Data Sheet

ADSD3030

VGA, CMOS, Time of Flight, Backside Illumination Sensor

FEATURES

- 512 (horizontal) × 640 (vertical) pixel array
- 3.5 µm × 3.5 µm square pixels
- 1/6 inch optical format
- 4-wire SPI or 2-wire I^2C serial interface
- MIPI CSI-2 transmitter interface with support for 1 or 2 data lanes, programmable up to 2.5 Gbps per lane
- Dual, 3.3 V and 1.2 V external supplies, 1.8 V input and output section
- Die size: 3.749 mm ± 0.01 mm × 6.4544 mm ± 0.01 mm

APPLICATIONS

- Smartphones
- Augmented reality (AR) and virtual reality (VR)
- Machine vision systems (logistics and inventory)
- Robotics (consumer and industrial)

GENERAL DESCRIPTION

The ADSD3030 is a CMOS 3D Time of Flight (ToF)-based 3D depth and 2D visual light imager that is available for integration into 3D sensor systems. The functional blocks required for read out, which include analog-to-digital converters (ADCs), amplifiers, pixel biasing circuitry, and sensor control logic, are built into the chip to enable a cost-effective and simple implementation into systems.

The ADSD3030 interfaces electrically to a host system over a mobile industry processor interface (MIPI), Camera Serial Interface 2 (CSI-2) interface. A lens plus optical band-pass filter for the imager and an infrared light source plus an associated driver are required to complete the working subsystem.

FUNCTIONAL BLOCK DIAGRAM

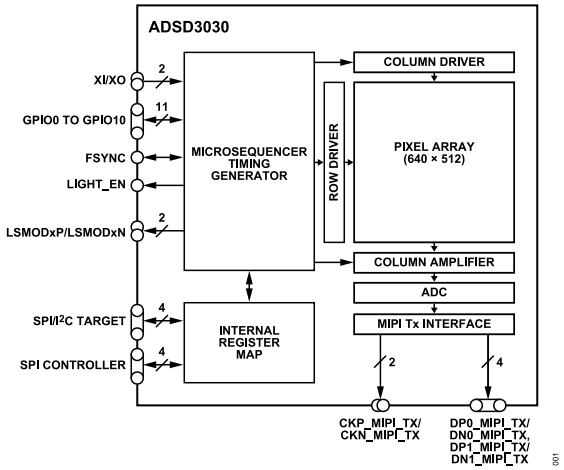

Figure 1. Functional Block Diagram

For more information about the ADSD3030, contact the Analog Devices, Inc., at tof@analog.com.

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