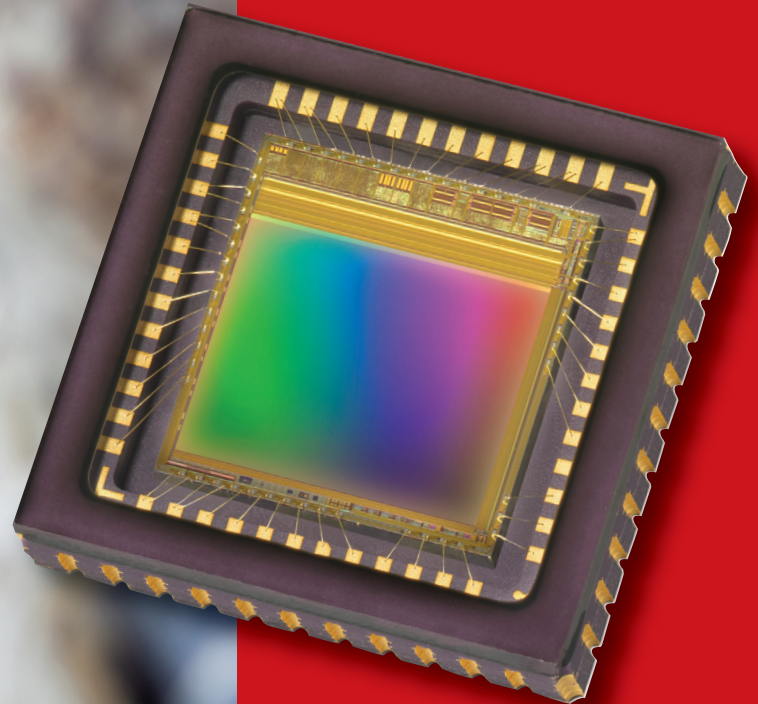
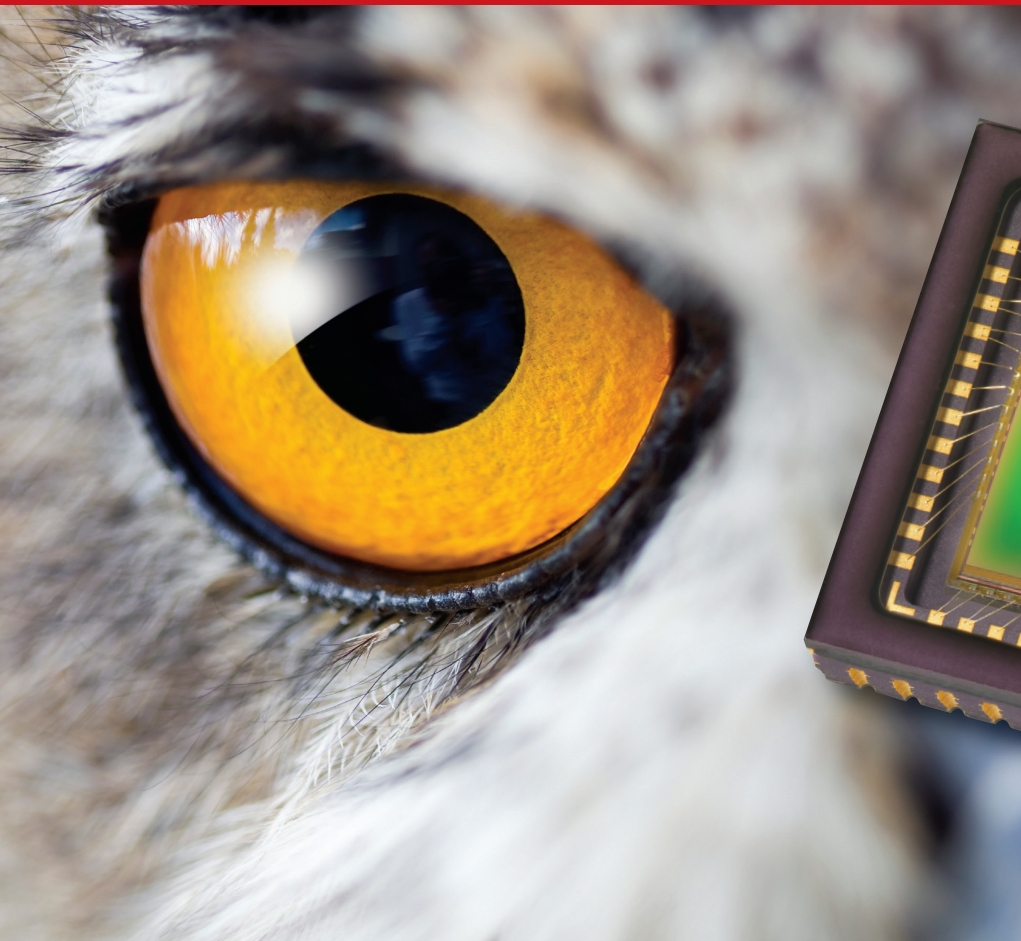


