

OS08B10

8-Megapixel Product Brief



1/1.252" Color 8-Megapixel CMOS Image Sensor with PureCel®Plus-S and Nyxel® Technologies

The OS08B10 is a 1/1.252" optical format, color 8-megapixel (3840 x 2160) high dynamic range (HDR) CMOS image sensor designed for the high-end security market.

The OS08B10 combines OMNIVISION's PureCel®Plus-S and Nyxel® NIR (near-infrared) technologies to extend dynamic range.

The OS08B10 has the option to output up to 12-bit, 30 fps video with 90 dB dynamic range from a single exposure (DCG™) plus with very short exposure. The sensor supports 3-exposure staggered HDR for >120 dB, but in this case, the HDR combination is done externally.

The OS08B10 performs sophisticated camera functions on-chip controlled via the serial camera control bus (SCCB) interface. These functions include black level correction (BLC), defect pixel correction (DPC), dual conversion gain (DCG™) combination, and piece-wise linear (PWL) image compression.

The OS08B10 enables advanced HDR imaging in a simple, cost effective system.

Applications

- Security cameras
- Action cameras
- High resolution consumer cameras

Features

- **Active array size:** 3840 x 2160
- **Maximum image transfer rate:**
  - 30x3 fps: UHD 4K2K
- **Power supply:**
  - Analog: 2.8V
  - Digital: 1.2V
  - I/O pads: 1.8V
- **Output interfaces:**
  Up to 4-lane MIPI CSI-2 or LVDS
- **Output formats:** single exposure HDR - 16-bit/14-bit combined RAW, 12-bit (PWL) compressed combined RAW; dual exposure HDR - 16-bit combined RAW + 12-bit VS RAW, 12-bit (PWL) compressed combined RAW + 12-bit VS RAW; 3-exposure HDR - 12-bit long exposure + 12-bit medium exposure + 12-bit short exposure
- **Lens size:** 1/1.252"
- **Pixel size:** 2.9 µm x 2.9 µm

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