

Applications

- Digital Still and Video Cameras
- Security Cameras

Product Features

- 1.75 μm OmniBSI™ technology for high performance (high sensitivity, low crosstalk, low noise)
- industry's best low light sensitivity
- 720p at 60 fps and full HD 1080p at 30 fps
- 256 bytes of embedded one-time programmable (OTP) memory
- support for horizontal and vertical sub-sampling and 2 x 2 binning
- image quality controls: lens shading correction, 2-D defective pixel canceling
- support for output formats: 8/10-bit RAW RGB data
- support for video or snapshot operations
- support for internal and external frame synchronization for frame exposure mode
- standard serial SCCB interface
- digital video port (DVP) parallel output interface
- MIPI interface (two lanes)
- on-chip phase lock loop (PLL)
- embedded 1.5 V regulator for core power
- programmable I/O drive capability, I/O tri-state configurability
- support for black sun cancellation
- programmable controls for frame rate, AEC/AGC 16-zone size/position/weight control, mirror and flip, cropping, windowing, and panning

OV5653



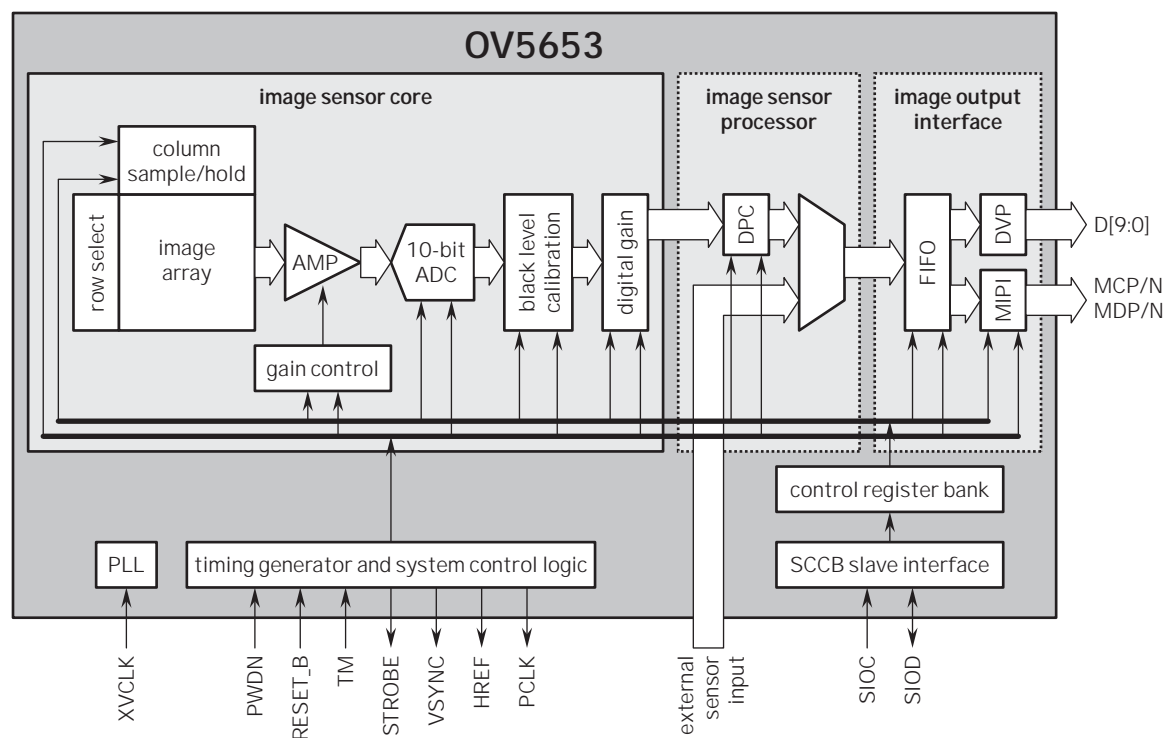
Ordering Information

- OV05653-A66A
(color, lead-free, 66-pin CSP3)

Product Specifications

- active array size: 2592 x 1944
- S/N ratio: 37 dB
- power supply:
 - core: 1.5 V $\pm 5\%$ (with embedded 1.5 V regulator)
 - analog: 2.6 - 3.0 V (2.8 V typical)
 - I/O: 1.8 V/2.8 V
- power requirements:
 - active: 150 mA
 - standby: 40 μA
- temperature range:
 - operating: -30°C to 70°C
 - stable image: 0°C to 50°C
- output formats: 8/10-bit RAW RGB output
- lens size: 1/3.2"
- lens chief ray angle: 11.2° non-linear
- input clock frequency: 6 - 27 MHz
- dynamic range: 69 dB
- maximum image transfer rate:
 - QSXGA (2592x1944): 15 fps
 - 1080p: 30 fps
 - 720p: 60 fps
 - VGA (640x480): 90 fps
 - QVGA (320x240): 120 fps
- sensitivity: >1300 mV/lux-sec
- shutter: rolling shutter
- pixel size: 1.75 μm x 1.75 μm
- well capacity: 7.5 Ke⁻
- dark current: <8 mV/sec @ 50°C
- image area: 4592 μm x 3423 μm
- package dimensions: 6505 μm x 6005 μm

Functional Block Diagram



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