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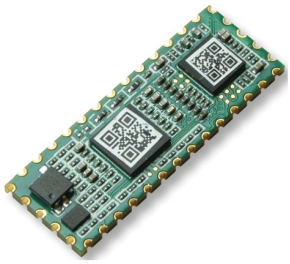

OMNIVISION OS04D10 High Performance Low-Power 2K 4 Megapixel Image Sensor Owner's Manual

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OS04D10
4 megapixel product brief

Contents

OS04D10 High Performance Low-Power 2K 4 Megapixel Image Sensor

High-performance, Low-power 2K 4-megapixel Image Sensor for Consumer Security and Surveillance Cameras
The OS04D is a 4-megapixel (MP) image sensor that brings 2K resolution digital images and high-definition (HD) video at 30 frames per second (fps) to IP and HD analog security cameras, including smart home, doorbell and baby monitoring devices. The OS04D CMOS image sensor utilizes a high-performance backside-illuminated (BSI) pixel while also providing 40% power consumption savings, as well as improvements of over 30% in signal-to-noise ratio (SNR1) and 40% in sensitivity when compared with its predecessor.
The OS04D image sensor's 2.0-micron (µm) BSI pixel is based on OMNIVISION's Purace® Plus technology and enables higher sensitivity, ultra-low noise and better overall image quality. Select conversion gain (SCG) allows the sensor to flexibly select low and high conversion gain depending on the lighting conditions. On-chip auto explorer control (AEC) and auto gain control (AGC) further accelerate system-on- chip (SoC) booting time. Low power consumption is beneficial for battery operated devices, especially doorbell security cameras. It comes in a cost-effective 1/3-inch optical format and is pin-to-pin compatible with OMNIVISION's OS04L image sensor as well as other new products that will be launched in the future.
The OS04D supports MIPI interfaces.
Find out more at **www.ovt.com**.

Applications

Ordering Information

- OS04D10-A44A-001A-Z (color, lead-free) 44-pin CSP Product Features
- security surveillance systems
- IP cameras
- HD analog cameras

Technical Specifications

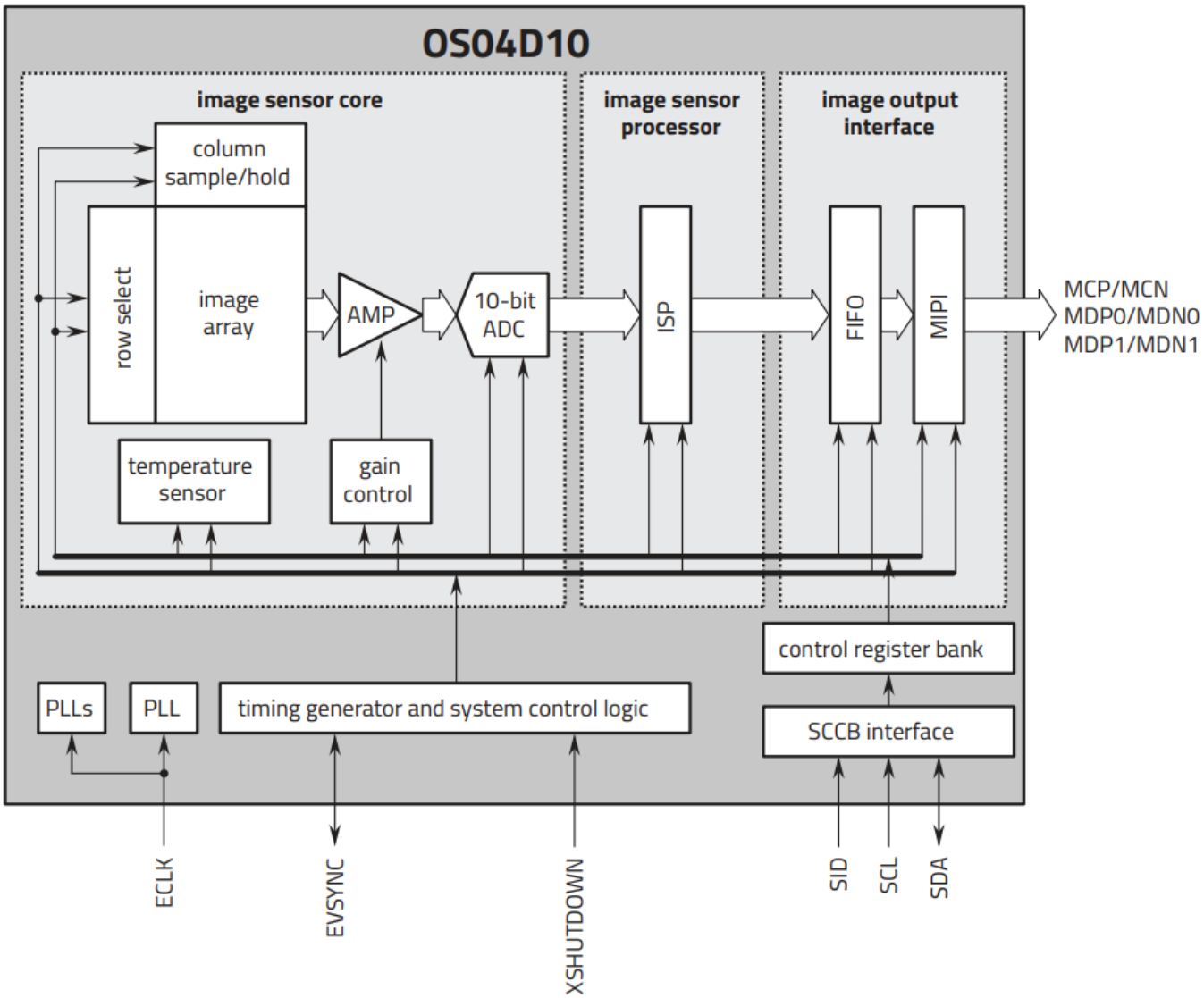
- active array size: 2560 x 1440
- maximum image transfer rate: – 2568 x 1448:30 fps

- power supply: – analog: 2.8V – I/O: 1.8V – core: 1.2V
- power requirements: – active: -76 mW – standby: 5 PA
- output interfaces: 10-bit 2-lane MIPI
- out formats: 10-bit RAW RGB
- temperature range: – operating: -30°C to +85°C
- junction temperature –
- stable: -20°C to +60°C junction temperature
- lens size: 1/3″
- lens chief ray angle: 12° linear
- scan mode: progressive
- pixel size: 1.998 pm x 1.998 pm
- image area:
  5130.864 pm x 2893.104 pm

Product Features

- programmable controls:
  – frame rate
  – mirror and flip
  – cropping
  – windowing
- supports 2×2 color binning function
- support for output format: 10-bit 2-lane MIPI TX
- SCCB control interface for register programming
- supports MIPI serial output interface (1-lane/2-lane)
- dynamic DPC
- supports image sizes: – 2568 x 1448 @ 30 fps
- supports automatic black level calibration
- supports multi-camera synchronous function
- supports fast boot function

Functional Block Diagram



https://www.ovt.com/products/os04d10/

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Documents / Resources

	OMNIVISION OS04D10 High Performance Low-Power 2K 4 Megapixel Image Sensor [pdf] Owner's Manual OS04D10 High Performance Low-Power 2K 4 Megapixel Image Sensor, OS04D10, High Performance Low-Power 2K 4 Megapixel Image Sensor, 4 Megapixel Image Sensor

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