



OV420 companion ASIC product brief



Compact Companion ASIC for Medical Imaging Applications



available in a lead-free package

The OV420 is a single chip solution for the OV6930-based medical applications. The OV420 provides an integrated analog-to-digital data conversion using a built-in A/D converter (ADC), black level calibration (BLC), lens correction (LENC), defect pixel correction (DPC), AEC/AGC and digital video parallel output (DVP). As shown in figure 2-1, the OV420 supports a standard SCCB interface to communicate with the system and manipulate the above mentioned functions.

During operation, the OV420 decodes the proprietary analog output from the OV6930 and digitizes it by an ADC. The generated digital signals will then be processed by a digital signal processor (DSP) and finally, standard DVP outputs are sent out.

Find out more at www.ovt.com.



Applications

- Medical Endoscopes
- Industrial Endoscopes
- Veterinarian Endoscopes

Product Features

- low cost, single-chip solution for the OV6930 medical sensor
- SCCB slave and master support
- high bandwidth ADC, supporting up to 16MHz
- supports 10-bit digital parallel output
- low voltage, 1.8V (core), 3.3V (analog) and 3.3V (I/O) operation
- external system clock or independent crystal operation
- auto gain/exposure control
- black level calibration (BLC)
- test pattern generator
- digital signal processor (DSP)
- RAW output with 10-bit parallel digital video port (DVP)

OV420



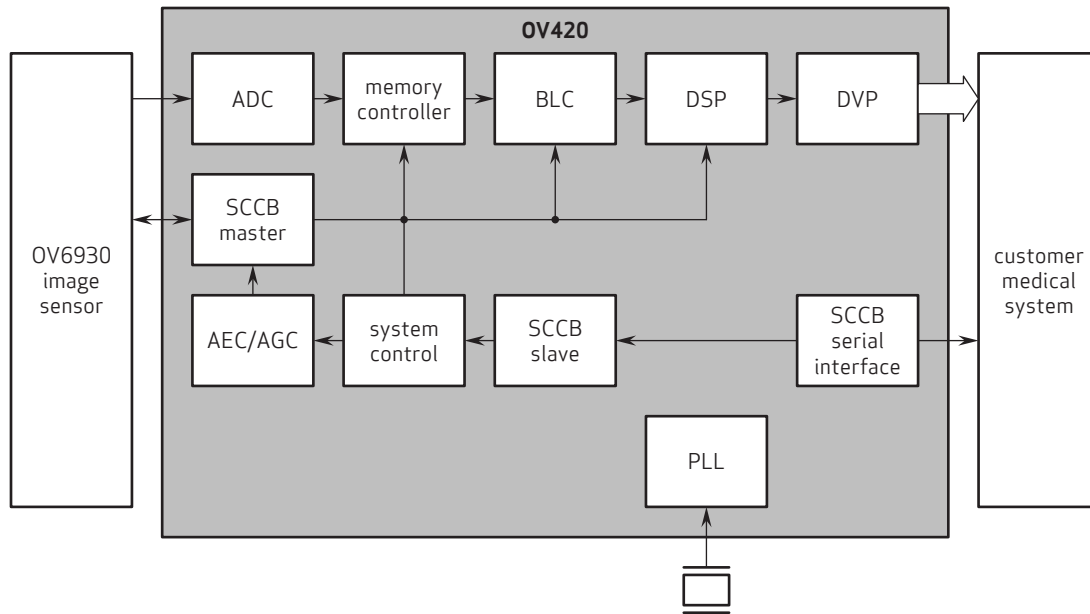
Ordering Information

- OV00420-A36G (lead-free, 36-pin wCSP™)

Product Specifications

- **power supply:**
 - core: 1.8V ±5%
 - I/O: 3.3V ±10%
 - analog: 3.3V ±10%
- **temperature range:** -30°C to +70°C
- **package dimensions:** 3.17 mm x 3.17 mm
- **power requirements:**
 - active: 16 mA (typical)
 - standby: 65 µA (typical)

Functional Block Diagram



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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