TELEDYNE e2v
Everywhere**you**look™
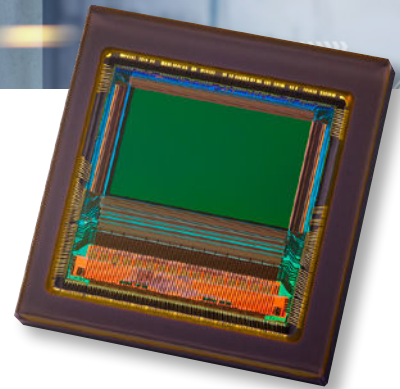
Part of the Teledyne Imaging Group

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**

▷ imaging.teledyne-e2v.com

FIND OUT MORE!

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 µm 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: $\leq$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

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