MX-E90
VISION PROCESSOR

DATALOGIC

The MX-E90 industrial vision processor provides the performance needed for the most demanding machine vision applications. With faster processing, more RAM, and up to 8 POE camera ports, our customers will be able to solve more inspection applications.

The total cost of ownership is reduced by having one processor able to connect to 8 inspection points. Integration, set up, and maintenance costs are lower since less cabinet space, less power consumption, fewer cables, fewer I/O blocks, and fewer spares are needed.

The MX-E90 is a part of a portfolio of industrial vision processors to address processing needs beyond the capability of smart cameras. The industrial vision processors can run a customer's application faster or process higher resolution images which will increase the range of applications that can be solved.

Powered by IMPACT Software, the MX-E90 has the same intuitive drag and drop interface as Datalogic's other industrial vision processors and Smart Cameras. IMPACT makes it easy to generate a vision program and create a custom user interface in minutes.

Built with performance in mind, our customers can rely on this industrial vision processor for years to come.

GiGE VISION

HIGHLIGHTS

- Rugged, industrial, high-powered vision processor
- GigE Vision standard connectivity and multicamera support
- Four or Eight channel Power over Ethernet (PoE) camera ports – PoE compliant cameras need no power cables and support up to 100 meter cable lengths
- Compatible with a wide range of cameras from VGA to high resolution, grayscale and color
- 8 USB 3.0 ports for connecting external devices (i.e keyboard and mouse)
- Complete IMPACT Software Suite included for ultimate programming flexibility
- Single I/O card that is configurable for PNP/NPN
- Long-term product availability

BENEFITS

- Multi-camera capability enables data collection and analysis from multiple points independently
- Shared processing reduces cost per inspection point
- Increased inspection power for higher inspection rates
- Reduces cost by eliminating additional PC for operator user interface
- State-of-the-art processor ensure long term product availability
- Easy integration with smart cameras for data sharing and inter-camera communication without needing a PC
- IMPACT software is common among all Datalogic vision processors and smart cameras so inspection files can be moved from one device to another and reduce maintenance support costs

TECHNICAL DATA

MX-E90	
CPU	Intel® Core i7-7700T up to 3.80 Ghz – quad core
System Memory	32 GB DDR4 RAM
Storage	128 GB SATA SSD
Graphics	Intel® HD Graphics 630 (1920x1200 resolution) - VGA, DVI
Camera Interface	4x or 8x - 1000 Mbps Base-T, PoE camera ports (Up to 7W per channel)
Camera Imager Limit	None
Network Interface	2x LAN ports - 10/100/1000 Mbps Base-T
Serial Communications	2x RS-232 serial port
Keyboard/Mouse	8x USB 3.0 ports
Comm Connectivity	Supports Ethernet/IP, Profinet, Modbus TCP and OPC
I/O	16 in-16out - single I/O card configurable PNP/NPN
Operating System	Windows 10 IoT Enterprise
Supply Voltage	24 VDC +/- 25%
Nominal Current Draw	5.5 A @ 24 VDC
Dimensions	145 (H) x 192 (W) x 230 (D) mm - 5.7 (H) x 7.56 (W) x 9.05 (D) in
Weight	4.45 Kg
Housing	Metal
Operating Temperature	0 to 50 °C / 32 to 122 °F
Operating Humidity	5 to 95% (non-condensing)
Mechanical Protection	IP20
Certification (Safety Compliance)	CE/FCC, c-UL-us, KCC

PART NUMBER KEY

MODEL	PROCESSING POWER	NUMBER OF PORTS	I/O TYPE	OPERATING SYSTEM
MX-E	XX	X	X	X
	90 = i7 - 3.8GHz Quad Core+HT	4 = 4 ports 8 = 8 ports	B = 16 IN - 16 OUT PNP/NPN	2 = WIN10
Examples	MX-E90-4-B-2 = MX-E90 with 4 camera ports, configurable I/Os and WIN10 Operating System			

