

HD

60FPS

1 / 3-Inch 720p CMOS Image Sensor

Brief data sheet

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Applications

- security and surveillance cameras
- automotive cameras

Features

■ Automatic controls :

automatic exposure control(AEC), automatic gain control (AGC), automatic black level calibration (ABLC), automatic white balance (AWB), auto flicker detection (AFD)

■ 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 eclipse cancellation
- Support for flash strobe and output enable
- Support for serial interface compatible with I²C
- Support for output formats :
10-bit raw / denoised / ISP Bayer, YUV422, BT656, HREF, RGB565
- Support for image size :
720p @ 60fps / 30fps / 15fps
VGA @ 60fps / 30fps / 15fps
- Support for input clock : 12/16/24/48MHz
- On-chip phase locked loop (PLL, 96MHz)

Key specifications

- **Active pixel array** : 1280H X 720V
- **Optical format** : 1/3 inch
- **Pixel size** : 4.0um X 4.0um
- **Scan mode** : progressive
- **Shutter** : rolling shutter
- **Maximum image transfer rate** :
720p and VGA (Bayer) : 60fps
720p and VGA (YUV) : 30fps
- **Output interface** : 10-bit parallel
- **Output formats** : 10-bit raw / denoised / ISP Bayer, YUV422, BT656, HREF, RGB565
- **Sensitivity** : 1.8V/Lux.sec
- **SNR** : 39.0 dB
- **Dynamic range** : 66.5 dB
- **Dark current** : 13.7mV/sec@60°C
- **Input clock frequency** : 12/16/24/48MHz
- **On-chip phase locked loop (PLL):**96MHz
- **Power supply** :
analog : 3.3V ± 10%
core : 1.8V ± 5%
I/O : 2.6~3.6V (3.3V Typical)
- **Power requirement** :
active : 302mW
standby : 511uW (master clock on)
power down : 137uW (master clock off)
- **Temperature range** :
operating : -40°C ~ 100°C (functional)