

## 720p 1/2 INCH XQE™ CMOS IMAGE SENSOR

## Applications

- Night Vision
- Day/Night Surveillance
- Biometrics
- IR User Interfaces

## Features

- SiOnyx 5.6µm XQE process technology
- Extremely high sensitivity (400-1200nm)
- Excellent color fidelity (400-650nm)
- 1280 x 720 720p resolution
- Rolling electronic shutter
- Extremely low read noise
- High dynamic range
- 60 fps progressive scan
- 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
- I<sup>2</sup>C control interface
- Programmable RGB gain controls
- Programmable exposure control
- Automatic black level calibration
- 48 pin CLCC package

## Key Performance Parameters

Parameter		Value
Optical Format		1/2-inch (4:3)
Optical Diagonal		8.2mm
Active Image Size		7.17(H) x 4.03(V)mm
Pixel Size		5.6 x 5.6µm
Active Pixels		1280 x 720
Total Active Pixels		921,600
Total Light Sensitive		1292 x 736
Rolling Shutter		500msec to 20µsec
Master Clock		50 MHz
Frame Rate		60 FPS
Column Parallel ADC		12 bits
Parallel Data Interface		100 MHz
I <sup>2</sup> C Control Interface		400 KHz
Native Dynamic Range		72dB
HDR	3 exp/line	120dB (20fps)
	2 exp/line	108dB (30fps)
	2 exp/frame	108dB (30fps)
Supply Voltage	Digital	1.8/3.3V
	Analog	3.3V
Power Consumption		<400mW
Operating Temperature		-20°C to +45°C
Functional Temperature		-40°C to +85°C
Versions		Color / Monochrome
Packaging		CLCC-48
Package Size		16.5 x 16.5mm
Coverglass		Double AR Coated

## General Description

The SiOnyx XQE-0920 image sensor has been designed for high performance low light security and surveillance applications. The sensor features SiOnyx's breakthrough XQE process technology, which offers unprecedented NIR sensitivity. XQE technology will enable new unassisted night vision imaging as well as dramatically enhance existing NIR illuminated applications.

# Typical Connections

