

ZR32212-PLC

Product Brief

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Description

The 1.3Megapixel CMOS Image Sensor (ZR32212-PLC) is a high performance CMOS image sensor for digital still and video imaging products.

With its Distributed-Pixel Amplifier™ design, the pixel response is independent of its distance from each column's CDS circuitry. This unique architecture results in an extremely uniform pixel array with low "fixed-pattern noise" without the need for off-chip "background frame subtraction" circuitry.

The bank of analog front-end circuits, digitize each pixel to 10-bit resolution. This highly parallel approach eases speed requirements on individual analog circuits and reduces overall power consumption. Separate programmable Red, Green and Blue PGA circuitry enables analog-domain color balance.

The flexibility of the ZR32212-PLC output image format permits the tradeoff between resolution and frame rate. The image output may also be horizontally "mirrored" and vertically "flipped".

Applications

- Digital Still Cameras
- Surveillance and Security cameras
- Biometrics and Document Imaging
- Machine Vision and Robotics
- Medical and Dental Imaging
- Mobile Consumer Appliances
- Video Conferencing Systems

Features

- No "dark-frame subtraction" required
- Analog domain RGB color balance
- High resolution still or motion video
- Programmable exposure control
- Movable and sizable output window
- Left-right and up-down scan flip modes
- Essentially No fixed pattern noise
- Wide Dynamic Range
- Red pixel start option in any direction
- Anti-blooming control
- Decimation by 2 or 4 sub-sampling
- 4 pixel border for 5x5 convolution
- 8 "optical black" pixel header and trailer
- Black vs. colored pixel signal flag
- Standard I²C bus control interface
- Single 3.3 volt power supply

Specifications

Array Resolution	1304 x 968	Saturation Level	1 VDC
Active Pixels	1288 x 968 (non-black)	Total Noise	< 1/2 mV
Array Format	1/2 inch (9.67mm diag.)	Dynamic Range	62dB
Pixel Size	6.0um x 6.0um	Programmable Gain	6-20dB in 6 bits
Color Filter Array	RGB Bayer	A/D Quantization	10 bits
Scanning Mode	Progressive	A/D Linearity	+ 1/2 LSB
Maximum Pixel Rate	24MHz.	Supply Voltages	3.3V $\pm$ 10%
Frame Rate	Up to 15 fps (full array)	Power Dissipation	<280mW
Exposure Time	1-1/10K of frame period	Chip Package	48 LCC (0.040" pitch)

Ordering Information

RGB Color
ZR32212-PLC

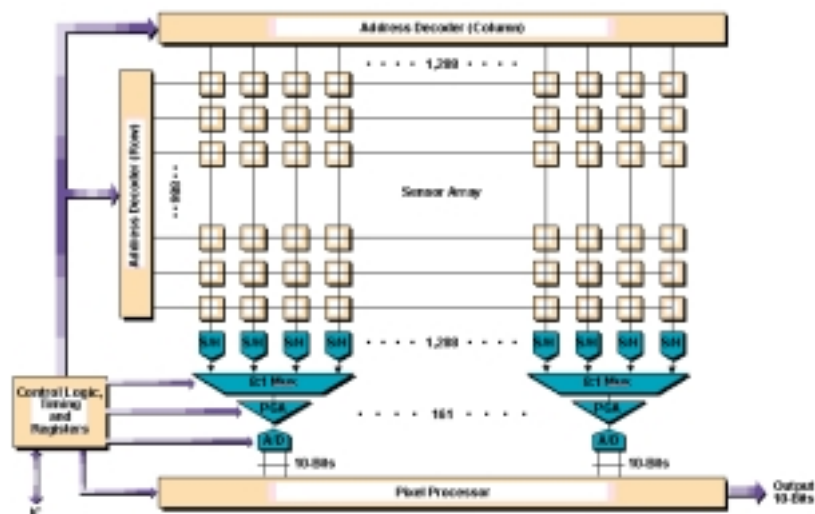
1.3Megapixel CMOS Image Sensor

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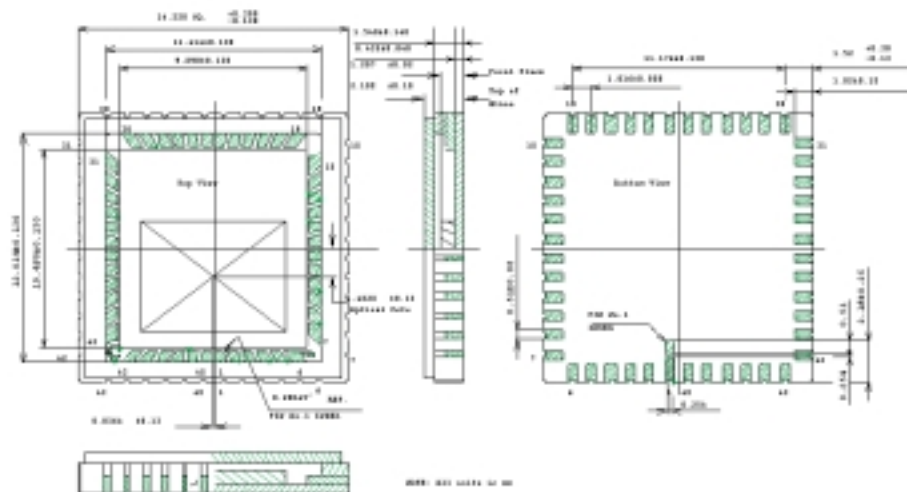
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Sensor Architecture



Package Diagram



For more information, contact Zoran's Santa Clara office or the office nearest you:

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