



OVM7692

VGA Product Brief



Feature-Rich VGA CameraCubeChip® for Mobile and Picture Phone Applications

The OVM7692 VGA CameraCubeChip® delivers proven performance and an extended feature set in an ultra-compact size to meet the performance and manufacturing requirements for a new generation of mobile and picture phones. The CameraCubeChip® is a complete VGA camera solution with DVP parallel or MIPI serial interface support and automatic luminance detection.

Featuring OMNIVISION's proprietary OmniPixel®3-HS architecture, the OVM7692 delivers industry leading low-light sensitivity of 960 mV/lux-sec. The image sensor's compact size is a critical characteristic for slim camera phones where the camera can be no thicker than the LCD housing.

The complete camera solution offered by the OVM7692 significantly simplifies design, integration and manufacturing, making it easier and cheaper to source. It is designed to withstand

multiple reflows during rework or dual-sided reflow to meet the stringent requirements of all handset manufacturers.

The OVM7692 CameraCubeChip® comes in a 1/13-inch optical format, offering automatic exposure control (AEC), automatic gain control (AGC), automatic 50/60 Hz luminance detection and automatic black level calibration (ABLC). It supports horizontal and vertical sub-sampling, mirror, flip, scaling, and windowing. The following image quality controls are included: color saturation, hue, gamma, sharpness (edge enhancement), lens correction, defective pixel canceling and noise canceling, as well as support for black sun cancellation. The OVM7692 can interface via DVP parallel output, MIPI serial output or SCCB, and has a programmable I/O drive capability and on-chip phase lock loop. Offering low power consumption, the OVM7692 has a 2.8V power supply and a built-in 1.5V regulator for sensor core power.

Applications

- Cellular and picture phones

Features

- Active array size:** 640 x 480
- Maximum image transfer rate:**
 - VGA (640 x 480): 30 fps
 - CIF (352 x 288): 30 fps
 - QVGA (320 x 240): 60 fps
 - QCIF (176 x 144): 60 fps
- Power supply:**
 - Analog: 2.6V ~ 3.0V
 - I/O pads: 1.7V ~ 3.0V
- Output interfaces:**
 - MIPI serial output interface
- Output formats:**
 - RAW 8-bit
 - RAW 10-bit (for MIPI only)
 - YUV422
 - RGB565/444
- Lens size:** 1/13"
- f no.:** 3.0
- Diagonal field-of-view (DFOV):** 64°
- Pixel size:** 1.75 µm x 1.75 µm

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