

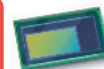
## Applications

- Notebooks
- Portable Media Players
- Cellular Phones
- Tablets
- PC Multimedia
- Digital Still Cameras
- Entertainment

## Product Features

- 1.4  $\mu\text{m}$  x 1.4  $\mu\text{m}$  pixel with OmniBSI technology for high performance (high sensitivity, low crosstalk, low noise)
- optical size of 1/6"
- automatic image control functions:
  - automatic exposure control (AEC)
  - automatic white balance (AWB)
  - automatic band filter (ABF)
  - automatic black level calibration (ABLC)
- programmable controls for frame rate, AEC/AGC 16-zone size/position/weight control, mirror and flip, cropping, windowing, and panning
- image quality controls: lens correction, 2-D defective pixel canceling
- support for output formats: 8/10-bit RAW RGB data
- support for video or snapshot operations
- support for horizontal and vertical sub-sampling
- standard serial SCCB interface
- digital video port (DVP) parallel output interface
- MIPI interface (two lanes)
- support for second camera interface
- 32 bytes of embedded one-time programmable (OTP) memory
- on-chip phase lock loop (PLL)
- embedded 1.5V regulator for core power
- programmable I/O drive capability, I/O tri-state configurability
- support for black sun cancellation
- suitable for module size of 6.5 x 6.5 x 3.5 mm

## OV2720



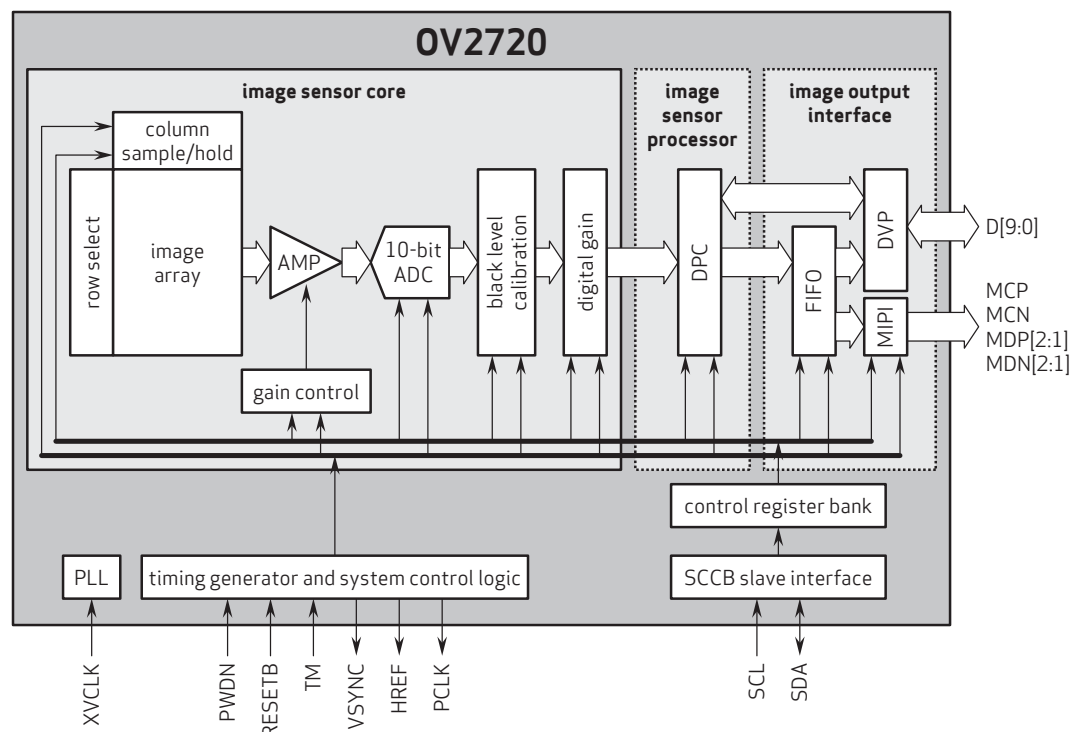
## Ordering Information

- OV02720-A50A  
(color, lead-free, 50-pin CSP3)
- OV02720-G04A  
(color, chip probing, 200  $\mu$ m  
backgrinding, reconstructed wafer)

## Product Specifications

- **active array size:** 1932 x 1092
- **power supply:**
  - **analog:** 2.6 ~ 3.0V (2.8V typical)
  - **core:** 1.5V ±5%  
(with embedded 1.5V regulator)
  - **I/O:** 1.7 ~ 3.0V
- **power requirements:**
  - **active:** 74 mA
  - **standby:** 15 µA
- **temperature range:**
  - **operating:** -20°C to 70°C junction temperature
  - **stable image:** 0°C to 50°C junction temperature
- **output formats:** 8/10-bit RAW RGB
- **lens size:** 1/6"
- **lens chief ray angle:** 28°
- **input clock frequency:** 6 ~ 27 MHz
- **max S/N ratio:** 35 dB
- **dynamic range:** 68 dB @ 8x gain
- **maximum image transfer rate:**
  - **1080p:** 30 fps
  - **720p:** 60 fps
  - **VGA:** 120 fps
  - **QVGA:** 240 fps
- **sensitivity:** 650 mV/lux-sec
- **shutter:** rolling shutter
- **maximum exposure interval:** 1118 x  $t_{\text{row}}$
- **pixel size:** 1.4 µm x 1.4 µm
- **dark current:** 5 mV/s @ 60°C junction temperature
- **image area:** 2732.8 µm x 1534.4 µm
- **package/die dimensions:**
  - **CSP3:** 5385 µm x 3285 µm
  - **COB:** 5400 µm x 3300 µm

## Functional Block Diagram



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