GC4663 CSP

1/3" 4Mega CMOS Image Sensor

Datasheet

V1.2

2021-05-11

1. Sensor Overview

1.1 General Description

GC4663 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 GC4663 fit the design and reduce the implementation process.

GC4663 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.

Additionally, it has HDR function by staggered output mode, letting user use 2 different exposure time frames combine one picture to improve dynamic range and avoid smearing.

1.2 Features

◆ Standard optical format of 1/3 inch

◆ 2.0μm × 2.0μm BSI pixel

◆ Power supply requirement: AVDD28: 2.7~2.9V(Typ2.8V)

   DVDD: 1.25~1.35V(Typ1.3V)

   IOVDD: 1.7~1.9V (Typ1.8V)

◆ PLL support

◆ Support for frame sync

◆ Horizontal/Vertical mirror

◆ Stagger HDR

◆ Image processing module

◆ OTP support (2Kbits total)

◆ Package: CSP

GC4663

1.3 Application

◆ Surveillance Cameras

◆ Smart Home Systems

◆ IoT Cameras

◆ Car Driving Recorders

◆ 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	60fps@full size
Power Supply	AVDD28: 2.8 V DVDD: 1.3V IOVDD: 1.8V
Power Consumption	140mW@30fps
Max Optical lens chief ray angle(CRA)	10°(linear)
Sensitivity	2.4V/Lux.s
Dynamic range	81dB@linear mode 105dB@hdr mode
SNR	38dB
Operating temperature:	-20 ~ 80℃
Stable Image temperature	0~60℃
Package type	41PIN-CSP