

# CP8510

1/3", **HD, HDR**, 1280x720, 30fps, Analog output with 1Mega pixel image

## Product Description

CP8510 is a true HDR image sensor designed with a dual Pixel structure for automotive cameras and security systems. CP8510 is set up with a 1280x720 image array, outputs up to 30 frames (1280x720) per second, and supports various forms of digital output format. CP8510 has various camera control functions, and can be programmed through a two-wire serial interface.

## Product Features

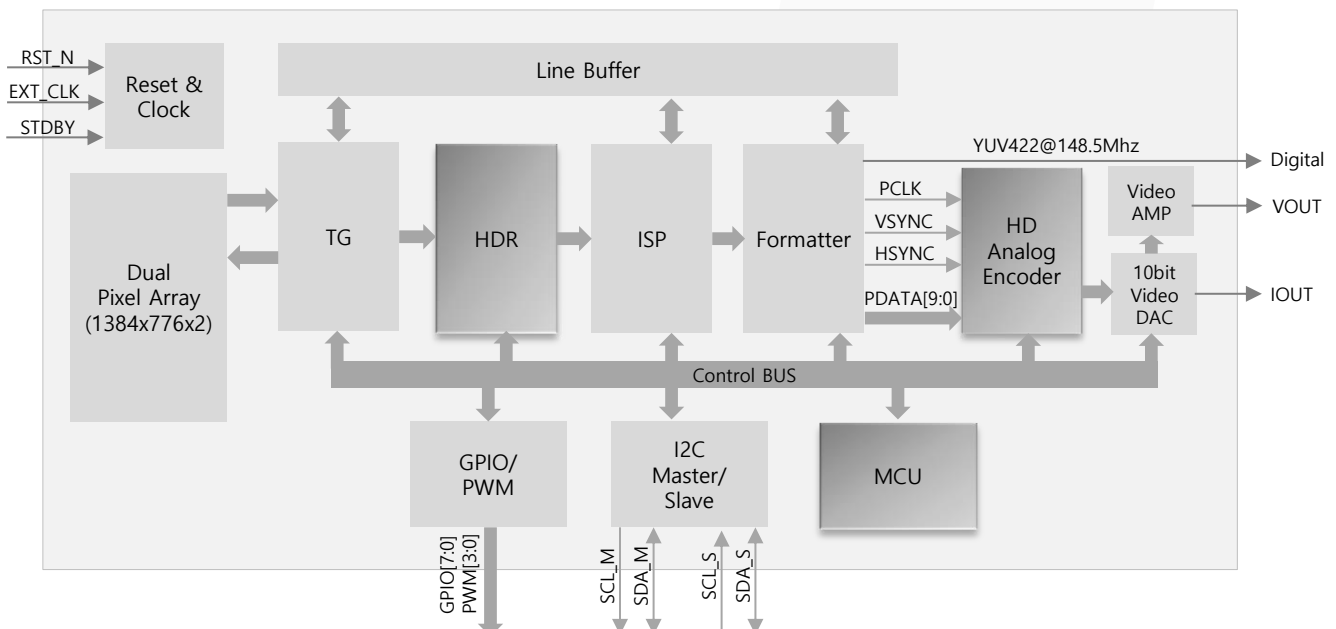
- System-on-a-chip(SoC)-completely integrated camera system
- Digital or HD-Analog output
- Integrated microcontroller for flexibility
- Parking Guide, OSD, Privacy Zone Mask,
- 2ch Two-wire serial interface (Master, Slave)

## Application

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

| PARAMETER              |                      | TYPICAL VALUE   |
|------------------------|----------------------|---|
| Optical Dimension      | Optical Format       | 1/3 inch  |
|                        | Pixel Size           | 4.0 um X 4.0 um   |
|                        | Effective Resolution | 1288(H) X 728(V)  |
|                        | Effective Pixel Area | 5.152mm(H) X 2.912mm(V)   |
| Output                 |                      | 10bit, 8bit RGB Bayer<br>YCbCr422, RGB565/555<br><a href="#">HD-Analog@148.5Mhz</a> |
| Input Clock Frequency  |                      | 27MHz   |
| Maximum Frame Rate     |                      | 1280x720, 30fps(YUV)@74.25MHz<br>1280x720, 60fps(YUV)@148.5MHz                      |
| Shutter Type           |                      | Electronic Rolling Shutter  |
| Sensitivity            |                      | 3.8 V / lux-sec   |
| Dynamic Range          |                      | 120 dB  |
| SNR                    |                      | 40.3 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               | 435mW@30fps (HD-Analog)   |
|                        | Standby              | 5mW   |
| Operating Temperature  |                      | -40°C ~ 85°C  |
| Package Type (Size)    |                      | PLCC  |

