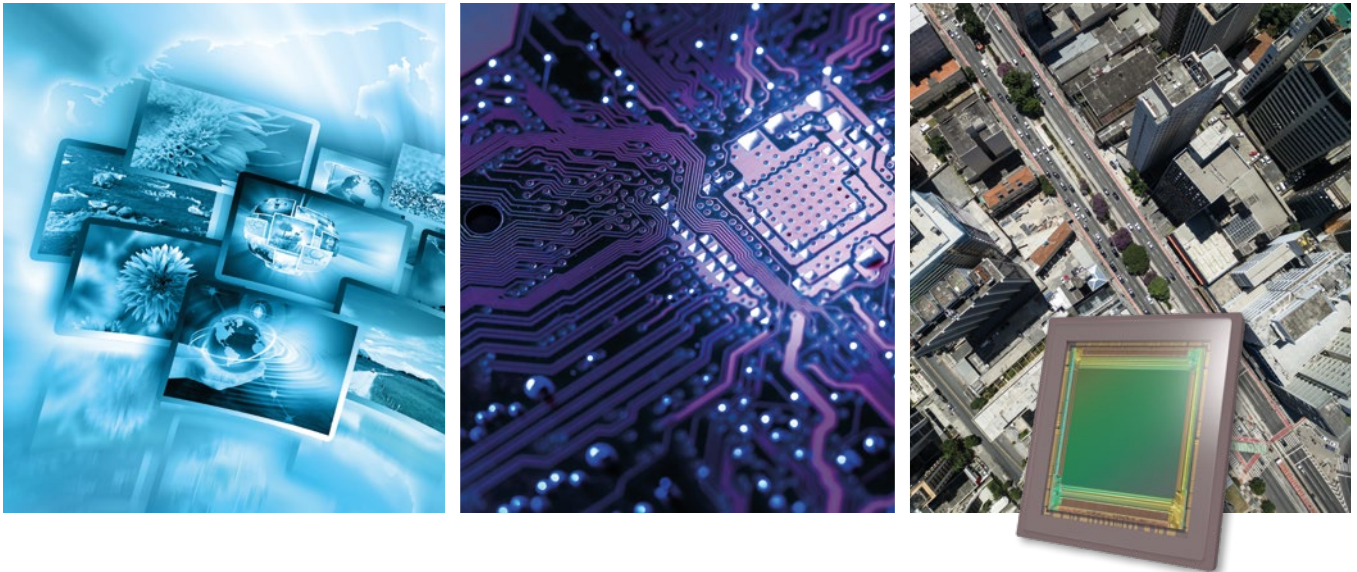


# Perfectly Combining Precision and Speed



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

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

## CUSTOMER BENEFITS

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

## SENSOR CHARACTERISTICS

	EMERALD 67M High speed	EMERALD 67M Ultra-high speed
Resolution – pixels	8,192 (H) x 8,192 (V)	
Pixel size – square	2.5µm	
Size type	APS-C (29mm diagonal)	
Aspect ratio	1:1	
Max frame rate @ 10bits	30fps	60fps
Bit depth	8/10/12	
Readout noise – e-	2.5	
Qsat – e-	≥ 6,000	
Dynamic range – dB	67	
SNRmax – dB	38	
Q.E. – %, @ 500nm	70	

### KEY BENEFITS

- » 67M resolution resulting in 8k UHD resolution per side
- » 2.5µm CMOS global shutter pixel allowing true CDS
- » Up to 60fps @ full resolution & 10 bits
- » 2 speed grades
- » APS-C optical format
- » Optical center is centered in package
- » Ceramic µPGA package
- » 72 LVDS outputs @ 830Mbps
- » Power consumption: ≤3W @ full speed & full resolution

### 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 inspection
- » Display inspection
- » High-end surveillance
- » Microscopy