



OS04E10

2048 x 2048 Product Brief



2K2K Square Resolution CMOS Image Sensor for Security Wide-Field-of-View and AR/VR/MR Pass-Through Cameras

OMNIVISION's OS04E10 is a 2K2K (2048 x 2048) square resolution CMOS image sensor designed for 1:1 aspect ratio security wide-field-of-view (dome, fisheye, and doorbell) and pass-through (AR/VR/MR) cameras. The OS04E10 is the industry's first image sensor with digital watermarking, a built-in anti-spoofing feature that ensures the original video source is not tampered with. The sensor captures real-time fast-moving video and

features always-on low-power mode at 512p for excellent pre-roll video recording capabilities.

The OS04E10 image sensor has a 2.0-micron pixel with a 1/3.111-inch optical format and is based on OMNIVISION's revolutionary PureCel®Plus technology, which reduces pixel crosstalk and noise for better color reproduction under low-light conditions. Its onboard Nyxel® near-infrared (NIR) technology ensures low to no ambient light image capture with IR source will result in clear and crisp images and provides opportunities for camera designers to extend battery life. The sensor's two-exposure staggered HDR mode increases dynamic range.

The OS04E10 supports MIPI and LVDS interfaces.

Applications

- Doorbell security cameras
- Dome / WFOV security cameras
- AR/VR/MR pass-through cameras
- Action cameras

Features

- **Active array size:** 2048 x 2048
- **Maximum image transfer rate:**
 - 2048 x 2048: 60 fps
- **Power supply:**
 - Core: 1.1V
 - Analog: 2.8V
 - I/O: 1.8V
- **Output interfaces:**
 - Up to 4-lane MIPI serial output interface
- **Output formats:** 10/12-bit RGB RAW
- **Lens size:** 1/3.111"
- **Pixel size:** 1.998 μm x 1.998 μm



Featuring
1:1 aspect ratio