

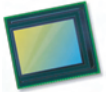
Applications

- Security and Surveillance
- Digital Video Camcorders (DVC)
- Digital Still Cameras (DSC)
- PC Multimedia
- 3D Cameras

Product Features

- 1.75 μm x 1.75 μm pixel with OmniBSI+™ technology for high performance (high sensitivity, low crosstalk, low noise)
- support for image sizes:
 - 5MP (2592x1944)
 - EIS 1080p (2112x1188)
 - 1080p (1920x1080)
 - EIS 720p (1536x864)
 - 720p (1280x720)
 - VGA (640x480)
- programmable controls for:
 - frame rate
 - mirror and flip
 - cropping
 - windowing
 - scaling
- image quality controls:
 - defect pixel correction
 - lens shading correction
 - black level calibration
- support for output formats:
 - 10-bit RAW RGB
- supports horizontal and vertical subsampling
- fast mode switching
- supports 2x2 binning, re-sampling filter
- supports 3D applications
- EIS 1080p scalar (allows scale down to EIS 1080p or any size below)
- standard serial SCCB interface
- up to 4-lane MIPI/LVDS serial output interface
- embedded 64 bytes 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
- supports alternate row HDR timing

OV5658



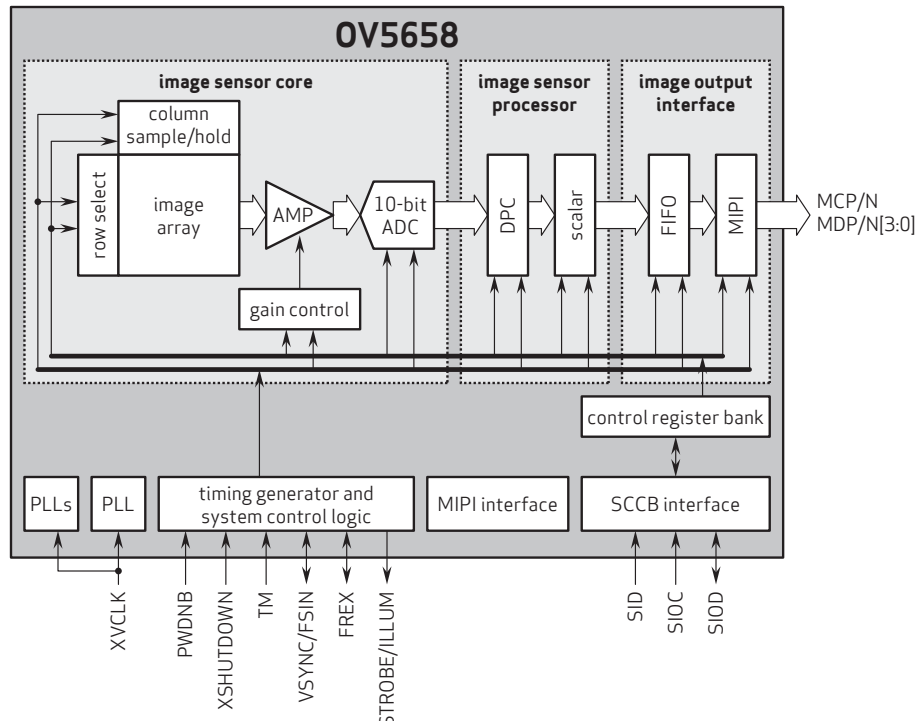
Ordering Information

- OV5658-G04A (color, chip probing, 200 μm backgrinding, reconstructed wafer with good die)
- OV5658-A66A (color, lead-free, 66-pin CSP)

Product Specifications

- active array size: 2592 x 1944
- input clock frequency: 6 - 27 MHz
- scan mode: progressive
- maximum image transfer rate:
 - 5MP (2592x1944): 30 fps
 - EIS 1080p (2112x1188): 30 fps
 - 1080p (1920x1080): 30 fps
 - EIS 720p (1536x864): 30 fps
 - 720p (1280x720): 60 fps
 - VGA (640x480): 90 fps
- sensitivity: 1200 mV/lux-sec
- max S/N ratio: 37 dB
- dynamic range: 73.7 dB @ 8x gain
- pixel size: 1.75 μm x 1.75 μm
- image area: 4592 μm x 3423 μm
- package/die dimensions:
 - CSP: 6360 μm x 5670 μm
 - COB: 6350 μm x 5660 μm
- power supply:
 - core: 1.5V
 - analog: 2.6 - 3.0V
 - I/O: 1.7 - 3.0V
- power requirements:
 - active: 150 mA (325 mW)
 - standby: 300 μA
 - XSHUTDOWN: 2 μA
- temperature range:
 - operating: -30°C to +70°C junction temperature
 - stable image: 0°C to +50°C junction temperature
- output interfaces:
 - 4-lane MIPI/LVDS serial
- output formats: RAW RGB data
- lens size: 1/3.2"
- lens chief ray angle: 11° non-linear

Functional Block Diagram



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