MECHANICAL DRAWINGS
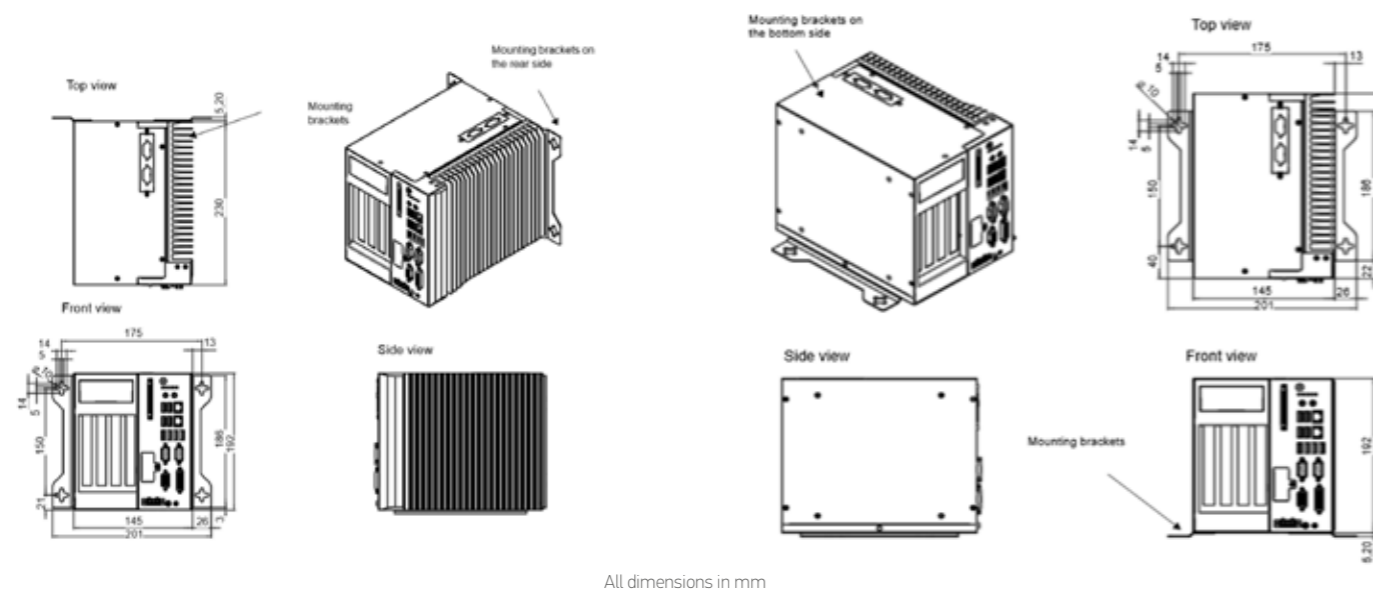
All dimensions in mm

MX-E90

AREA SCAN CAMERAS

The MX-E90 supports a series of cameras that are grayscale or color and supports standard vision GigE connectivity. Thanks to their small housing, cameras allow for easy installation in locations where space is constrained.

The cameras are the ideal solution for fast embedded vision system integration and ensures an outstanding price/performance ratio. High resolution and frame rate guarantee superior image acquisition for tackling the most complex machine vision applications.

HIGHLIGHTS

- GigE compatible to MX-E Series vision processors
- VGA to 5MP resolution, in both grayscale and color
- CMOS image sensors for high speed performance
- Power over Ethernet (PoE) guarantees minimum wiring and easy installation
- Compact housing (as small as 29 mm x 29 mm x 60 mm) enables mounting in space-constrained locations
- High frame rate ensures image capture at rates up to 300 frames per second (fps)
- Trigger and strobe I/O provide outstanding integration flexibility

BENEFITS

- Reduced size for minimum space requirements
- GigE vision camera interface
- High frame rate for superior image acquisition and processing
- State-of-art grayscale and color image sensors
- C-mount lens support
- IP30 rated housing
- CE, FCC and RoHS compliant

TECHNICAL DATA

GRAYSCALE MODEL	COLOR MODEL	RESOLUTION	IMAGER	SHUTTER	FRAME RATE (FPS)	PoE
E101	E101C	640 x 480	1/4" CMOS	Global	376	•
E151	E151C	1280 x 1024	1/2" CMOS	Global	88	•
E181	E181C	1920 x 1200	2/3" CMOS	Global	50	•
M197	M197C	2592 x 1944	1/2.5" CMOS	Rolling	14	•
E198	E198C	2448 x 2048	2/3" CMOS	Global	23	•

