

Easy, Accurate, and Fast, Quite Simple



KEY BENEFITS

- » New generation of sensors – 512 pixels 14µm, 1024 pixels 14µm, 2048 pixels 14µm, 4096 pixels 10µm
- » Excellent dynamic range – 68dB
- » High sensitivity CCD sensor
- » Interface – high reliability Gigabit Ethernet
- » Interoperability – GigE Vision and GenICam fully compliant
- » Advanced GPIO
- » Line rate – up to 175 kHz
- » Bit depth – up to 12 bits
- » Mechanics – 93 x 56 x 49 mm (w, h, l)

TYPICAL APPLICATIONS

- » Web inspection – metallurgy, wood, paper, textile...
- » Process control – pick and place, positioning
- » Print inspection
- » Sorting – food, postal, parcel, checks...
- » Surface inspection – wafers, PCB...
- » Document archiving, data archiving
- » OCR and barcode reading



Teledyne e2v's AViiVA cameras have been leaders in the field of line scan imaging for over 10 years, largely due to their unique sensor technology. Teledyne e2v has now developed a new generation of line scan sensors, with resolution up to 4k pixels with various pitches. These sensors feature unmatched performance in terms of sensitivity, dynamic range and PRNU and are embedded in the new EM1 GigE series of cameras.

Coupled with an advanced Gigabit Ethernet interface and an easy-to-use software package, EM1 is the ideal candidate for the most demanding of inspection applications.

DETAILED SPECIFICATION

SENSOR CHARACTERISTICS

Resolution	pixels	512	1024	2048	4096
Pixel size (square)	µm	14	14	14	10
Maximum line rate	kHz	175	102	55	28

FUNCTIONALITIES (PROGRAMMABLE BY CONTROL INTERFACE)

Gain	up to 32dB
Offset (contrast expansion)	-4096 to +4096 LSB
Trigger mode	Free run or external trigger
Flat field correction	Auto
GPIO	3 inputs 2 outputs TTL, RS422, RS644 general purpose counters and timers

RADIOMETRIC PERFORMANCES

Bit depth	bits	8.12
Spectral range	nm	250–1100
Non-linearity	%	< 1
Dynamic range	dB	68

MECHANICAL AND ELECTRICAL INTERFACE

Size (w x h x l)	mm	60 x 56 x 49 without heat sinks
Optional lens mount		F, T2, M42 x 1, C
Sensor alignment	µm	±100
Power supply	V	single 12 to 24
Power dissipation	W	< 11
Operating temperature	°C	0 to 55 (front face)
Storage temperature	°C	-40 to 70
Regulatory		RoHS, CE and FCC compliant

CONNECTORS

Power	HR10 6-pins
Inputs/outputs	HR10 12-pins
Gigabit Ethernet	RJ45

NETWORKING FEATURES

GigE-based	1Gb/s, long reach: 100m point-to-point Effective data rate up to 122.5 MB/s with 8kB packet size
GigE Vision protocol	Zero-loss packet resend technology, delivery of all packets Comprehensive data transfer diagnostics Multicast capabilities

SOFTWARE PACKAGE

eBUS driver suite	eBUS universal driver (filter driver) eBUS optimal driver Driver installation tool
iPORT PureGEV suite	SDKs Software tools Documentation Sample applications