

Applications

- Cellular and Picture Phones

Product Features

- OmniPixel3-HS structure using 0.11 μm 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



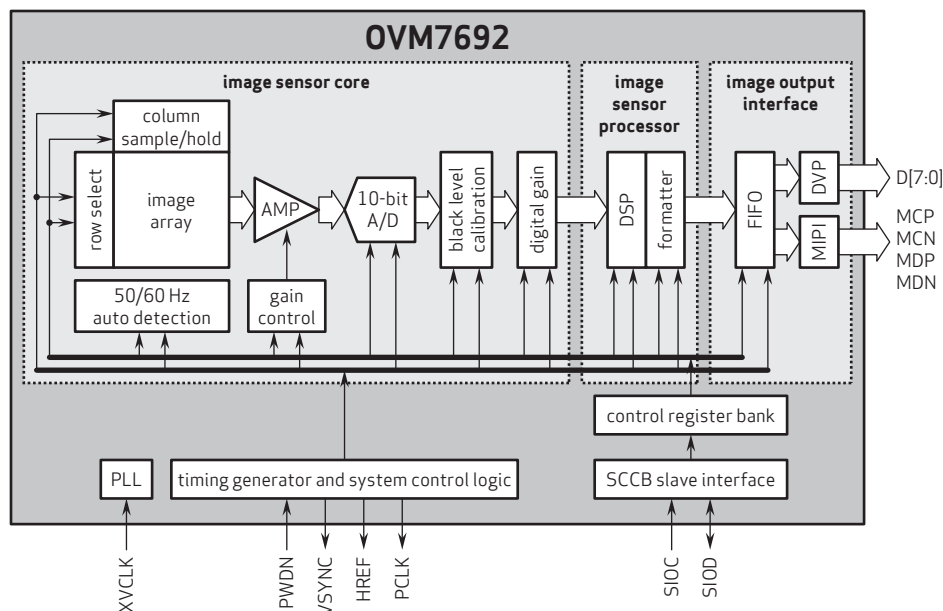
Ordering Information

- 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 μA
- 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_{row}
- pixel size:** 1.75 μm x 1.75 μm
- dark current:** 10 mV/sec @ 60°C junction temperature
- image area:** 1148 μm x 861 μm
- package dimensions (including ball height):**
 - RYAA: 3470 x 2950 x 2760 μm
 - RAAA: 3179 x 2815 x 2600 μm
 - RYCA: 3450 x 2820 x 2350 μm
 - RACA: 3180 x 2820 x 2060 μm

Functional Block Diagram



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