MECHANICAL DRAWINGS

All dimensions in mm
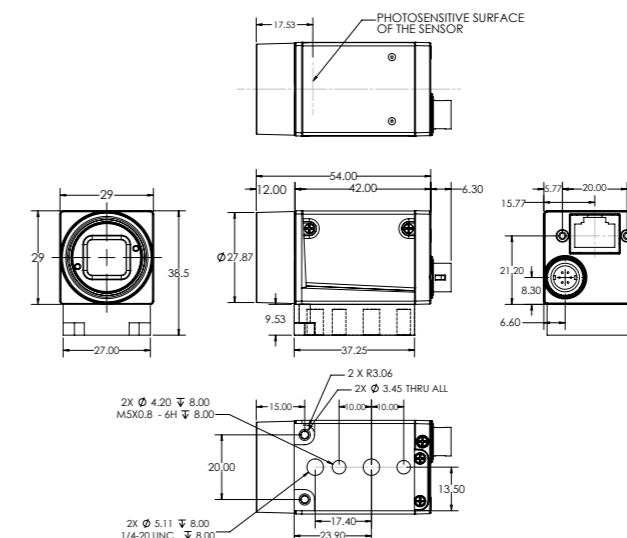
MX-E90

LINE SCAN CAMERAS

The MX-E90 supports a series of line scan cameras that are grayscale and supports standard vision GigE connectivity. These cameras are for applications that need high resolution and the object is very long or an endless web of materials.

The cameras are the ideal solution for printing machines to inspect printed images such as continuous web or the printing around a circular object.

HIGHLIGHTS

- GigE compatible to MX-E40, MX-E80 and MX-E90 vision processors
- 2K to 8K resolution in grayscale
- High quality image sensors for speed performance
- Compact housing enables mounting in space-constrained locations
- High line rate ensures image capture at rates for high speed applications

BENEFITS

- Reduced size for minimum space requirements
- GigE vision camera interface
- Great for high-speed or high-resolution applications
- Different lens mount options to support applications needs
- IP30 rated housing
- CE, FCC and RoHS compliant

TECHNICAL DATA

LINE SCAN						
MODEL	RESOLUTION	MAX. LINE RATE	PIXEL SIZE	C0MOUNT	F-MOUNT	M42-MOUNT
M565	2048	51 KHz	7 µm x 7 µm	•	•	•
M570	4096	26 KHz	7 µm x 7 µm		•	•
M575	6144	17 KHz	7 µm x 7 µm		•	•
M580	8192	12 KHz	3.25 µm x 3.5 µm		•	•

