e2v Bringing life to technology

EV76C660/EV76C661

Ruby family

B&W and colour CMOS sensors

ENHANCED VISION, SEEING BEYOND THE LIMITS

KEY BENEFITS

- 1.3 million pixels (1280 x 1024), 5.3µm 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°C to +65°C)
- Package: CLCC 48 12.7 x 12.7mm
- System-on-chip with SPI control and 10 bits parallel outputs

TYPICAL APPLICATIONS

EV76C660:

- Surveillance IP/CCTV cameras
- Biometrics/Medical applications

EV76C661:

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

e2v.com/imaging

WE PARTNER WITH OUR CUSTOMERS TO IMPROVE, SAVE AND PROTECT PEOPLE'S LIVES

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ORDER CODES

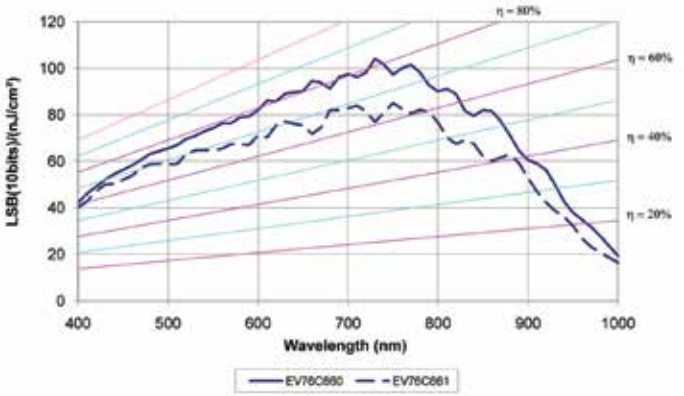
EV76C660ABT: B&W, rolling shutter
EV76C660ACT: Colour, rolling shutter
EV76C661ABT: B&W, global shutter
EV76C661ACT: Colour, global shutter

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)	15000

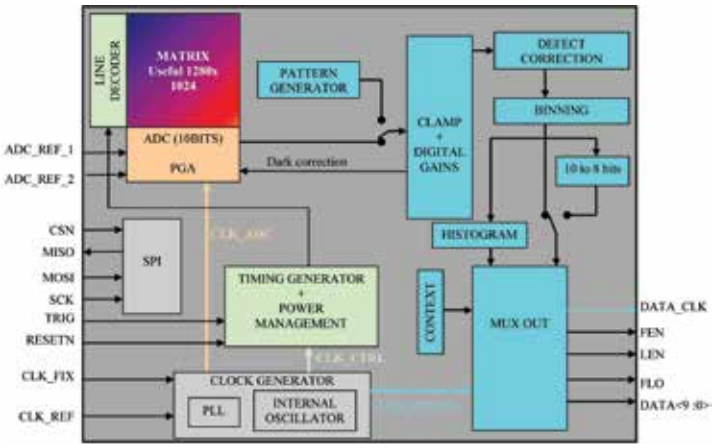
SPECTRAL RESPONSE AND QUANTUM EFFICIENCY



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)	13000

SENSOR OVERVIEW



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