

CP8320

1/2.7", **FHD, HDR**, 1920x1080, 30fps, Analog output with 2Mega pixel image

Product Description

CP8320 is a true HDR image sensor designed with a dual Pixel structure for automotive cameras and security systems. CP8320 is set up with a 1920x1080 image array, outputs up to 30 frames (1920x1080) per second, and supports various forms of digital output format. CP8320 has various camera control functions, and can be programmed through a two-wire serial interface.

Product Features

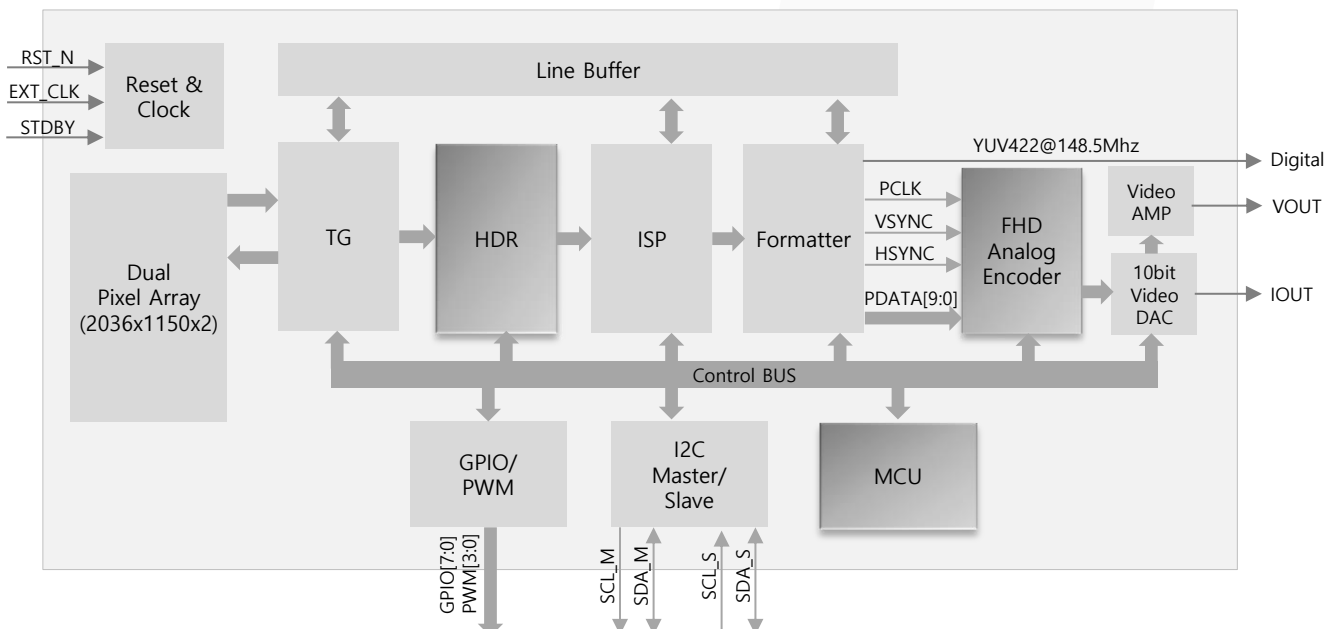
- System-on-a-chip(SoC)-completely integrated camera system
- Digital or FHD-Analog output
- Integrated microcontroller for flexibility
- Parking Guide, OSD, Privacy Zone Mask,
- 2ch Two-wire serial interface (Master, Slave)

Application

- Automotive Solution (ex. Black Box, AVM)
- CCTV / Door-Phone
- USB Camera

PARAMETER		TYPICAL VALUE
Optical Dimension	Optical Format	1/2.7 inch
	Pixel Size	3.0 um X 3.0 um
	Effective Resolution	1928(H) X 1088(V)
	Effective Pixel Area	5.784mm(H) X 3.264mm(V)
Output		10bit, 8bit RGB Bayer YCbCr422, RGB565/555 FHD-Analog@148.5Mhz
Input Clock Frequency		27MHz
Maximum Frame Rate		1920x1080 30fps(YCbCr)@148.5MHz
Shutter Type		Electronic Rolling Shutter
Sensitivity		~1.9 V / lux-sec
Dynamic Range		120 dB
SNR		39.3 dB
Max. Programmable Gain		analog (x64), digital (x32)
Supply Voltage	Pixel	2.8V ± 10%
	Analog	2.8V ± 10%
	I/O	2.8V ± 10%
	Digital	1.5V ± 10%
Power Consumption	Active	521mW@30fps (HD-Analog)
	Standby	5mW
Operating Temperature		-40°C ~ 85°C
Package Type (Size)		CLCC, BGA

