

OV580 3D bridge chip product brief

Stand Alone ISP Bridge for High Definition 3D Applications



available in a lead-free package

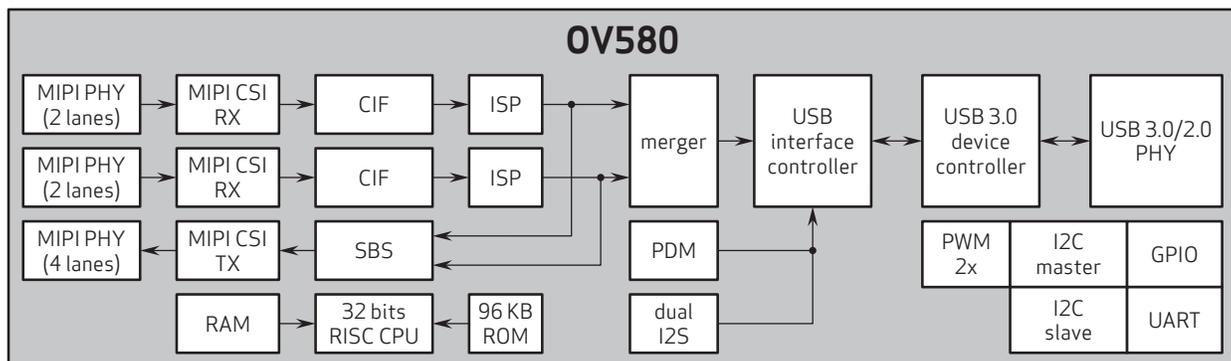
OmniVision's OV580 is an image signal processor (ISP) bridge chip for high definition (HD) 3D applications. The OV580 includes a built-in-advanced ISP for high-quality image and video streaming. It accepts two video inputs from MIPI camera serial interfaces and supports up to 1080p HD at 30 frames per second (fps) or 1280 x 800 pixels operating at 60 fps for dual streaming 3D applications in both RAW and YUV format.

Additionally, dual 2-lane MIPI input interfaces can be combined to form a single 4-lane MIPI input to convert a large resolution MIPI sensor to USB 3.0 output.

Find out more at www.ovt.com.



Functional Block Diagram



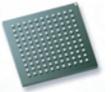
Applications

- Stand Alone 3D ISP Chip

Product Features

- supports a maximum 3MP sensor input or EIS 1080p (maximum input width is 2208 pixels and maximum input height is 1536 lines) for ISP process
- supports dual 2-lane MIPI RX interface with maximum data transfer rate of 800 Mbps (MIPI RX 2x2 lane can combine dual 2-lane to single 4-lane MIPI RX to receive higher resolution sensor input, such as 8MP, 13MP sensors)
- supports RAW8, RAW10, RAW12 and YUV422 format input
- supports video class and audio class based on USB 3.0 interface
- built-in advanced image signal processor (ISP) for high quality images and video streaming, which features include:
 - AWB
 - AEC/AGC
 - AFC
 - DNS
 - gamma
 - special digital effects (SDE)
- supports two sets of external I2S audio input interface
- supports one MIPI TX 4-lane interface
- supports 3D mode processed images of up to 1920x1080 @ 30 fps or 1280x800 @ 60 fps
- embedded 32-bit RISC processor with 96 KB program memory
- on-chip PLL with an input clock frequency of 20 MHz
- embedded 1.2V regulator, that supports a typical 240 mA current and maximum 480 mA current
- supports 1K bits of one time programmable memory (OTP)
- supports two sets of SCCB master and one set of SCCB slave
- core 1.2 power can be supplied by external power supply or internal regulator

OV580



Ordering Information

- OV00580-B21G-1C
(lead-free, 121-pin BGA)

Product Specifications

- **power supply:**
 - core: 1.2V ±10%
 - analog: 1.8V ±10% (MIPI) / 3.3V ±10% (USB)
 - I/O: 3.3V / 2.5V / 1.8V ±10%
- **temperature range:**
 - operating: -30°C to +70°C ambient temperature
- **package dimensions:** 8 x 8 x 1.2 mm
- **power requirements:**
 - active: 460 mW
 - standby: 1.7 mA

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