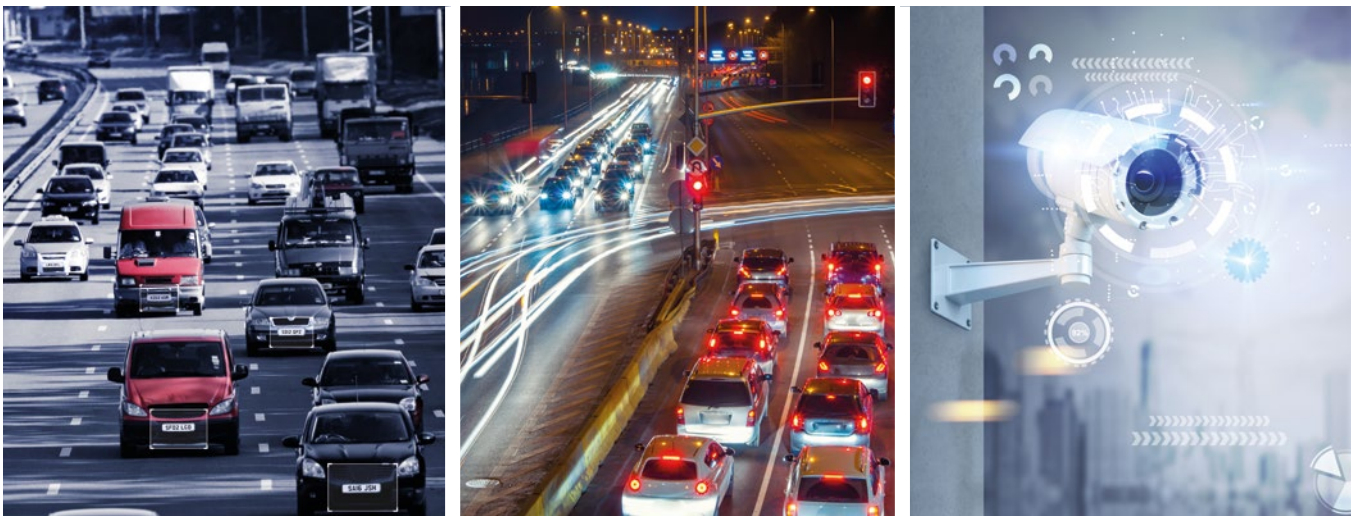


Enhanced Vision for Safer and Smarter Environments



To improve the performance and usability of their cameras, surveillance and intelligent traffic systems companies are seeking a high-dynamic range image sensor with an even wider field of observation, which can capture usable data from daylight to night-time. The new Emerald 8M9 provides the ideal solution, delivering an excellent performance combined with exclusive features to address these specific outdoor imaging challenges.

SENSOR FEATURES

High precision 4k ultra high definition
8.9 Megapixel resolution

More objects captured in a single high resolution shot with its multi ROI feature

Combine speed and contrast
with a new real time HDR mode

Reduced integration costs with its compact 2/3" optical format

CUSTOMER BENEFITS

Accurate surveillance and electronic toll collection **over longer distances**

Simultaneous traffic monitoring over **several lanes with a single sensor**

Easier automatic license plate recognition
due to unique real-time HDR mode

Clear capture of enforcement area **from daylight to night-time**



SENSOR CHARACTERISTICS

	EMERALD 8M9 Standard speed	EMERALD 8M9 High speed
Resolution – pixels	4,096 (H) x 2,160 (V)	
Pixel size – square	2.8µm	
Size type – inch	2/3"	
Aspect ratio	17:9	
Max frame rate	47fps @10 bit 34fps @12 bit	107fps @10 bit 67fps @12 bit
Bit depth	8/10/12	
Readout noise – e-	2.8 (standard mode) 1.7 (ultra-low noise mode)	
Qsat – e-	≥ 6,000	
Dynamic range – dB	67.5 (normal mode) 71.9 (ultra-low noise mode) up to 120 (HDR mode)	
SNRmax – dB	>39	
Q.E. – %, @ 500nm	65	

KEY ELEMENTS

- » 8.9 Megapixels delivering 4k ultra high definition resolution
- » 2.8µm CMOS global shutter pixel allowing true CDS
- » Up to 107fps @ full resolution & 10 bits
- » 2 speed grades
- » Pin-to-pin compatible with Emerald 12M and 16M
- » Ceramic LGA package, 20 x 21mm², 224 pins
- » 16 LVDS outputs @800 Mbps
- » Power consumption: ≤1.6 W @ full speed & full resolution

EMBEDDED FEATURES

- » ROI (up to 4, overlap and independent configurations allowed)
- » High Dynamic Range modes
- » Binning
- » Sub sampling
- » Look-up table
- » Defective pixel correction
- » Flipping/mirroring
- » Image statistics and context output
- » Multiple trigger modes
- » SPI controls

TYPICAL APPLICATIONS

- » Intelligent Traffic System
- » Red light or speed enforcement
- » Electronic toll collection
- » High-end surveillance