

Crystal Image through
Imaging Innovation

PIXELPLUS



*Preliminary
Brief Spec*

***1/3 inch Bayer Chip
CMOS Image Sensor with 1312x980 Pixel Array***

PK2130KA

Rev 0.2

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*6th Floor, Gyeonggi R&DB Center, 105, Gwanggyo-ro, Yeongtong-gu,
Suwon-si, Gyeonggi-do, 16229, Korea
Tel : 82-31-888-5300, FAX : 82-31-888-5398*

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1/3 inch Bayer Chip
 CMOS Image Sensor with 1312x980 Pixel Array

Features

- 1312 x 980 effective pixel array with RGB bayer color filters and micro-lens
- Output format: RGB Bayer (progressive scan)
- Interface
 - 12-bit digital parallel interface support
 - 2/4-lane serial output MIPI support @ max 1.04[Gbps/lane]
- High dynamic range
- HDR combine
- Auto black level compensation
- Programmable frame size, frame rate, window size, image orientation, and exposure
- Horizontal/Vertical mirroring and image cropping
- External synchronization support (Genlock)
- Chip address selection PAD
- Software reset
- On-chip phase locked loop (PLL)
- I2C Interface support

General Description

The PK2130KA is a 1/3-inch CMOS image sensor with high dynamic range. It is a Bayer sensor with effective pixel array of 1312 (width) x 980 (height). The PK2130KA can generate a 12-bit RGB raw Bayer data at maximum frame rate of 30 FPS through MIPI serial interface or 12-bit parallel interface. On-chip sensor functions can be controlled through I2C interface.

Table 1 Key Performance Parameter

Parameter	Typical value
Pixel size	3.75 [um] x 3.75 [um]
Effective pixel array	1312 (H) x 980 (V)
Effective image area	4.920 [mm] x 3.675 [mm]
Optical format	1/3 [inch]
Input clock frequency	27 [MHz]
Output interface	12-bit parallel
	MIPI serial interface with 2/4 lane
Max. frame rate	30 [FPS]
Dark signal	TBD [mV/sec] @TBD [°C]

1/3 inch Bayer Chip
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Parameter	Typical value
Sensitivity	5.2 [V/Lux.sec]
Power supply	HVDD : 1.8~3.3 [V]
	AVDD : 3.3 [V]
	DVDD : 1.5 [V]
Power consumption	236 [mW] @dynamic, mipi(960p)
	21 [uW] @standby
Operating Temp. (fully functional Temp.)	-40~105 [°C] (Ambient)
Dynamic range	102 [dB]
SNR	41 [dB] @ 60 [°C]