SiOnyx

XQE-1310

SXGA 1 INCH XQE™ CMOS IMAGE SENSOR

Applications

- Night Vision
- Day/Night Surveillance
- Weapon Sights
- Aerial ISR
- Laser See Spot

Features

- SiOnyx 10µm XQE process technology
- Extremely high sensitivity (400 -1200nm)
- Excellent color fidelity (400-650nm)
- 1280 x 1024 SXGA resolution
- Rolling electronic shutter
- Extremely low read noise
- High dynamic range
- Progressive scan readout
- Raw image data output
- 120 dB multiple exposure HDR modes
- Column summing 1x2 binning for extreme low light SNR
- Region-of-Interest readout
- Flip & Mirror readout modes
- 12-bit parallel data interface
- I²C control interface
- Programmable RGB gain controls
- Programmable exposure control
- Automatic black level calibration
- Sensor temperature output
- 60 pin COB/CLCC package

Key Performance Parameters

Parameter		Data
Optical Format		1-inch (5:4)
Optical Diagonal		16.4mm
Active Image Size		12.8(H) x 10.2(V)mm
Pixel Size		10 x 10µm
Active Pixels		1280 x 1024
Total Active Pixels		1,310,720
Total Light Sensitive		1292 x 1040
Rolling Shutter		500msec to 20usec
Master Clock		42.5 MHz
Frame Rate		40fps SXGA
Frame Rate		60fps 720p
Column Parallel ADC		12 bits
Parallel Data Interface		85 MHz
I²C Control Interface		400 KHz
Native Dynamic Range		72dB
HDR	3 exp/line	120dB (20fps 720p)
	2 exp/line	108dB (30fps 720p)
	2 exp/frame	108dB (30fps 720p)
Supply Voltage	Digital	1.8/3.3V
	Analog	3.3V
Digital IO Level		3.3/1.8V selectable
Power Consumption		<400mW
Operating Temperature		-20°C to +45°C
Functional Temperature		-40°C to +85°C
Versions		Color / Monochrome
Packaging		60 pin COB/CLCC
Package Size		22 x 23mm
Coverglass		Double AR Coated

General Description

The SiOnyx XQE-1310 image sensor has been designed for high performance night vision applications. The sensor features SiOnyx's breakthrough XQE process technology, which offers unprecedented NIR sensitivity. XQE technology will enable new digital night vision imaging systems.

Patent www.sionyx.com/patents