

DiViINA LM1

GigE Vision
Line Scan Camera



The right balance, low cost and leading edge Gigabit Ethernet interface

Key Features

- ❖ Wide sensor range: 1024 to 4096 pixels, 10µm or 14µm
- ❖ Cost effective and easy to use
- ❖ Interface: High reliability Gigabit Ethernet
- ❖ Interoperability: GigE Vision and GenICam fully compliant, supporting iPort Technology and compatible with third-party vision system
- ❖ Line rate: up to 35.7kHz
- ❖ Bit depth: 8 bits
- ❖ Mechanics: 60x60x65mm (w,h,l)

Typical Applications

- ❖ Web inspection: wood, paper, metallurgy
- ❖ Parts inspection or sorting: cotton, food
- ❖ General machine vision inspection

e2v introduces the LM1 Diviina line scan camera, their new cost effective industrial inspection camera that features the proven quality of 1024, 2048 and 4096 pixel sensors, running at 40MHz and outputting 8 bits on Gigabit Ethernet. The Diviina cameras are easy-to-use and robust, with user friendly levels of functionality providing the perfect monochrome image quality for mid-range applications. They have been specifically designed to provide the best answer to machine vision system integrators that are under cost reduction pressure and at the same time are eager to maintain high CCD performance. The Diviina family of cameras incorporate Pleora's iPort technology.

Detailed Specifications

Sensor Characteristics

Resolution	pixels	1024	2048	4096
Pixel Size (Square)	µm	10 or 14	10 or 14	10
Maximum Line Rate	kHz	35,7	18,1	9,5

Functionalities (Programmable by Control Interface)

Gain	0 to 35 dB (0.035 dB steps)
Offset	0 to 63 LSB
GPIO	2 inputs TTL/LVDS delayer, rescaler, general purpose counter
Trigger Mode	Free Run, External Trigger

Radiometric Performances

Bit Depth	bits	8
Spectral Range	nm	250 - 1100
Non-linearity	%	< 1
Dynamic Range	dB	58

Networking Features

GigE-based	1 Gb/s, long reach: 100m point-to-point
GigE Vision Protocol	Zero-loss packet resend technology, delivery of all packets Comprehensive data transfer diagnostics Multicast capabilities

Mechanical and Electrical Interface

Size (w x h x l)	mm	60 x 60 x 65
Lens Mount		M42 x 1
Optional Lens Adaptor		C, F
Sensor Alignment	µm	< ± 200
Power Supply	V	Single 12 to 24
Power Dissipation	W	6
Operating Temperature	°C	0 to 65 (front face)
Storage Temperature	°C	-40 to 70
Regulatory		RoHS, CE compliant

Connectors

Power	HR10 6-pin
Inputs	HR10 5-pins
Gigabit Ethernet	RJ45

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



Overview of e2v's Line Scan Camera offer

Commercial Name	M/C	Max Data Rate M Pixels/s	Interface	Resolution	Bit Depth
AViVA EM1	Monochrome	120	GigE	2048 to 4096	up to 12 bits
Aviiva EM2	Monochrome	80	CL	2048 to 4096	up to 12 bits
AViVA EM4	Monochrome	160	CL	2048 to 4096	up to 12 bits
Aviiva UM4	Monochrome	160	CL	8192	up to 12 bits
AViVA UM8	Monochrome	320	CL	12 288	up to 12 bits
AViVA SC2	Colour	60	CL/LVDS	4096	up to 12 bits
AViVA UC2	Colour	62	GigE	4096	up to 12 bits
DiViINA LM1	Monochrome	40	GigE	1024 to 4096	8 bits
DiViINA LM2	Monochrome	40	CL	1024 to 4096	8 bits
ELiIXA UC4/UC8	Colour	320	CL	4 x 4096	up to 12 bits
ELiIXA 3V	Monochrome	320	CL	3 x 4096	up to 12 bits
ELiIXA 4S	Monochrome	80	CL	4 x 4096	up to 12 bits

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