

OS08E10

8-Megapixel Product Brief



8-Megapixel CMOS Image Sensor with PureCel®Plus and Nyxel® Technologies for Security Applications

OMNIVISION's OS08E10 is a 1.998-micron pixel, 8-megapixel (MP) resolution CMOS image sensor for both surveillance and home security cameras. When paired with the designer's selected platform, the OS08E10 can enable a system ultra low power mode for battery-powered cameras with always-on video (AOV) functionality. Additionally, it provides 3840 x 2160 high resolution with a 16:9 aspect ratio, while adding the premium near-infrared (NIR) and ultra low light, SNR1 performance of its combined Nyxel® and PureCel®Plus technologies. This sensor also offers multiple high dynamic range (HDR) options for the highest quality 8MP still and video captures of fast-moving objects at 60 frames per second. Both DCG HDR and staggered HDR are supported.

The OS08E10 is built on the PureCel®Plus pixel architecture to achieve a superior low-noise design.

OMNIVISION's industry-leading Nyxel® NIR technology, combined with its PureCel®Plus technology and multiple HDR options, enable the OS08E10 to work equally well in all lighting conditions. It can detect incident light in both the visible and NIR wavelengths, while producing precise color and monochrome images for security applications.

The OS08E10 supports an advanced process technology combined with AEC/AGC on sensor for increased AOV performance and reduced power consumption, also helping battery powered cameras and Wi-Fi/4G solar devices achieve continuous 24/7 and stable operation.

The OS08E10 70-pin CSP package is pin-to-pin compatible with other similar OMNIVISION 70-pin products.

Applications

- Security systems
- Action cameras
- High resolution consumer cameras

Features

- **Active array size:** 3840 x 2160
- **Maximum image transfer rate:**
  - 3840 x 2160: 60 fps (10-bit)
  - 3840 x 2160: 30 fps (12-bit)
  - 1920 x 1080: 120 fps (10-bit)
  - 960 x 540: 240 fps (10-bit)
- **Power supply:**
  - Analog: 2.8V
  - I/O: 1.8V
  - Core: 1.2V
- **Output interfaces:** 4-lane MIPI/LVDS (supports maximum speed up to 1560 Mbps / lane x 4), MIPI HDR; sub-LVDS supports staggered HDR, but not DCG combination + VS
- **Output formats:** 10/12-bit RGB RAW
- **Lens size:** 1/1.818"
- **Pixel size:** 1.998 µm x 1.998 µm

Version 1.0, June 2026

OMNIVISION®

4275 Burton Drive
Santa Clara, CA 95054
USA

Tel: + 1 408 567 3000
Fax: + 1 408 567 3001
www.ovt.com

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