



OV02G10

2-megapixel product brief

1/2.9" Color 2-Megapixel CMOS Image Sensor for Smart Home / IoT Consumer Cameras

The OV02G10 is a high quality, 1/2.9-inch 1080p CMOS image sensor providing high-definition (HD) video and high quality digital imaging for smart home / IoT consumer camera applications.

By introducing an advanced 2.8 μm pixel architecture, the OV02G10 achieves excellent low-light sensitivity, signal-to-noise ratio, full-well capacity, quantum efficiency and low-power consumption. The default mode and programmable mode allow for a more convenient way of controlling the parameters of frame size, exposure time, gain value, etc.

It also offers the following image control functions: mirror and flip, windowing, auto black level calibration, defective pixel correction, black sun cancellation, and other functions.

The OV02G10 supports a high frame rate of up to 30 fps @ 1080p format through the DVP interface or MIPI interface. These prominent features integrated in the OV02G10 allow for a best-in-class image sensor that will bring users vivid pictures and an excellent experience.

Find out more at www.ovt.com.



- OV02G10-A41A-001A (color, lead-free)
41-pin CSP

Applications

- security surveillance systems
- smart TVs
- DVRs
- IoT

Product Features

- programmable controls:
 - frame rate
 - mirror and flip
 - cropping
 - windowing
- supports 2x2 color binning function
- supports output formats: 10-bit RAW RGB
- SCCB control interface for register programming
- supports MIPI 2-lane serial output interface
- supports DVP 10-bit output interface
- supports image sizes: 1920 x 1080 @ 30 fps
- supports automatic black level calibration
- supports multi-camera synchronous function

Technical Specifications

- active array size: 1920 x 1080
- maximum image transfer rate:
 - 1920 x 1080: 30 fps
- power supply:
 - analog: 2.8V
 - I/O: 1.8/2.8V
 - core: 1.5V
- power requirements:
 - active: 115 mW
 - standby: 10 μ A
- output interfaces:
 - 10-bit 2-lane MIPI/10-bit DVP
- temperature range:
 - operating: -30°C to +85°C junction temperature
 - stable image: -20°C to +60°C junction temperature
- output formats: 10-bit RAW RGB
- lens size: 1/2.9"
- lens chief ray angle: 34.04° non-linear
- scan mode: progressive
- pixel size: 2.8 μ m x 2.8 μ m
- image area: 5398.4 μ m x 3046.4 μ m

Functional Block Diagram

