

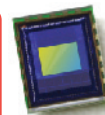
Applications

- Mobile Phones
- Notebooks and Webcams
- Entertainment
- Digital Still Cameras

Product Features

- ultra low power and low cost
- automatic image control functions:
 - automatic exposure control (AEC)
 - automatic white balance (AWB)
 - automatic black level calibration (ABLC)
- programmable controls for frame rate, AEC/AGC, mirror and flip, scaling and windowing
- image quality controls: color saturation, hue, gamma, sharpness (edge enhancement), lens correction, defective pixel canceling, and noise canceling
- support for output formats: RAW RGB, RGB565, CCIR656 and YCbCr422
- support for video or snapshot operations
- support for images sizes: VGA, scaling CIF and sub-sampling QVGA and scaling QCIF
- support for horizontal and vertical sub-sampling
- standard serial SCCB interface
- digital video port (DVP) parallel output interface
- on-chip phase lock loop (PLL)
- programmable I/O drive capability
- support for black sun cancellation
- built-in 1.5 V regulator for sensor core power
- suitable for module size of 4.5 mm x 4.5 mm

OV7690



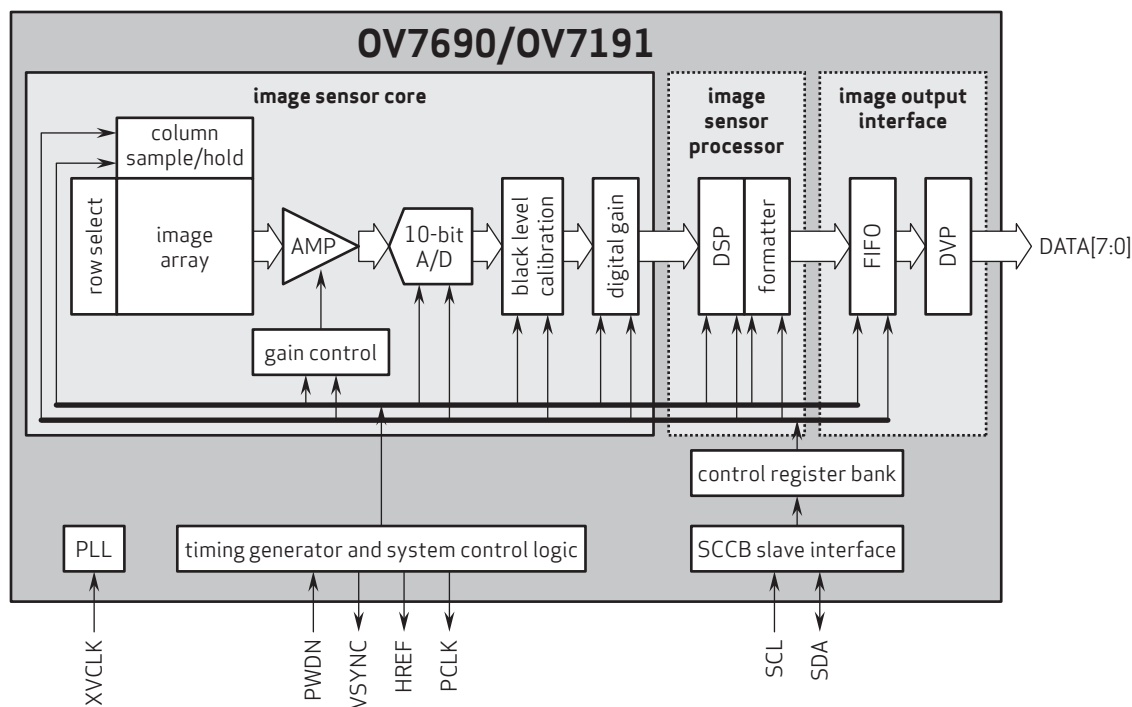
Ordering Information

- OV07690-A20A
(color, lead-free, 20-pin CSP3)

Product Specifications

- active array size: 640 x 480
- power supply:
 - analog: 2.6 - 3.0 V
 - I/O: 1.7 - 3.0 V
- power requirements:
 - active: 100 mW
 - standby: 20 μ A
- temperature range:
 - operating: -30°C to 70°C junction temperature
 - stable image: 0°C to 50°C junction temperature
- output formats: YUV422/YCbCr422, RGB565, CCIR656, 8/10-bit raw RGB data
- lens size: 1/13"
- lens chief ray angle: 25°
- input clock frequency: 6 - 27 MHz
- max S/N ratio: 38 dB
- dynamic range: 66 dB @ 8x gain
- maximum image transfer rate:
 - VGA (640x480): 30 fps
 - QVGA (320x240): 60 fps
- sensitivity: 960 mV/lux-sec
- shutter: rolling shutter
- scan mode: progressive
- maximum exposure interval: 511 x t_{row}
- gamma correction: programmable
- pixel size: 1.75 μ m x 1.75 μ m
- dark current: 4.7 mV/s @ 60°C junction temperature
- image area: 1148 μ m x 861 μ m
- package dimensions: 2467 μ m x 2917 μ m

Functional Block Diagram



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