

EMERALD 5M EMPOWERING EMBEDDED VISION



The Emerald family of sensors has been designed to match the unique requirements of machine vision and security applications. From pixel performance and features, to the MIPI output; every aspect of this product has been optimized to address the next challenges of embedded vision.

SENSOR FEATURES

High precision
5 Megapixel resolution

MIPI CSI-2 outputs to interface with leading edge
ISP and FPGA

Combining speed and image quality
with a single frame HDR mode

Reduced integration costs
with its compact 1/1.8" optical format

CUSTOMER BENEFITS

Accurate and fast operation enabling
an improved detection/control ratio

Simultaneous verification
tasks **using a single sensor**

Lighting system costs saving
due to improved dynamic range

Seamless and **cost-effective integration**



Sensor Characteristics

EMERALD 5M

Resolution – pixels	2,560 × 1,936
Aspect ratio	4:3
Frame rates @ 8-10 bit @ 12 bit	54 fps 40 fps
Size type	1"/1.8"
Pixel type / size – square	Global shutter/2.8 μm
Readout noise	2.8 e-
Full well capacity	6,970 e-
Dynamic range	66 dB (normal mode) 100+ dB (HDR mode)
SNRmax	38 dB
Q.E. – %, @550nm	65

SYSTEM INTEGRATION

- Options:
 - Color Filter Array: B&W or color
- Optical center centered in package
- MIPI CSI-2, 1.2Gbps lanes (up to 4 lanes)
- SPI/I2C (selectable) controls
- Versatility between 8, 10 or 12 bit depth
- Power consumption: <450W @ full speed & full resolution

TYPICAL APPLICATIONS

- Embedded vision systems
- Factory automation
- Intelligent transportation systems
- Security cameras
- Drones/UAVs

EMBEDDED FEATURES

- ROI (independent configurations allowed)
- High Dynamic Range modes
- Fast Self Exposure
- Binning
- Sub sampling
- Look-up table
- Defective pixel correction
- Flipping/mirroring
- Image statistics and context output
- Multiple trigger modes

ORDER CODES – EMERALD 5M

	CERAMIC LGA
	5° CRA
B&W	EV2S05MB-CM20150-T
COLOR	EV2S05MC-CM20150-T