EV76C660/EV76C661

Ruby family

B&W and colour CMOS sensors



Enhanced vision, seeing beyond the limits

Key features

- 1.3 million pixels (1280 x 1024), 5.3 μ m square pixels with micro-lens
- Enhanced sensitivity in the near infrared region
- High quantum efficiency (peak > 70%)
- Low noise, rolling shutter allowing true CDS and global reset for best SNR (EV76C660)
- Global shutter for sharp images of fast moving objects (EV76C661)
- High speed: 60 fps at full resolution, low light CMOS sensor
- Multiple simultaneous regions of interest (4 separate windows)
- Linear dynamic range > 62dB @ 25°C with possible HDR modes
- Low power consumption, < 200 mW
- Operating temperature (-30° to +65°C)
- Package: CLCC 48 12.7x12.7mm
- System-on-chip with SPI control and 10 bits parallel outputs

Typical applications

EV76C660:

- Surveillance IP/CCTV cameras
- Defence & security
- Biometrics / Medical applications

EV76C661:

- Industrial machine vision
- Barcode reading / scanners
- Smart cameras
- Intelligent traffic systems

e2v.com/imaging

e2v

EV76C660/EV76C661 Ruby family, B&W and colour CMOS sensors

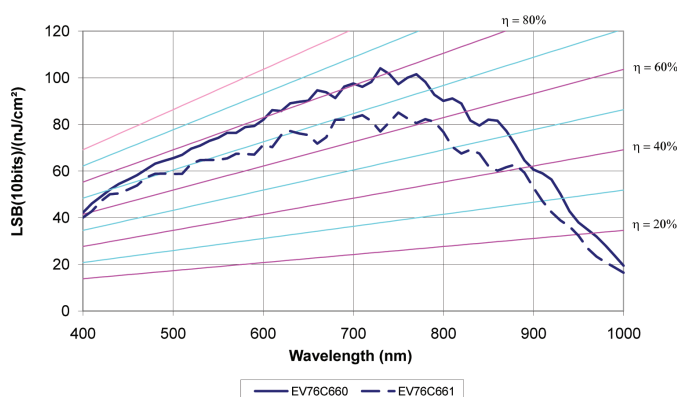
The EV76C660 and EV76C661 are the newest members of e2v's Ruby family of CMOS imaging sensors. These breakthrough devices provide sensitivity and performance beyond that considered possible on a front side illuminated sensor with a pixel size of 5.3µm, Quantum Efficiency (QE) of over 80% and excellent sensitivity and performance in the near-infrared (NIR) spectrum (>50% at 850nm).

This significantly reduces system illumination costs, or enables very low-light imaging in outdoor camera applications. The EV76C660 and EV76C661 share the same package, pin-out and software interface as e2v's Sapphire family of imaging sensors, enabling them to provide a range of differentiated industrial camera products from a single hardware and software development effort.

Sensor characteristics – EV76C660, rolling shutter

Sensor characteristics		
Resolution	pixels	1280 (H) x 1024 (W)
Image size	inches	1/1.8
Pixel size (square)	µm	5.3 x 5.3
Aspect ratio		5/4
Max frame rate	fps	60 @ full format >100 @ VGA format
Pixel rate	Mpixels/s	90 to 120
Pixel performance		
Bit depth	bits	10
Dynamic range	dB	>66 (linear) >100 (HDR) mode
SNR max	dB	39
Responsivity	LSB10/(Lux/s)	76000

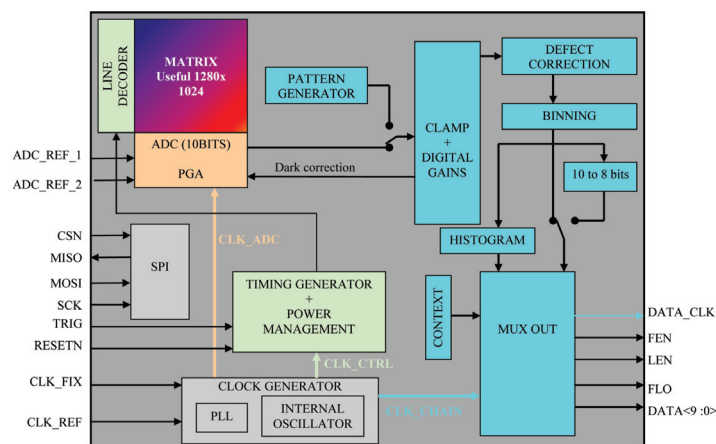
Spectral response and quantum efficiency



Sensor characteristics – EV76C661, global shutter

Sensor characteristics		
Resolution	pixels	1280 (H) x 1024 (W)
Image size	inches	1/1.8
Pixel size (square)	µm	5.3 x 5.3
Aspect ratio		5/4
Max frame rate	fps	60 @ full format >100 @ VGA format
Pixel rate	Mpixels/s	90 to 120
Pixel performance		
Bit depth	bits	10
Dynamic range	dB	>63 (linear) >100 (HDR) mode
SNR max	dB	39
Responsivity	LSB10/(Lux/s)	12000

Sensor overview



Contact us online at:

e2v.com/imaging

Issue 1 02/12

Ordering codes

- EV76C660ABT: B&W, rolling shutter
- EV76C660ACT: Colour, rolling shutter
- EV76C661ABT: B&W, global shutter
- EV76C661ACT: Colour, global shutter



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