OV7739

Applications

- Mobile Phones
- Notebook PC
- Netbook
- Games

Product Features

- ultra-thin (3 mm) module z-height
- excellent low light performance 3300 mV/lux-sec
- support for multiple interfaces including parallel and MIPI serial output
- automatic image control functions:
  - automatic exposure control (AEC)
  - automatic gain control (AGC)
  - automatic white balance (AWB)
  - automatic band filter (ABF)
  - automatic 50/60 Hz luminance detection
  - automatic black level calibration (ABLC)
- programmable controls for frame rate, mirror and flip, scaling, cropping, and windowing
- image quality controls: color saturation, hue, gamma, sharpness (edge enhancement), lens correction, defective pixel canceling, and noise canceling
- support for output formats: 8/10-bit RAW RGB, CCIR656 and YUV422
- support for horizontal and vertical sub-sampling
- support for images sizes: VGA and any arbitrary size scaling down from VGA
- support for binning
- support for external frame synchronization
- standard serial SCCB interface
- embedded one-time programmable (OTP) memory for part identification, etc.
- on-chip phase lock loop (PLL)
- programmable I/O drive capability
- built-in 1.5V regulator for core

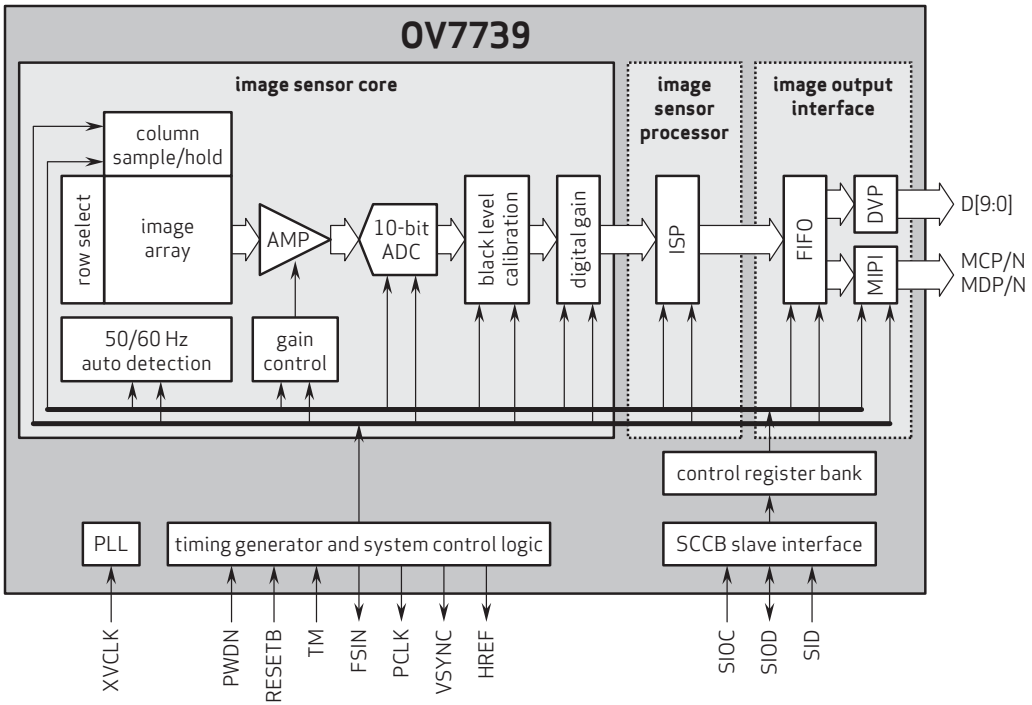
Ordering Information

- **OV07739-A34A** (color, lead-free, 34-pin CSP3)
- **OV07739-A34T** (color, lead-free, 34-pin CSP3 high temp)
- **OV07739-G04A** (color, chip probing, 200 µm backgrinding, reconstructed wafer)

Product Specifications

- **active array size:** 640 x 480
- **power supply:**
  - **core:** 1.5 VDC ±5% (internal regulator)
  - **analog:** 2.6 - 3.0 V (2.8 V typical)
  - **I/O:** 1.7 - 3.0 V
- **temperature range:**
  - **operating:** -30° C to 70° C junction temperature
  - **stable image:** 0° C to 50° C junction temperature
- **output formats:** 8/10-bit RAW RGB, 8-bit YUV
- **lens size:** 1/7.5"
- **lens chief ray angle:** 27.5°
- **input clock frequency:** 6 - 27 MHz
- **S/N ratio:** 38 dB
- **dynamic range:** 68 dB @ 8x gain
- **maximum image transfer rate:**
  - **VGA (640 x 480):** 30 fps
  - **QVGA (320 x 240):** 60 fps
  - **QQVGA (160 x 120):** 120 fps
- **sensitivity:** 3300 mV/lux-sec
- **maximum exposure interval:** 508 x t_{ROW}
- **dark current:** 10 mV/s @ 60°C junction temperature
- **pixel size:** 3 µm x 3 µm
- **image area:** 2016 µm x 1488 µm
- **package/die dimensions:**
  - **CSP3:** 3985 µm x 3385 µm
  - **RW:** 4000 µm x 3400 µm

Functional Block Diagram



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