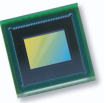# OV7695

Applications

- Cellular and Picture Phones
- PC Multimedia
- Tablets
- Toys
- Digital Video Cameras

Product Features

- support for image sizes:
  - VGA (640x480)
  - QVGA (320x240)
  - QQVGA (160x120)
  - HF (640x20)
- support for output formats:
  YUV4:2:2 through MIPI
- on-chip phase lock loop (PLL)
- built-in 1.5V regulator for digital block
- capable of maintaining register values at software power down
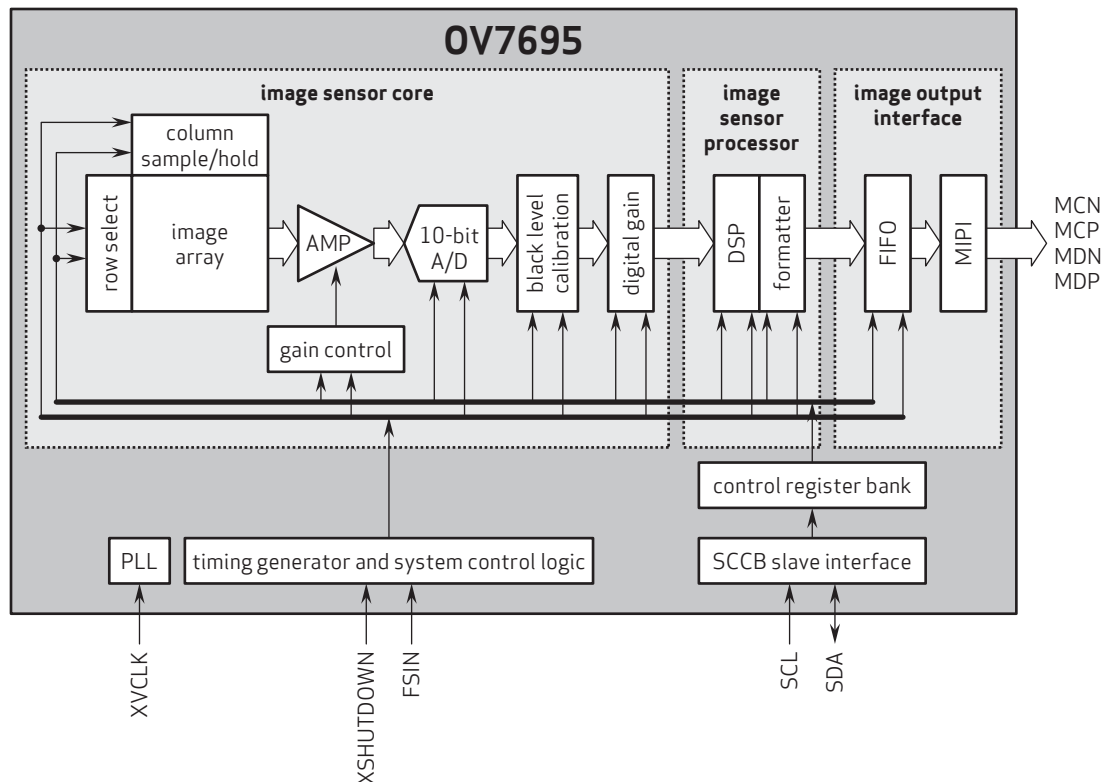- programmable controls for frame rate, mirror and flip, AEC/AGC, and windowing
- support for horizontal and vertical sub-sampling
- automatic image control functions:
  - automatic exposure control (AEC)
  - automatic white balance (AWB)
  - automatic black level calibration (ABLC)
- image quality controls: defect pixel correction and lens shading correction
- support for black sun cancellation
- standard serial SCCB interface
- parallel I/O tri-state configurability and programmable polarity

Product Specifications

- **active array size:** 656 x 496
- **power supply:**
  - **core:** 1.5V DC ±5% (internal regulator)
  - **analog:** 2.8V ±5%
  - **I/O:** 2.8V, 1.8V
- **temperature range:**
  - **operating:** -30°C to 70°C junction temperature
  - **stable image:** 0°C to 50°C junction temperature
- **output formats:** YUV422
- **lens size:** 1/13"
- **lens chief ray angle:** 26°
- **input clock frequency:** 6 - 27 MHz
- **max S/N ratio:** 35.9 dB

- **dynamic range:** 69.2 dB @ 16x gain
- **maximum image transfer rate:**
  - **VGA (640x480):** 30 fps
  - **QVGA (320x240):** 60 fps
  - **QQVGA (160x120):** 120 fps
  - **HF (640x20):** 120 fps
- **sensitivity:** 1000 mV/lux-sec
- **scan mode:** progressive
- **maximum exposure interval:** 536 x t_{ROW}
- **pixel size:** 1.75 µm x 1.75 µm
- **image area:** 1148 µm x 868 µm
- **package dimensions:**
  - **CSP3:** 2370 µm x 2300 µm

Functional Block Diagram