

FHD

30FPS

1 / 2.7-inch 1080p CMOS Image Sensor **ZA20S10**

Data sheet

Version 2.0

2014.10.06

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Applications

- surveillance and automotive cameras

Features

- **Automatic controls :**
automatic exposure control(AEC), automatic gain control (AGC), automatic black level calibration (ABLC), automatic white balance (AWB)
- **Programmable controls :**
exposure, gain, frame rate, horizontal mirror, vertical flip, scaling, windowing
- **Image adjusting functions :**
lens shading correction, color correction, gamma correction, hue and saturation, brightness, contrast, sharpness(edge enhancement), false color suppression, chroma suppression
- **Support privacy zone and HLC function**
- **Support motion detection and alarm**
- **Support TDN, IRIS and smart LED control**
- **Support SMPTE274M for HD-SDI**
- **Support I²C slave interface**
- **Support for output formats :**
10-bit raw / denoised / ISP Bayer, YUV422, RGB565, Mono, BT1120
- **Support for image size :**
1080p up to 30fps (YUV)
- **Support for input clock :**
20~78MHz
- **On-chip phase locked loop**
- **Built-in OSD to adjust image**
- **High sensitivity and low noise characteristics**

Key specifications

- **Active pixel array :** 1930H X 1088V
- **Optical format :** 1/2.7 inch
- **Pixel size :** 3.0um X 3.0um
- **Scan mode :** progressive
- **Shutter :** rolling shutter
- **Maximum image transfer rate :**
1080p (YUV) : 30fps
- **Output interface :** 10-bit/20-bit parallel
- **Output formats :**
10-bit raw / denoised / ISP Bayer, YUV422, RGB565, Mono, BT1120
- **Input clock frequency :**
20~78MHz
- **Sensitivity :** 3.0 V/Lux.sec
- **SNR :** 39.9 dB
- **Dynamic range :** 66.5 dB
- **Dark current :** 13.0 mV/sec
- **Max CRA :** 15 °
- **Power supply :**
analog : 3.1V ~ 3.5V (3.3V Typical)
core : 1.4V ~ 1.6V (1.5V Typical)
I/O : 2.6~3.6V (3.3V Typical)
- **Power requirement :**
active : 345 mW
standby : 618 uW
- **Temperature range :**
operating : -40°C ~ 105 °C (Functional)