



OH02B30

2-megapixel product brief

High-Resolution, Small Image Sensor for 3D Intraoral Dental Scanners

The new OH02B30 is a high-performance CMOS image sensor that provides the best image quality for three-dimensional (3D) intraoral dental scanners. It features a 1.12-micron pixel with a small size of 2.45 mm x 2.45 mm built on OMNIVISION's PureCel®Plus-S stacked-die technology.

The 2-megapixel (MP) OH02B30 sensor achieves 60 frames per second (fps), and at 720p resolution, 120 fps. It comes in a 1/7.3-inch optical format and has a MIPI high-speed digital interface for cameras in benchtop, standalone and portable intraoral scanners.

The OH02B30 is a low-power device that enhances patient comfort.

Find out more at www.ovt.com.



- OH02B30-A24A-001A (color, lead-free)
24-pin CSP

Applications

- dental applications

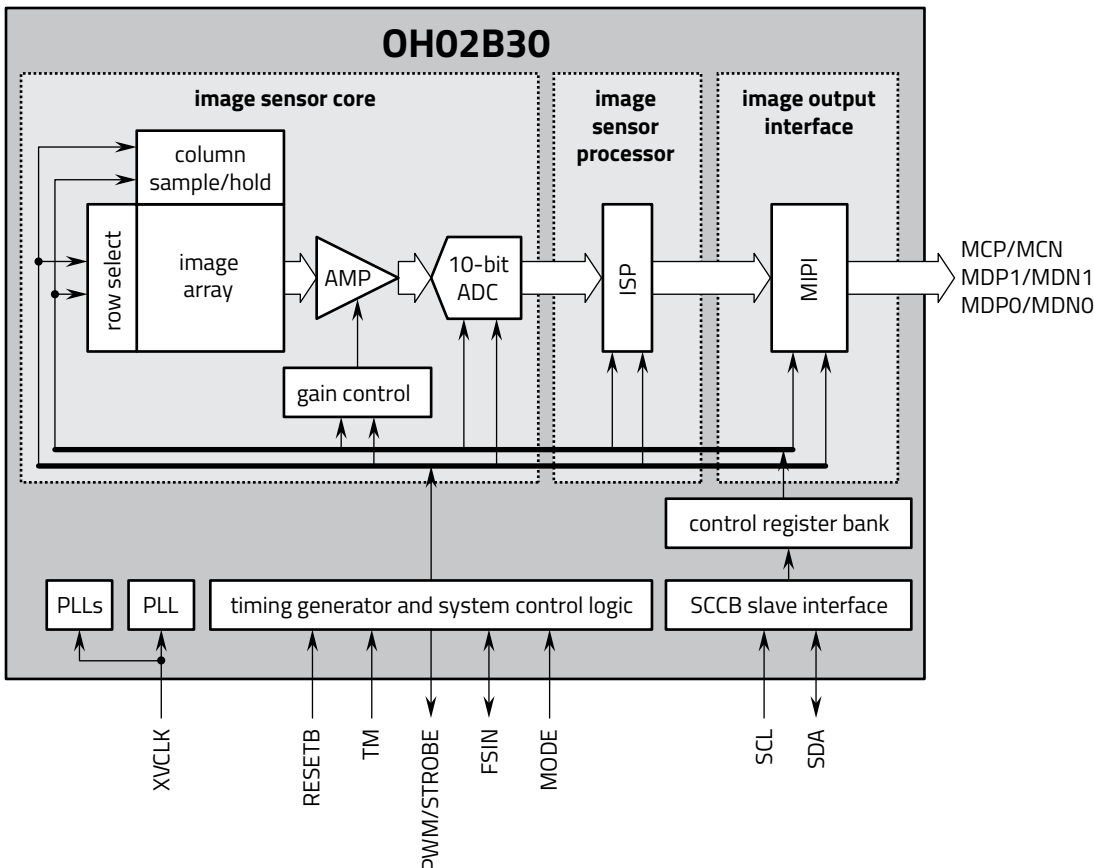
Technical Specifications

- active array size:** 1516 x 1516
- temperature range:**
 - operating: -30°C to +85°C junction temperature
 - stable image: 0°C to +60°C junction temperature
- maximum image transfer rate:**
 - 1500 x 1500: 60 fps
- power supply (mode 1):**
 - AVDD: 2.7V to 3.0V (2.8V nominal)
 - DVDD: 1.14V to 1.26V (1.2V nominal)
- power supply (mode 2):**
 - analog: 2.8V
 - core: 1.2V
 - I/O: 1.2V
- power requirements:**
 - active: 124 mW (1500 x 1500 @ 60 fps)
 - standby: 2 mA
- output formats:** 10-bit RGB RAW
- lens size:** 1/7.5"
- lens chief ray angle:** 32.54° non-linear
- scan mode:** progressive
- pixel size:** 1.116 μm x 1.116 μm
- image area:** 1691.856 μm x 1691.856 μm

Product Features

- automatic black level calibration (ABLC)
- programmable controls for:
 - frame rate
 - mirror and flip
 - binning
 - cropping
 - windowing
- support for dynamic DPC
- supports output formats: 10-bit RGB non-HDR
- supports horizontal and vertical subsampling
- supports typical images sizes:
 - 1500 x 1500
 - 1280 x 720
 - 960 x 540
 - 640 x 480
- 2-lane MIPI TX interface with speeds up to 1.0 Gbps/lane
- standard serial SCCB interface
- HDR support: stagger HDR 2 exposure timing
- two on-chip phase lock loops (PLLs)
- built-in temperature sensor
- 1.116 μm x 1.116 μm pixel

Functional Block Diagram



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