

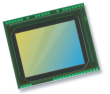
Applications

- Smartphones and Feature Phones
- Tablets
- PC Multimedia
- Wearables

Product Features

- 1.12 μm x 1.12 μm pixel
- 5MP at 30 fps
- programmable controls for frame rate, mirror and flip, cropping, and windowing
- supports images sizes:
 - 5MP (2592x1944)
 - Quad HD (2560x1440)
 - 1080p (1920x1080)
 - 720p (1280x720)
 - VGA (640x480), and more
- 2k bits of embedded one-time programmable (OTP) memory for customer use
- ultra low power mode (ULPM)
- support for output formats: 10-bit RGB RAW
- interleave row HDR output
- two-wire serial bus control (SCCB)
- MIPI serial output interface (1- or 2-lane)
- 2x binning support
- image quality control:
 - defect pixel correction
 - automatic black level calibration

OV5670



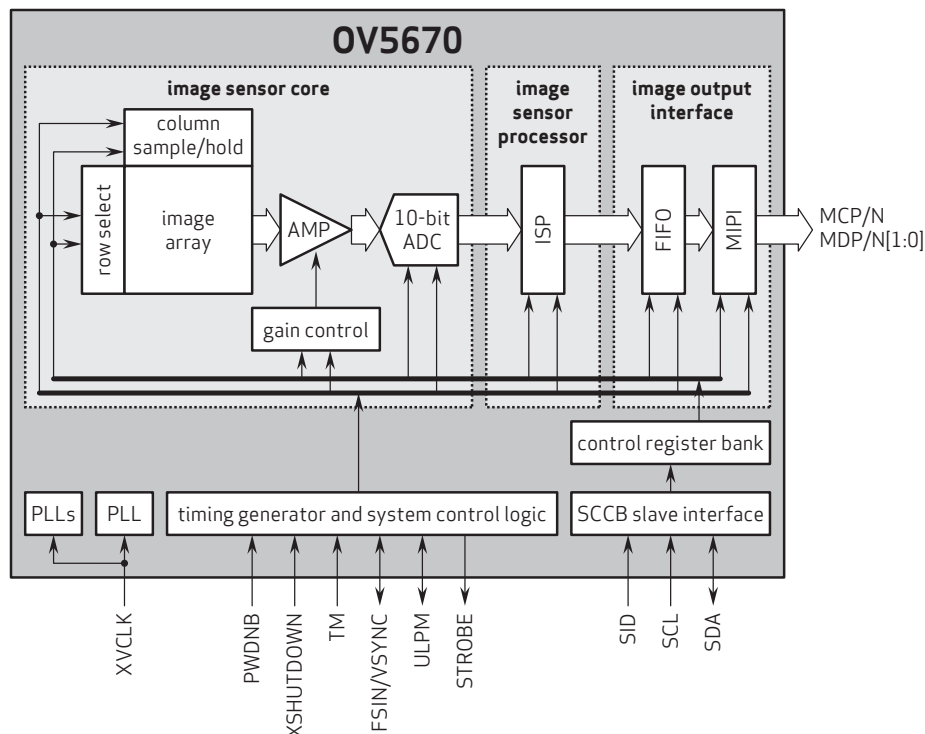
Ordering Information

- OV05670-G04A**
(color, chip probing, 200 μm backgrinding, reconstructed wafer)
- OV05670-H42A**
(color, lead-free, 42-pin CSP5)

Product Specifications

- active array size:** 2592 x 1944
- input clock frequency:** 6 - 27 MHz
- power supply:**
 - core: 1.14 - 1.26V (1.2V nominal)
 - analog: 2.6 - 3.0V (2.8V nominal)
 - I/O: 1.7 - 1.9V (1.8V nominal)
- max S/N ratio:** 35.6 dB
- dynamic range:** 68.4 dB @ 16x gain
- power requirements:**
 - active: 126 mW
 - standby: 166 μW
 - XSHUTDOWN: 1 μW
- maximum image transfer rate:**
 - 5MP (2592x1944): 30 fps
 - Quad HD (2560x1440): 30 fps
 - 1080p (1920x1080): 60 fps
 - 720p (1280x720): 60 fps
 - VGA (640x480): 120 fps
- temperature range:**
 - operating: -30°C to +85°C junction temperature
 - stable image: -20°C to +60°C junction temperature
- sensitivity:** 490 mV/lux-sec
- pixel size:** 1.12 μm x 1.12 μm
- output interfaces:** 2-lane MIPI serial output
- dark current:** 14 e-/sec @ 60°C junction temperature
- output formats:** 10-bit RAW RGB data
- image area:** 2945.7 μm x 2214 μm
- lens size:** 1/5"
- package/die dimensions:**
 - CSP5: 4080 μm x 3430.2 μm
 - COB: 4050 μm x 3400.2 μm
 - RW: 4100 μm x 3450.2 μm
- lens chief ray angle:** 31.24° non-linear

Functional Block Diagram



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