

About Cista

Cista Design Inc. is a start-up company that develops and delivers CMOS image sensors and imaging solutions for mobile handsets, automotive, consumer electronics and surveillance camera markets. Its R&D group is headquartered in the heart of Silicon Valley.

Cista collaborates closely with supply chain partner and customers including SMIC and SPRD to deliver a wide variety of CMOS image sensor technology for the most advance application.

Drive for Best Vision



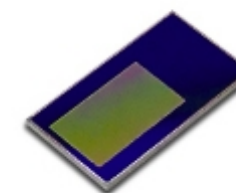
Cista Design Inc.

2674 N First Street, STE 250
San Jose CA 95134 USA
Email: sm@cistadesign.com
Web: cistadesign.com

CISTA

2017 New Product

CMOS Image Sensor: C8396



Application

- Smart Phone
- Video Conferencing



General Description

The C8396 camera chip is sophisticatedly integrated with a 4K2K BSI H³ Q-PIX CMOS image sensor of 1/2.7 inch optical format and on-chip ISP (image signal processor) that feature auto black level calibration, lens shading correction, bad pixel correction, automatic and manual exposure control and auto white balance.

The C8396 has a MIPI CSI-2 compliance serial interface of up to 4 data lanes interface. It consists of a 3872 x2192 active pixel sensor (APS) array that's capable of operating at 4k2k 60 frames per second (FPS). In addition to featuring superior low-light sensitivity and low dark current performance, a better and clear image is achieved through significant reduction of fixed pattern noise through an on-chip 10-bit/12-bit ADC, programmable gain control and correlated double sampling. The C8396 also includes a 32-kbit one-time programming (OTP) memory.

The C8396 camera chip is suitable for smart phone, and video conferencing applications, and is available in bare die package (RW) and chip-scale package (CSP).

Key Benefits

- ❖ BSI 4K2K
- ❖ Flexible RGB-IR Pattern
- ❖ Device Temp. up to 120 °C
- ❖ Low Fixed Pattern Noise

Product Features

- Cista 1.5 um BSI H³ Q-Pix technology
- Image Sensor Processor function: BPC, ABLC, AEC
- Dedicated I²C ID pin select
- Multiple Camera Frame Sync
- On-Chip Temperature Sensor
- Column and Row Sub-Sampling
- Ultra-high Precision on-Chip PLL

Flexible RGB-IR Mode

The C8396 also supports RGB-IR mode to capture both RGB and IR images in one sensor which reduces both the cost for the system and space required for multiple sensors.

Key Specifications

Optical Format	1/2.7-inch.	
Active Pixel Array(1080P)	3872H x2192V	
Pixel Size	1.5µm x 1.5µm	
Color Filter Array	RGB/RGBIR	
Chief Ray Angle	31° Non Linear	
Shutter Type	Electronic rolling shutter	
Maximum Frame Rate	Full@60fps Others: TBD	
Power Supply	AVDD	2.6-3.0V (2.8V nominal)
	I/O	1.7 -3.6V (1.8V nominal)
Output Formats and Interfaces	10-bit /12-bit RAW MIPI CSI-2 4-lane	
Operating Temperature	-30°C to TBD	
Storage Temperature	-40°C to TBD	
Die Dimensions (µm ²)	10180 x 5510	

Functional Block