Functional Block Diagram

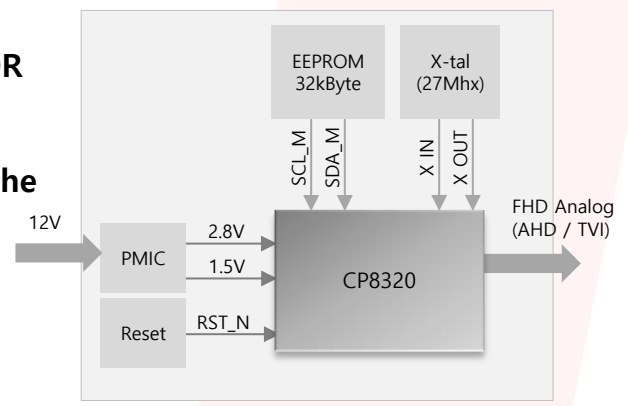


System Block Diagram

Camera Diagram (Analog Output)

The CP8320 is a One-Chip SoC sensor with HDR and HD-Analog Tx in one sensor.

In addition, the video AMP is included inside the sensor and it supports differential output, which can be used for noise-sensitive systems such as automobiles.

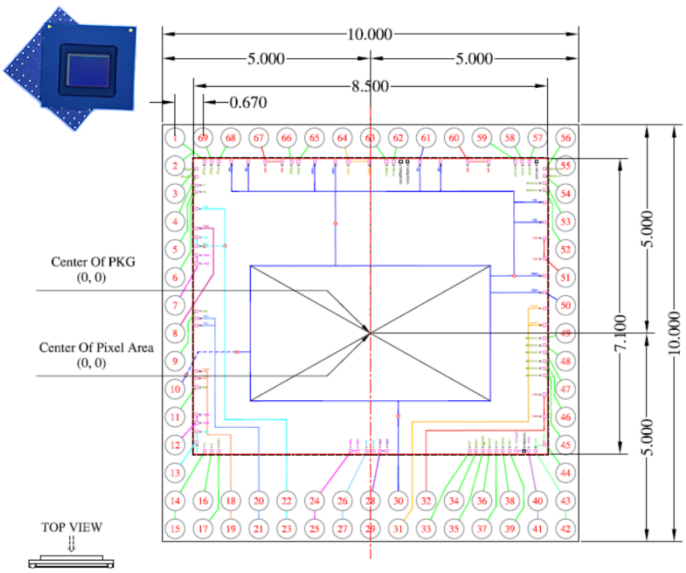


Analog Camera Module

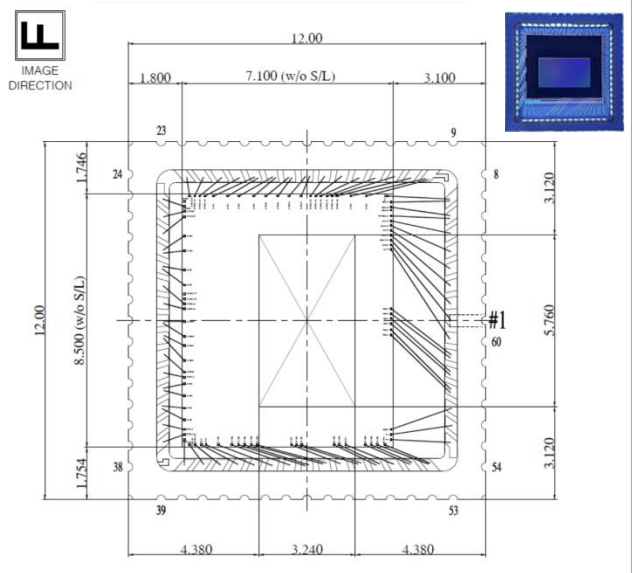
Package Information

Package Type

There are two types of CP8320 PKG, both of which are manufactured in Korea and have very high reliability. The BGA PKG completes the AEC-Q100 (Grade 2) requirements and is useful for Automotive Before-Market products.



BGA (10mm x 10mm)



60 CLCC (12mm x 12mm)

 **HDR Performance**

