

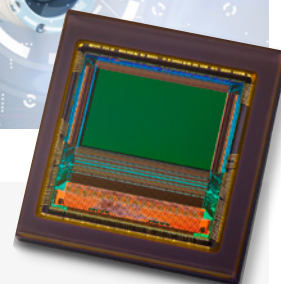
EMERALD 8.9M & 10M

ENHANCED VISION FOR SAFER ENVIRONMENTS



To improve the performance and usability of their cameras, surveillance and intelligent traffic system 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 8.9M and Emerald 10M** are ideal solutions, delivering an excellent performance combined with exclusive features to address these specific outdoor imaging challenges.



SENSOR FEATURES

4K high precision
8.9 and 10 Megapixel resolution

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

Combine speed and contrast
with a new real-time HDR mode

Reduced integration costs with their
compact 2/3" and 1" optical formats

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 8.9M		EMERALD 10M	
	Standard Speed	High Speed	Standard Speed	High Speed
Resolution – pixels	4,096 (H) x 2,160 (V)		4,096 (H) x 2,460 (V)	
Aspect Ratio	17:9		17:10	
Size Type – inch	2/3"		1"	
Pixel Type / Size – square	Global Shutter / 2.8 μm			
Readout Noise	2.8 e-			
Dynamic Range	67.5 dB (normal range) 100+ dB (HDR mode)			
SNRmax	38 dB			
Q.E. - %, @ 500 nm	65%			
Frame Rates @ 8-10 bit @ 12 bit	47 fps 34 fps	91 fps 68 fps	42 fps 30 fps	80 fps 60 fps

SYSTEM INTEGRATION

- 4K or 10 Megapixel resolution for an extended vertical field of view
- 2.8 μ m CMOS global shutter pixel allowing true CDS
- Up to 91 fps @ full resolution & 10 bits
- 2 speed grades
- Pin-to-pin compatible with Emerald 12M and 16M
- Ceramic LGA package, 20 x 21 mm², 224 pins
- 16 LVDS outputs @ 800 Mbps
- 8, 10 or 12 bit depth
- Power consumption: ≤ 1.8 W @ full speed & full resolution

EMBEDDED FEATURES

- ROI (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

TYPICAL APPLICATIONS

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

ORDER CODES – EMERALD 8.9M

	STANDARD SPEED	HIGH SPEED
B&W	EV2S8M9B-CLV0151-T	EV2S8M9B-CLV0351-T
COLOR	EV2S8M9C-CLV0151-T	EV2S8M9C-CLV0351-T

ORDER CODES – EMERALD 10M

	STANDARD SPEED	HIGH SPEED
B&W	EV2S10MB-CLV0151-T	EV2S10MB-CLV0351-T
COLOR	EV2S10MC-CLV0151-T	EV2S10MC-CLV0351-T