

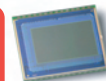
Applications

- Security
- Car DVR
- Notebooks
- Telepresence
- Mobile Phones
- Digital Still Cameras
- Webcams
- Medical
- Entertainment

Product Features

- high sensitivity for low-light operation
- ultra low power and low cost
- automatic image control functions:
 - automatic exposure control (AEC)
 - automatic gain control (AGC)
 - automatic white balance (AWB)
 - automatic band filter (ABF)
 - automatic black level calibration (ABLC)
- programmable controls:
 - frame rate
 - AEC/AGC 16-zone size/position/weight control
 - mirror
 - flip
 - windowing
- image quality controls:
 - lens correction
 - defective pixel canceling
- output support for raw RGB
- supports image sizes:
 - WXGA (1280x800)
 - 640 x 400
- support for horizontal and vertical sub-sampling
- support for black sun cancellation
- standard serial camera control bus (SCCB) interface
- digital video port (DVP) parallel output interface
- embedded one-time programmable (OTP) memory
- on-chip phase lock loop (PLL)
- built-in 1.5V regulator for core

OV9712-1D



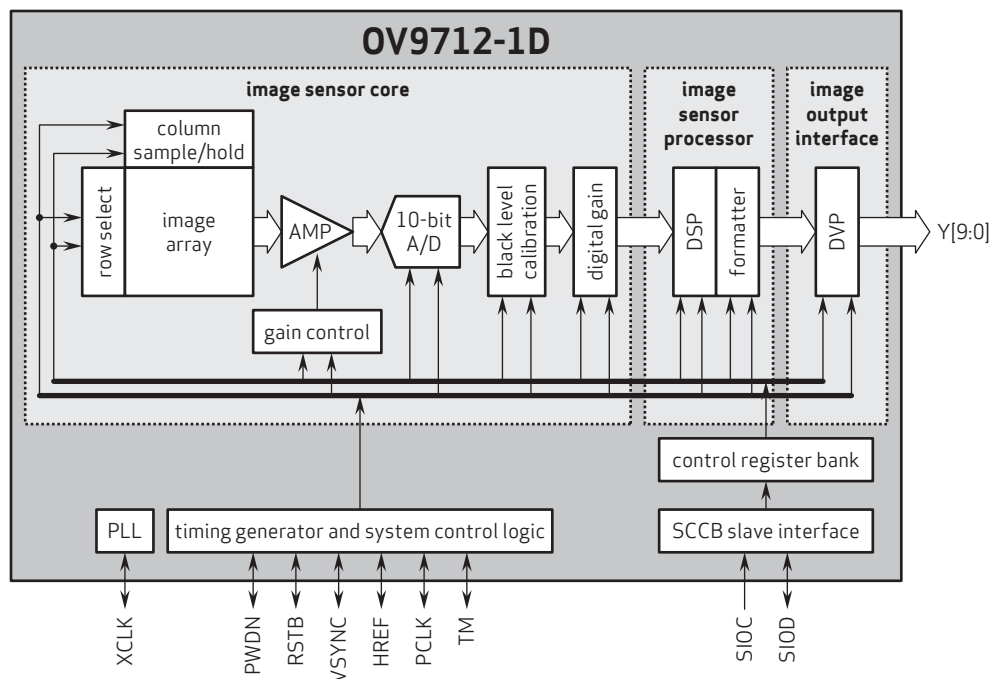
Ordering Information

- **OV09712-V28A-1D**
(color, lead-free, 28-pin CSP)
- **OV09712-G04A-1D**
(color, chip probing, 200 μ m backgrinding, reconstructed wafer)
- **OV09211-V28A**
(B&W, lead-free, 28-pin CSP)
- **OV09211-G04A**
(B&W, chip probing, 200 μ m backgrinding, reconstructed wafer)

Product Specifications

- **active array size:** 1280 x 800
- **power supply:**
 - core: 1.5 VDC \pm 5% (built-in regulator)
 - analog: 3.0 - 3.6V
 - I/O: 1.7 - 3.6V
- **power requirements:**
 - active: 110 mW
 - standby: 50 μ A
- **temperature range:**
 - operating: -30°C to +70°C junction temperature
 - stable image: 0°C to +50°C junction temperature
- **output formats:** 10-bit RAW RGB data
- **lens size:** 1/4"
- **lens chief ray angle:** 25° non-linear
- **input clock frequency:** 6 - 27 MHz
- **scan mode:** progressive
- **maximum image transfer rate:**
 - WXGA (1280x800): 30 fps
 - 640 x 400: 60 fps
- **sensitivity:** 3700 mV/Lux-sec
- **max S/N ratio:** 40 dB
- **dynamic range:** 69 dB @ 8x gain
- **maximum exposure interval:** 826 x t_{row}
- **pixel size:** 3 μ m x 3 μ m
- **image area:** 3888 μ m x 2430 μ m
- **package/die dimensions:**
 - CSP: 5415 μ m x 4415 μ m
 - COB: 5430 μ m x 4430 μ m

Functional Block Diagram



4275 Burton Drive
Santa Clara, CA 95054
USA

Tel: + 1 408 567 3000
Fax: + 1 408 567 3001
www.ovt.com

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