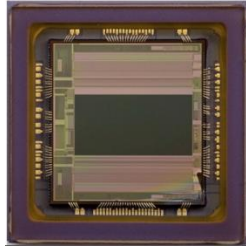


## 720p 1/2" XQE™ CMOS IMAGE SENSOR



### Key Performance Parameters

Parameter		Data
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
Shutter Type		Rolling
Shutter speed		500msec to 20µsec
Linear full well		24,000 e/pix
Maximum Frame Rate		60fps 720P
Column Parallel ADC		12 bits
Read noise		≤ 2.2 e- RMS
Dark Current (25C)		<40 e/pix/sec
Parallel Data Interface		100 / 85 MHz
I <sup>2</sup> C Control Interface		400 KHz
Native Dynamic Range		72dB
HDR	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
Master Clock		50 / 42.5 MHz
Power Consumption		380mW
Operating Temperature		-20°C to +45°C
Functional Temperature		-40°C to +85°C
Versions		Color / Monochrome
Packaging		CLCC-48
Package Size (CLCC)		16.5 x 16.5mm
Coverglass		Double AR Coated

### Applications

- Day/Night Surveillance
- Biometrics
- Machine Vision
- IR User Interfaces
- Medical / Scientific

### Features

- SiOnyx 5.6µm XQE process technology
- Extremely high sensitivity (400-1100nm)
- Capable of 3mLux imaging at 30fps/F1.4
- 1280 x 720 (720p) resolution
- Rolling electronic shutter
- Extremely low read noise
- High dynamic range
- 60 fps progressive scan
- Raw image data output
- 2 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

### General Description

The SiOnyx XQE-1310 image sensor has been designed for high performance night vision applications. The sensor features SiOnyx's breakthrough low light imaging technology enable new performance levels for digital night vision, security, scientific, machine vision, and laser imaging applications.