



GC4653 CSP

1/3" 4Mega CMOS Image Sensor

Datasheet

Beta 0.1

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1. Sensor Overview

1.1 General Description

GC4653 is a high quality 4Mega CMOS image sensor, for security camera products, digital camera products and mobile phone camera applications. The full-scale integration of high-performance makes the GC4653 fit the design and reduce the implementation process.

GC4653 incorporates a 2560H x 1440V pixel array, on-chip 12/10-bit ADC, and image signal processor. It provides RAW12 and RAW10 data format with MIPI interface. It has a commonly used two-wire serial interface for host to control the operation of the whole sensor.

1.2 Features

- ◆ Standard optical format of 1/3 inch
- ◆ 2.0 μ m \times 2.0 μ m BSI pixel
- ◆ Output formats: Raw Bayer 12bit/10bit
- ◆ Power supply requirement: AVDD28: 2.7~2.9V(Typ2.8V)
DVDD: 1.15~1.25V(Typ1.2V)
IOVDD: 1.7~1.9V (Typ1.8V)
- ◆ PLL support
- ◆ Support for frame sync
- ◆ MIPI(2_lane) interface support
- ◆ Horizontal/Vertical mirror
- ◆ Image processing module
- ◆ OTP support (2Kbits total)
- ◆ Package: CSP

1.3 Application

- ◆ Surveillance Cameras
- ◆ Smart Home Systems
- ◆ IoT Cameras
- ◆ Car Driving Records
- ◆ Video telephony and conferencing equipment

1.4 Technical Specifications

Parameter	Typical value
Optical Format	1/3 inch
Pixel Size	2.0μm x 2.0μm(BSI)
Active pixel array	2560 x 1440
Shutter type	Electronic rolling shutter
ADC resolution	12/10-bit ADC
Max Frame rate	30fps@full size
Power Supply	AVDD28: 2.8 V DVDD: 1.2V IOVDD: 1.8V
Power Consumption	140mW @30fps
Max Optical lens chief ray angle(CRA)	10°(linear)
Sensitivity	2.4V/Lux.s
Dynamic range	81dB
SNR	38dB
Operating temperature:	-30~ 85℃
Stable Image temperature	-20~60℃
Package type	41PIN-CSP