## Functional Block Diagram

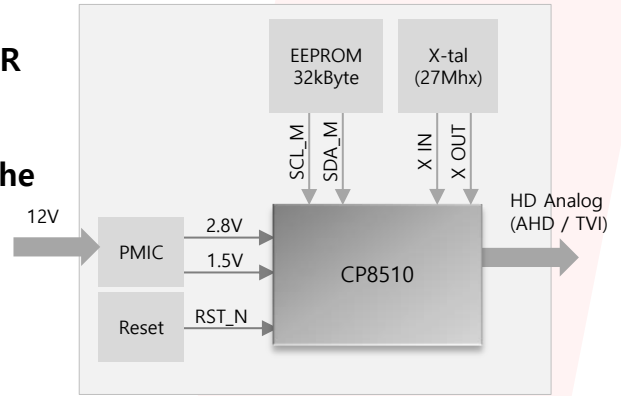


## System Block Diagram

### Camera Diagram (Analog Output)

The CP8510 is a One-Chip SoC sensor with HDR and HD-Analog Tx in one sensor.

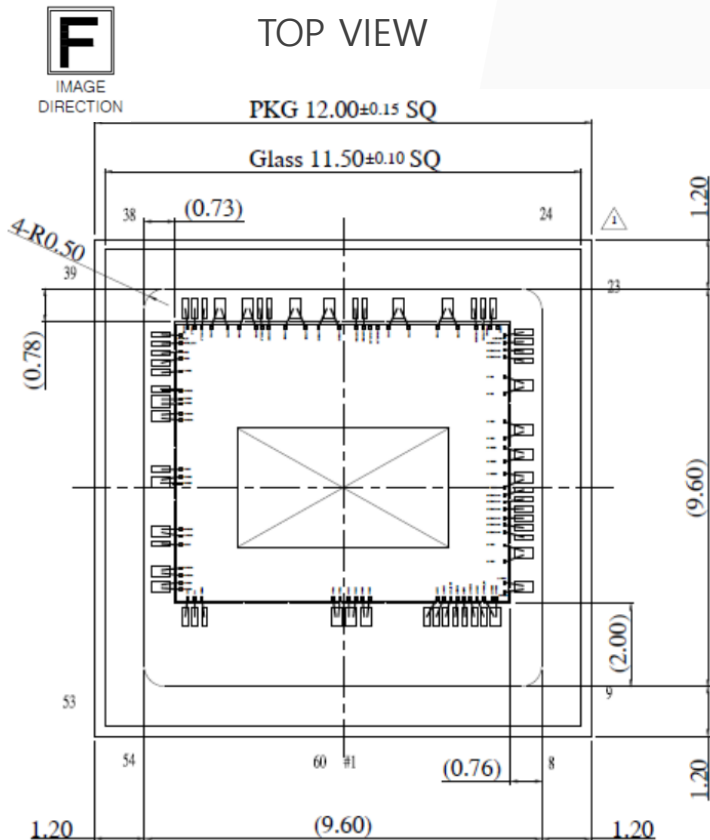
In addition, the video AMP is included inside the sensor and it supports differential output, which can be used for noise-sensitive systems such as automobiles.



Analog Camera Module

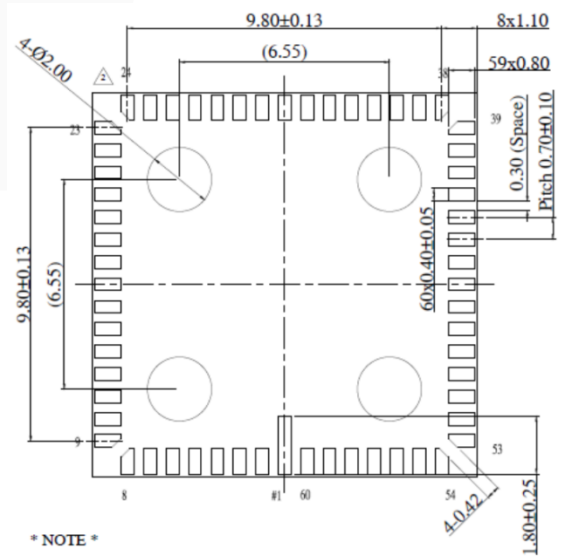
## Package Information

### Package Type : PLCC (60pin)



※ PKG Center = Image Center

### BOTTOM VIEW



### SIDE VIEW

