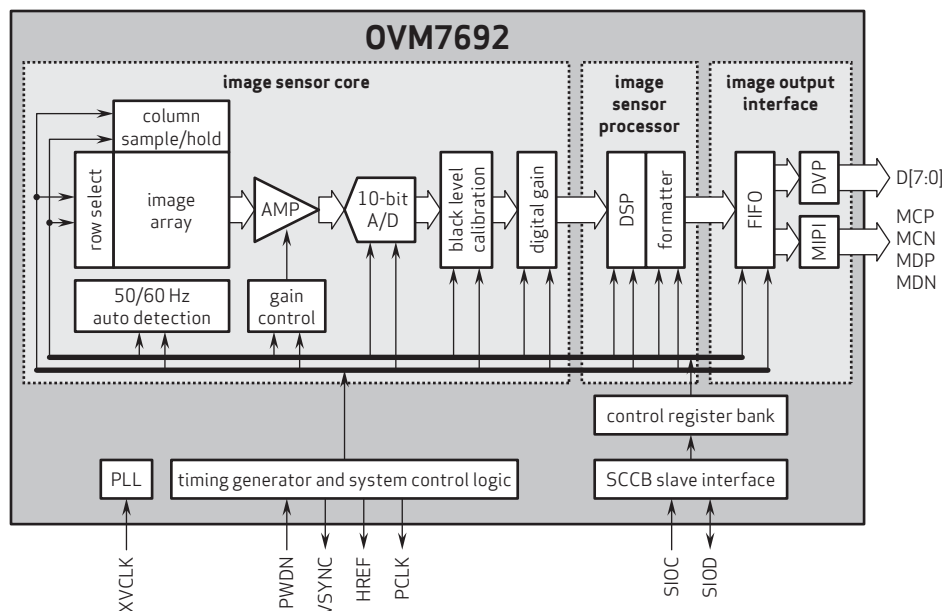
## Ordering Information

- OVM7692-RYAA**  
(color, lead-free, CameraCubeChip™ with metal can)
- OVM7692-RYCA**  
(color, lead-free, CameraCubeChip™ with metal can)
- OVM7692-RAAA**  
(color, lead-free, CameraCubeChip™ with black coating)
- OVM7692-RACA**  
(color, lead-free, CameraCubeChip™ with black coating)

## Product Specifications

- active array size:** 640 x 480
- power supply:**
  - analog: 2.6 - 3.0V
  - I/O: 1.7 - 3.0V
- power requirements:**
  - active: -120 mW @ AVDD = 2.8V, DOVDD = 1.8V
  - standby: 23  $\mu\text{A}$
- temperature range:**
  - operating: -30°C to 70°C junction temperature
  - stable image: 0°C to 50°C junction temperature
- output formats:** RAW 8-bit, RAW 10-bit (for MIPI only), YUV422, RGB565/444
- optical format:** 1/13"
- diagonal field of view (FOV):**
  - RYAA/RAAA: 64°
  - RYCA/RACA: 71.9°
- f no.:**
  - RYAA/RAAA: F/3.0
  - RYCA/RACA: F/2.8
- focal length:**
  - RYAA/RAAA: 1.15 mm
  - RYCA/RACA: 1.10 mm
- input clock frequency:** 6 - 27 MHz, 54 MHz
- max S/N ratio:** 38 dB
- dynamic range:** 66 dB
- maximum image transfer rate:**
  - VGA (640x480): 30 fps
  - CIF (352x288): 30 fps
  - QVGA (320x240): 60 fps
  - QCIF (176x144): 60 fps
- sensitivity:** 960 mV/lux-sec
- scan mode:** progressive
- maximum exposure interval:** 511 x  $t_{\text{row}}$
- pixel size:** 1.75  $\mu\text{m}$  x 1.75  $\mu\text{m}$
- dark current:** 10 mV/sec @ 60°C junction temperature
- image area:** 1148  $\mu\text{m}$  x 861  $\mu\text{m}$
- package dimensions (including ball height):**
  - RYAA: 3470 x 2950 x 2760  $\mu\text{m}$
  - RAAA: 3179 x 2815 x 2600  $\mu\text{m}$
  - RYCA: 3450 x 2820 x 2350  $\mu\text{m}$
  - RACA: 3180 x 2820 x 2060  $\mu\text{m}$

## Functional Block Diagram



4275 Burton Drive  
Santa Clara, CA 95054  
USA

Tel: +1 408 567 3000  
Fax: +1 408 567 3001  
www.ovt.com

OmniVision reserves the right to make changes to their products or to discontinue any product or service without further notice. OmniVision, the OmniVision logo and OmniPixel are registered trademarks of OmniVision Technologies, Inc. CameraCubeChip and OmniPixel3-HS are trademarks of OmniVision Technologies, Inc. All other trademarks are the property of their respective owners.

**OmniVision**

Version 1.7, March, 2013