

HD

60FPS

1 / 3-Inch 720p CMOS Image Sensor **ZA10S20**

Brief data sheet

Version 0.4

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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
- **Efficient denoising coupled with defective pixel correction**
- **Support for privacy zone and eclipse function**
- **Support SMPTE296M for HD-SDI**
- **Support for I²C master/slave interface**
- **Support for output formats :**
10-bit raw / denoised / ISP Bayer, YUV422, RGB565, Mono, BT656, BT1120
- **Support for image size :**
720p up to 60fps (YUV)
VGA up to 60fps (YUV)
- **Support for input clock :**
10/20/40/80/37.125/74.25MHz
- **On-chip phase locked loop**
- **Built-in OSD to adjust image**
- **High sensitivity and low noise characteristics**

Key specifications

- **Active pixel array :** 1288H X 728V
- **Optical format :** 1/3 inch
- **Pixel size :** 4.0um X 4.0um
- **Scan mode :** progressive
- **Shutter :** rolling shutter
- **Maximum image transfer rate :**
720p (YUV) : 60fps
- **Output interface :** 10-bit/20-bit parallel
- **Output formats :**
10-bit raw / denoised / ISP Bayer, YUV422, RGB565, Mono, BT656, BT1120
- **Input clock frequency :**
10/20/40/80/37.125/74.25MHz
- **On-chip phase locked loop (PLL)**
- **Sensitivity :** 3.1V/Lux.sec
- **SNR :** 39.1dB
- **Dynamic range :** 66.2dB
- **Dark current :** 16.8mV/Sec @ 60 °C
- **Max CRA :** 12°
- **Power supply :**
analog : 3.3V ± 5%
core : 1.8V ± 5%
I/O : 2.6~3.6V (3.3V Typical)
- **Power requirement :**
active : 385mW
standby : 360uW (master clock on)
- **Temperature range :**
operating : -40°C ~ 105 °C (Functional)