

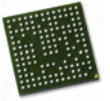
Applications

- Stand Alone 3D Bridge Chip for HD Sensors

Product Features

- interfaces:
 - four one-lane MIPI receiver for video input
 - can combine to dual 2-lane video input
 - one channel two-lane MIPI transmitter for video output
 - up to 400 kHz SCCB with 13 MHz - 26 MHz input clock
 - three general purpose IO (GPIO)
 - one open drain output CMD_RDY
- on-chip PLLs:
 - system PLL - input clock frequency ranges from 13 MHz to 26 MHz
 - MIPI speed - 5x or 10x of system clock for raw, 4x or 8x of system clock for YUV
- image signal processor (ISP)
 - AEC/AGC/AWB
 - two ISPs, one for each input video stream
 - max resolution: 1280 x 800
 - max frame rate: 60 fps at 720p, 120 fps at VGA, 240 fps at QVGA
 - defect pixel correction (DPC)
 - lens shading correction (LENC)
- SCCB:
 - one SCCB master to control sensors
 - one SCCB slave to take the commands from host controller
 - 7-bit SCCB slave device ID is fixed to 0x35 (0x6A for write, and 0x6B for read)
 - supports SCCB clock 100 kHz and 400 kHz
- data format:
 - input: raw
 - output: raw 8/10-bit, YUV422
- microcontroller:
 - 8-bit microcontroller running at the system clock
 - 16 KByte program memory
- power supply:
 - 1.8V for DOVDD, 2.8V for MIPI and PLL analog
 - internal regulator generates 1.2V DVDD from DOVDD for the digital core circuit
 - hardware standby mode: initiated by pulling PWDN high, whole system halts and input clock is gated
 - software standby mode: initiated by register, whole system except the SCCB slave block halt

OV680



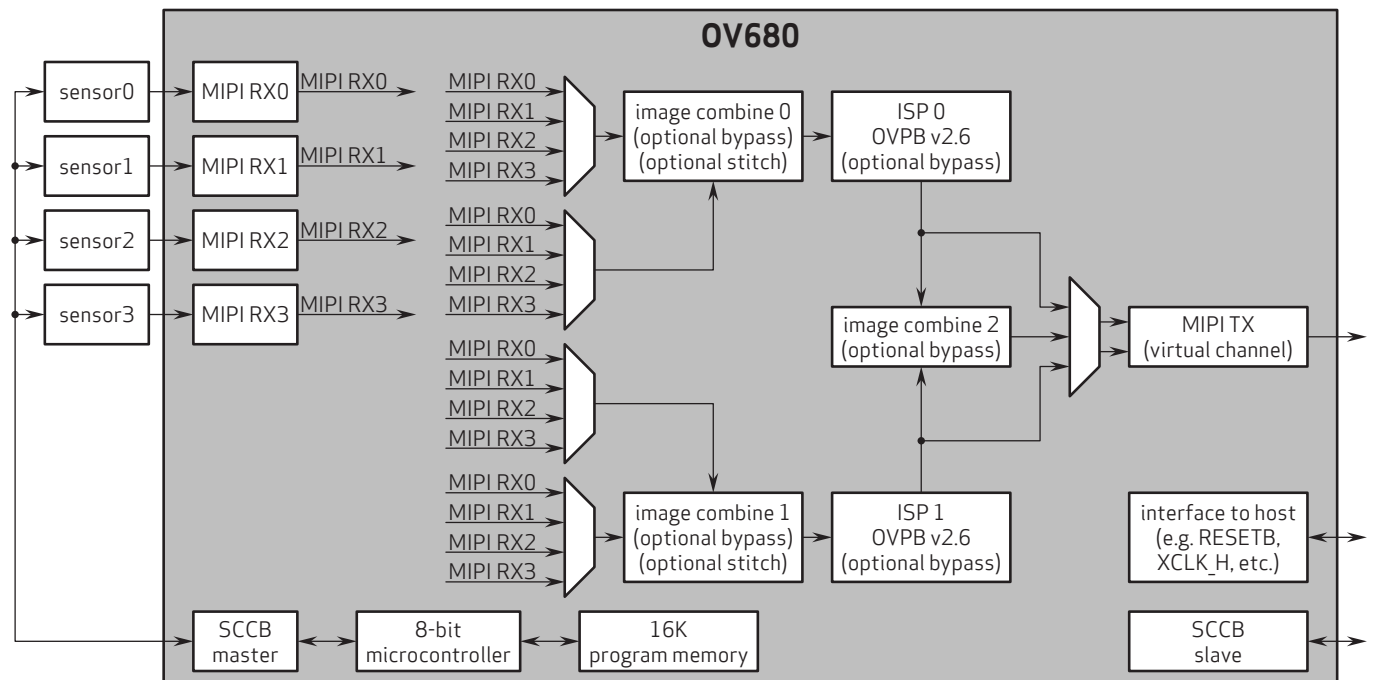
Ordering Information

- OV00680-B64G
(lead-free, 64-pin BGA)

Product Specifications

- power supply:
 - core: 1.2V
 - analog: 1.8V
 - I/O: 1.8V
- output formats:
 - 8-bit and 10-bit RAW RGB data
 - YUV422 data
- input clock frequency: 6 - 27 MHz
- maximum image transfer rate: 120 fps
- power requirements:
 - hardware standby: 75 μ W
- temperature range:
 - operating: -30°C to +70°C junction temperature
- package dimensions:
 - 5000 μ m x 4500 μ m

Functional Block Diagram



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Version 1.0, March, 2017