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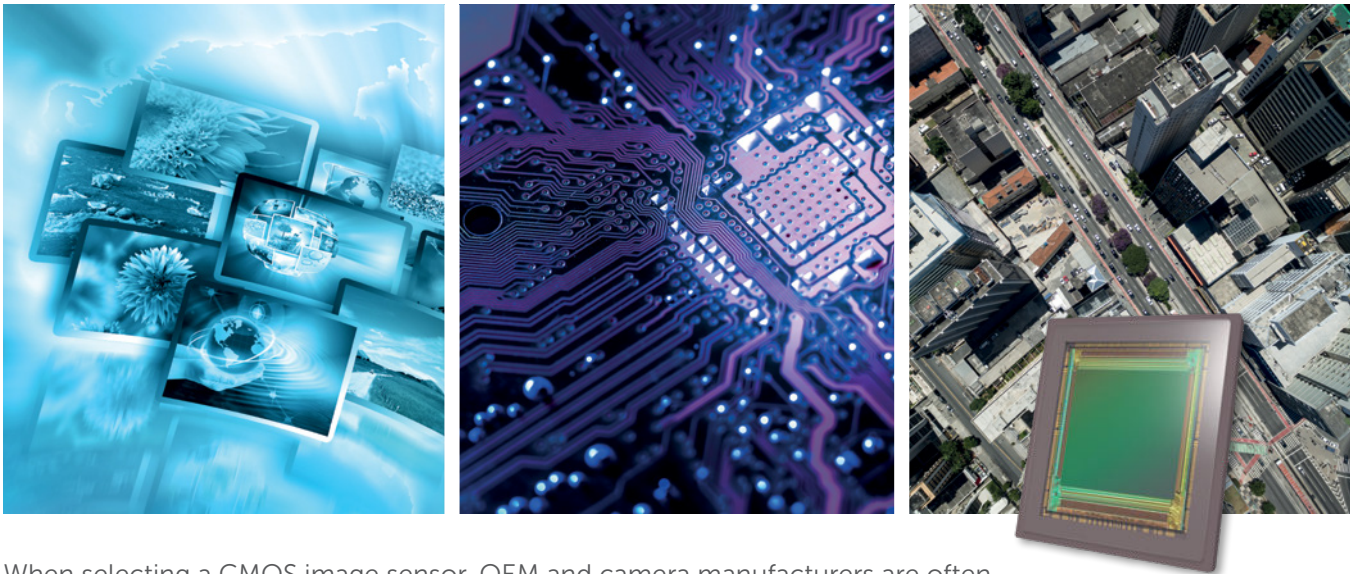
Part of the Teledyne Imaging Group

Emerald 67M
Perfectly Combining Precision and Speed

When selecting a CMOS image sensor, OEM and camera manufacturers are often forced to compromise between precision or speed. The new Emerald 67M uniquely delivers both, enabling vision specialists to create extremely accurate and high speed vision systems.

SENSOR FEATURES

Ultra-high precision – 8k resolution per side	**More objects captured** in a single high resolution shot with up to 64 ROIs
Cost-effective optics with an APS-C optical format	**High image processing** throughput with 60fps frame rate @ full resolution

CUSTOMER BENEFITS

Cost-effective and seamless integration	**Easier long-distance** object identification
Extremely accurate detection of short and open circuits	**More efficient inspection** for TFT-LCD and OLED panels

▷ imaging.teledyne-e2v.com

FIND OUT MORE!

SENSOR CHARACTERISTICS

	EMERALD 67M High speed	EMERALD 67M Ultra-high speed
Resolution – pixels	8,192 (H) x 8,192 (V)	
Pixel size/type – square	Global Shutter / 2.5 µm	
Size type	APS-C (29 mm diagonal)	
Aspect ratio	1:1	
Max frame rate @ 8-10 bit @ 12 bit	32 fps 16 fps	65 fps 31 fps
Readout noise	2.5 e- @ 8-10 bit / 2.2 e- @ 12 bit	
Dynamic range	64.5 dB @ 8-10 bit / 67 dB @ 12 bit	
SNRmax	38 dB	
Q.E. – %, @ 500 nm	66	

SYSTEM INTEGRATION

» Options:
  - Color Filter Array: B&W or color
  - Speed grades: High speed or Ultra-high speed
  - AR coating or temporary window (upon request)
» Package: ceramic µPGA, 37 x 42 mm²
» Optical center centered in package
» Pin-to-pin compatible with Emerald 36M
» Power consumption: ≤3.5W @ full speed & full resolution
» Scalable LVDS outputs (64, 32 or 16 channels)
» Versatility between 8, 10 or 12 bit depth
» SPI controls

EMBEDDED FEATURES

» Horizontal sub sampling
» Look-up table
» Defective pixel correction
» FPN correction
» Flipping/mirroring
» Image statistics and context output
» Multiple trigger modes
» SPI controls
» ROI (up to 64, overlap and independent configurations allowed)
» High Dynamic Range modes
» Binning

TYPICAL APPLICATIONS

» High-end electronic and FPD inspection
» 3D AOI & metrology
» High-end surveillance
» Aerial imaging & mapping
» Earth observation
» Scientific cameras and microscopy
» Entertainment
» Medical

ORDER CODES – EMERALD 67M

	HIGH SPEED	ULTRA-HIGH SPEED
B&W	EV2S67MB-CLV0350-T	EV2S67MB-CLV0650-T
COLOR	EV2S67MC-CLV0350-T	EV2S67MC-CLV0650-T

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