MECHANICAL DRAWINGS

All dimensions in mm
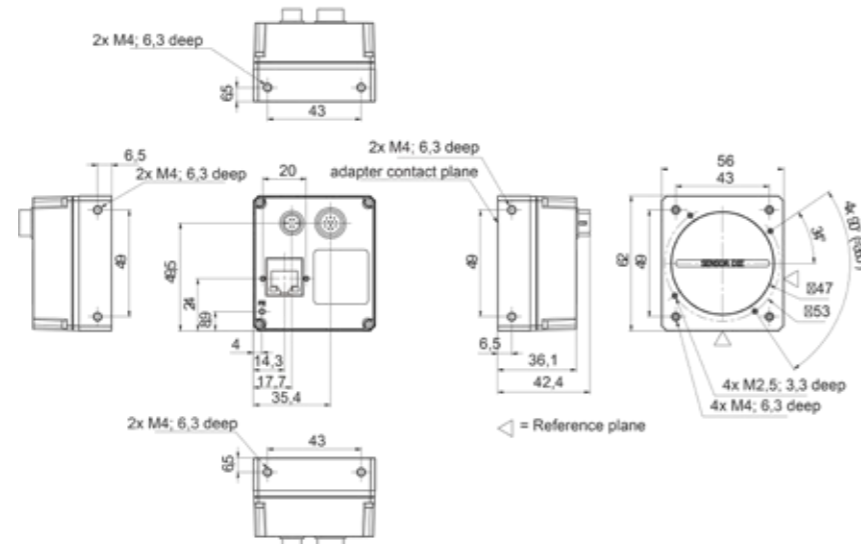
MX-E90 MODELS

DESCRIPTION	PART NUMBER
Vision Processors	
MX-E90-4-B-2, Vision Processor, 4 ports, PNP/NPN, WIN10	959918112
MX-E90-8-B-2, Vision Processor, 8 ports, PNP/NPN, WIN10	959918113
Dongles	
DONGLE, IMPACT	93ACC0185
DONGLE, IMPACT, Enhanced	93ACC0236
DONGLE, IMPACT, PST	93ACC0187
DONGLE, IMPACT, Enhanced, PST	93ACC0237
Licenses, MX-E Series Processors	
LICENSE, ENHANCED, PROCESSOR	95A907109
LICENSE, PATTERN SORTING TOOL, PROCESSOR	95A906545
GigE Area Scan Cameras	
Camera, E101, Gig-E, 659 x 480, 300 FPS, Grayscale, 1/4" CMOS	959933022
Camera, E101C, Gig-E, 659 x 480, 300 FPS, Color, 1/4" CMOS	959933023
Camera, E151, Gig-E, 1280 x 1024, 75 FPS, Grayscale, 1/2" CMOS	959933024
Camera, E151C, Gig-E, 1280 x 1024, 75 FPS, Color, 1/2" CMOS	959933025
Camera, E181, Gig-E, 1920 x 1200, 48 FPS, Grayscale, 2/3" CMOS	959933026
Camera, E181C, Gig-E, 1920 x 1200, 48 FPS, Color, 2/3" CMOS	959933027
Camera, M, Gig-E, 2592 x 1944, M FPS, Grayscale, 1/2.5" CMOS	959931010
Camera, M, Gig-E, 2592 x 1944, M FPS, Color, 1/2.5" CMOS	959931011
Camera, E198, Gig-E, 2448 x 2048, 20 FPS, Grayscale, 2/3" CMOS	959933044
Camera, E198C, Gig-E, 2448 x 2048, 20 FPS, Color, 2/3" CMOS	959933045
GigE Line Scan Cameras	
Camera, M565, Gig-E, 2048 Linescan, 51KHz, Grayscale	959931002
Camera, M570, Gig-E, 4096 Linescan, 26KHz, Grayscale	959931003
Camera, M575, Gig-E, 6144 Linescan, 17KHz, Grayscale	959933020
Camera, M580, Gig-E, 8192 Linescan, 12KHz, Grayscale	959933021

ACCESSORIES

DESCRIPTION	PART NUMBER
I/O Cables, MX Series Processors	
Cable, I/O, MX Series, Processor to Terminal Block, .75 Meter	606-0675-.75
Cable, I/O, MX Series, Processor to Terminal Block, 3 Meter	606-0675-3
Cable, I/O, MX Series, Processor to Terminal Block, 4.5 Meter	606-0675-4.5
Cable, I/O, MX Series, Processor to Terminal Block, 7.5 Meter	606-0675-7.5
I/O Boards, MX Series Processors	
I/O Board, MX-Series Processors, Female DB37, DIN Rail Mountable, no isolation	248-0110
Power and I/O Cables to Terminal Block, M and E Series Cameras	
Cable, Camera I/O, M1xx, E1xx, M5xx, 6 pin, 3 Meter, Camera to Terminal Block	606-0674-03
Cable, Camera I/O, M1xx, E1xx, M5xx, 6 pin, 5 Meter, Camera to Terminal Block	606-0674-05
Cable, Camera I/O, M1xx, E1xx, M5xx, 6 pin, 10 Meter, Camera to Terminal Block	606-0674-10
Cable, M5xx, 12 pin, 3 Meter, Camera to Terminal Block	606-0673-03
Cable, M5xx, 12 pin, 5 Meter, Camera to Terminal Block	606-0673-05
Cable, M5xx, 12 pin, 10 Meter, Camera to Terminal Block	606-0673-10
Power and I/O Cables Unterminated, M and E Series Cameras	
M1xx, E1xx Cameras I/O Cable, 6 pin, 3 Meter, Unterminated	606-0672-03
M1xx, E1xx Cameras I/O Cable, 6 pin, 5 Meter, Unterminated	606-0672-05
M1xx, E1xx Cameras I/O Cable, 6 pin, 10 Meter, Unterminated	606-0672-10
Cable, I/O, M5xx, 12 pin, 3 Meter, Camera to Unterminated	606-0671-03
Cable, I/O, M5xx, 12 pin, 5 Meter, Camera to Unterminated	606-0671-05
Cable, I/O, M5xx, 12 pin, 10 Meter, Camera to Unterminated	606-0671-10
I/O Boards, M and E Series Cameras	
I/O Board, M1xx, E1xx Cameras, w / isolation	661-0399
I/O Board, M5xx Camera, w / isolation	661-0401
Brackets, M and E Series Cameras	
Camera Mount, M1xx, E1xx Cameras	95A903029
Ethernet Cables, M and E Series Cameras	
Cable, Gig-E, CAT6, STP with thumb screws, 3 Meter	606-0677-M1-03
Cable, Gig-E, CAT6, STP with thumb screws, 5 Meter	606-0677-M1-05
Cable, Gig-E, CAT6, STP with thumb screws, 10 Meter	606-0677-M1-10