Chipsmall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!
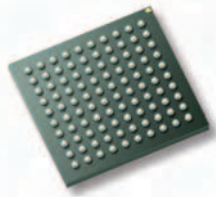

Contact us

OV490 companion ISP product brief

High-Quality Image and Video Processing for the Next Generation of Advanced Driver Assistance Systems (ADAS)

lead free

available in a lead-free package

The OV490 is a new powerful companion chip that brings improved high dynamic range (HDR) functionality as well as high-quality image and video processing to next-generation advanced driver assistance systems (ADAS). Working in conjunction with other high-performance image sensors, the OV490 enables extremely flexible system partitioning to support a number of advanced automotive features.

OmniVision's OV490 enables simultaneous output of fully processed YUV or RGB for display-based applications and RAW data for machine-vision downstream processing. It also incorporates unique architecture that is capable of processing two video pipelines, resulting in reduced bill-of-materials.

The OV490 contains a well-defined feature set to fulfill Automotive Safety Integrity Level (ASIL) according to ISO 26262. The companion chip fits into a BGA package, and has completed AEC-Q100 Grade-2 qualifications.
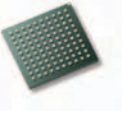
Find out more at www.ovt.com.

OmniVision.

Applications

- Rear View Camera
- Surround View System
- Camera Monitoring System

OV490

Product Features

- AEC-Q100 grade 2 qualified
- feature set optimized for next generation surround view applications
- simultaneous output of fully processed YUV for display based applications and RAW only to enable machine vision downstream processing
- parallel processing of two input streams
- industry leading HDR technology, third generation HDR technology allows capturing of more details in bright and dark environments
- JTAG boundary scan
- high speed serial data transfer with MIPI CSI-2
- embedded information including: frame counter, temperature and register data in each image to enable critical automotive safety applications
- industry's first features to improve image harmonization and synchronization for surround view applications
- SCCB master interface for automatic sensor configuration at power-on
- SCCB slave interface for OV490 configuration by host
- on chip PLL to generate stable internal clock frequency
- on chip voltage regulator 3.3V/1.8V to 1.2V
- brown-out detection circuit and output flag
- embedded 32-bit RISC processor for high performance and great flexibility
- supports 1K bits of one time programmable memory (OTP)
- advanced ISP for high quality image capturing and video streaming
- advanced auto white balance (AWB)
- AEC/AGC with statistical data from hardware engine and algorithm running on RISC
- support of four user-defined ROI windows for statistics
- DNS (RAW de-noise) and CIP (de-mosaic)
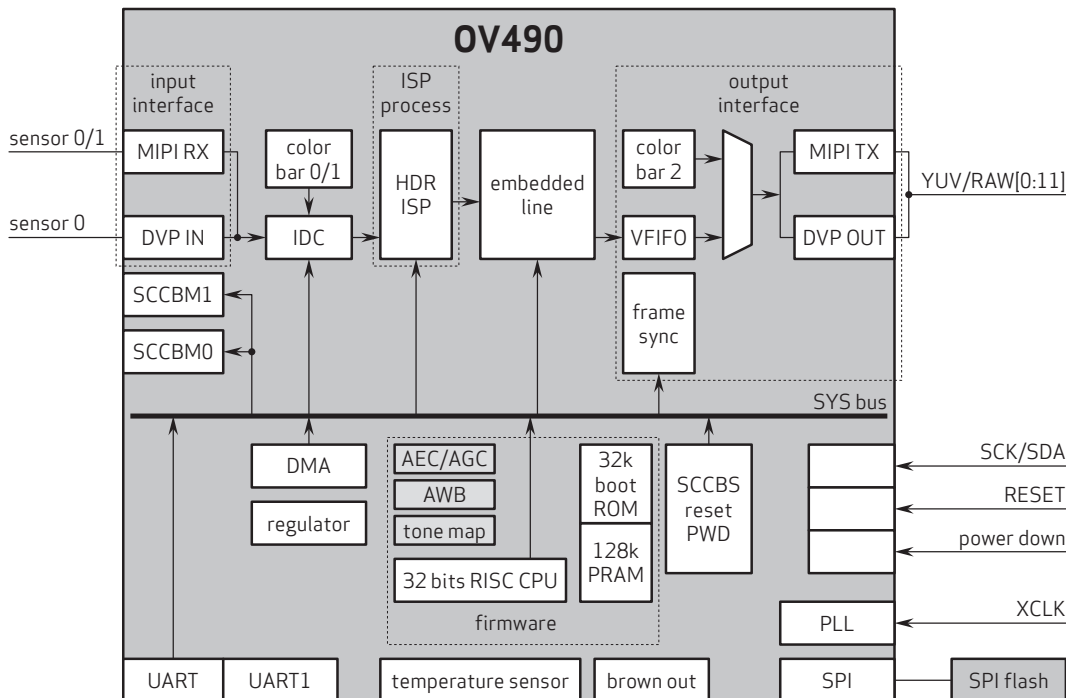- supports power cut mode designed for power saving during system quiescence

Product Specifications

- power supply:
  - core: 1.2V ±10%
  - I/O: 1.8V ±10% or 3.3V ±10%
- power requirements: 250 mA
- temperature range:
  - operating: -40°C to +105°C ambient temperature and -40°C to +125°C junction temperature
- package dimensions: 7 mm x 7 mm

Functional Block Diagram

OmniVision®

Version 1.4, April, 2018