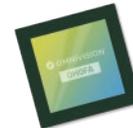




OH0FA

720 x 720 product brief



Industry's Highest-Resolution Image Sensor for ENT, Cardiac, Arthro, OB-GYN and Utero-Renal Endoscopes

OMNIVISION's OVMed® OH0FA is a high performance 0.93 x 0.93 mm analog image sensor in a 1/18 inch optical format. The sensor provides 720 x 720 resolution at 30 frames per second (fps)—the highest available resolution for ENT, cardiac, arthro, OB-GYN and utero-renal endoscopes, yielding unmatched visibility for surgeons to see and diagnose early-stage diseases.

Built on OMNIVISION's PureCel®Plus-S pixel technology, the OH0FA, with its 1.008 μm pixel size provides the high color fidelity and signal-to-noise ratio of 37.5 dB for crisper and more realistic medical images. Additionally, PureCel®Plus-S offers high full-well capacity, zero blooming and lower power consumption.

OMNIVISION's OVMed® product line includes medical-grade, trusted components that undergo comprehensive certification, qualification and testing. This increases the likelihood and speed of FDA certification for medical device OEMs, while providing hospitals, surgeons and patients with a high level of confidence in the endoscope device.

The OH0FA image sensor offers a wide range of resolution and frame rate combinations that can be selected based on the procedural requirements: 720 x 720 at 30 fps, 600 x 600 at 40 fps or 400 x 400 at 60 fps. The high signal-to-noise ratio of the image sensor results in sharper, crisper images with excellent color fidelity—so surgeons can see the most realistic images to better diagnose and treat disease.

Find out more at www.ovt.com.



- OH0FA10-A04A-Z (color, lead-free)
720 x 720 color analog RAW output image sensor
with AntLinX™ in 4-pin CSP package

Applications

- medical endoscopes
- medical and dental equipment
- security and surveillance
- toys and games
- wearable devices

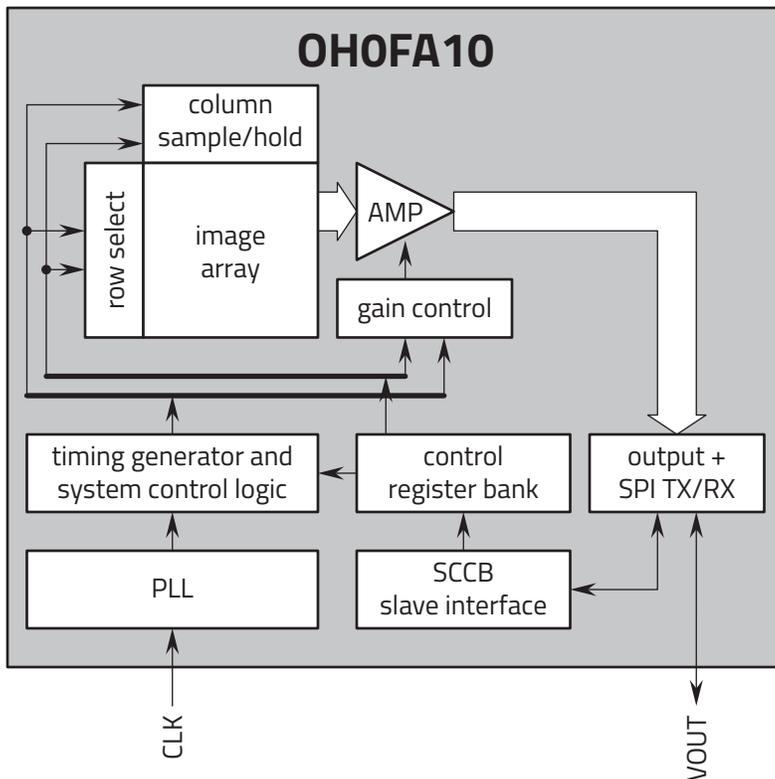
Technical Specifications

- active array size:** 720 x 720
- frame rate:**
 - 518 Kpixel (720x720): 30 fps
 - 360 Kpixel (600x600): 40 fps
 - 160 Kpixel (400x400): 60 fps
- power supply:**
 - analog: 3.3V ±5%
- temperature range:**
 - operating: -20°C to +70°C junction temperature
 - stable image: 0°C to +50°C junction temperature
- output format:** analog signal output
- optical size:** 1/17.5"
- lens chief ray angle:** supports lens up to 30° CRA
- scan mode:** progressive
- color mosaic:** RGB Bayer pattern
- pixel size:** 1.008 μm x 1.008 μm
- image area:** 733.824 μm x 733.824 μm
- package dimensions:** 950 μm x 950 μm

Product Features

- optical size of 1/17.5"
- AntLinX™ Analog output
- single 3.3V power supply
- on-chip PLL
- serial peripheral interface (SPI)
- exposure and gain control
- pseudo-global shutter (LED mode)
- PureCel®Plus-S pixel structure
- improved sensitivity, FWC, zero blooming, low noise, and low power consumption
- enhanced NIR sensitivity
- square aspect ratio
- minimum package size (total 4 pads)
- autoclavable
- 4 m drive distance

Functional Block Diagram



Note: For signal conversion from analog to a variety of digital outputs, please use OMNIVISION's OAH0428 ASIC bridge chip.

Version 1.2, February 2023

