

Product Description



Product: MX-E Series

Expected General Availability: March 7, 2016
Expected Public Announcement: March 7, 2016

MX-E SERIES VISION PROCESSORS

MAXIMUM POWER AND EXTREME FLEXIBILITY

OVERVIEW

The MX-E Series is a new line of Vision Processors powered by IMPACT Software.

The MX-E Series of GigE vision processors delivers extraordinary computing power and unmatched application flexibility guaranteeing long-term product availability. The highest-quality hardware components delivered in a rugged chassis ensure robustness and long-life service.

Compared with the previous MX vision processor generation, the MX-E processors are up to 25% faster, with extended camera support to the new E series cameras and feature external dongles compatible with the MX-U Series.

Three different models are available according to the application requirements, featuring the ultimate Intel® multi-core chipsets: the entry-level, cost effective MX-E20 supporting two cameras, the mid-range MX-E40 and the high-end, quad core MX-E80 both supporting two or four cameras.

All MX-E Series models are available either with PNP or NPN digital I/Os for complete configuration versatility. Two different digital I/O boards and two or four camera ports (MX-E40 and MX-E80 only) result in 10 different hardware configurations that guarantee outstanding application flexibility.

Superior image processing capabilities, combined with the GigE high speed connectivity, make the MX-E Series the perfect choice for demanding multi-camera vision inspections in any industry, from packaging to pharmaceutical, and electronics to automotive.



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FEATURES AND BENEFITS

PRODUCT FEATURES	BENEFITS FOR CUSTOMER
Outstanding computing power	The ultimate Intel® multi-core chipsets guarantee extraordinary computing power and maximize multi-camera inspection speed.
Long-term availability	Thanks to their cutting-edge hardware components, the MX-E processors guarantee long term availability.
Superior quality and robustness	Highest-quality hardware components packed in a rugged and compact processor chassis guarantee robustness and long-life service even in the harshest industrial environments.
Ethernet (GigE Vision) connectivity and multi-camera support	The MX-E processors feature two or four independent GigE Vision camera ports for high-speed image acquisition. Multi-camera capability allows data collection and analysis from multiple points and reduces integration costs. Thanks to the Power over Ethernet (PoE) functionality, the MX-E processors simplifies camera cabling.
Three models covering different performance and price point requirements	Three different models allow for the selection of the appropriate level of performance based on the application needs.
Ten different combinations of hardware configurations	The MX-E processors are available either with PNP or NPN digital I/Os (16 inputs and 16 outputs) ensuring extended connectivity to any PLC brand. Two digital I/O options and two or four GigE camera ports result in 10 different hardware configurations.
Universal dongle for easier SW license management	Universal dongles allow for IMPACT software license and add-on license functionalities on all the MX-E and MX-U models, allowing users to move and swap licenses from one vision processor to another.
Wide range of supported cameras including the high-speed CMOS E Series cameras	The MX-E processors are compatible with a wide range of Gig-E cameras from VGA up to 16MP resolution (areascan) and from 2K up to 8K (linescan) including the new E Series high-speed PoE Gig-E cameras, ensuring outstanding application flexibility.
Compatible with existing MX accessories	The MX-E processors are fully compatible with the existing MX accessories (e.g. cables, breakout boards), reducing costs for new installations.
Compact and effective design	The MX-E is designed for ensures optimal air ventilation. The processor chassis features mounting holes for easy and robust panel mounting. The MX-E connectors are located on the same side, simplifying the vision processor wiring.

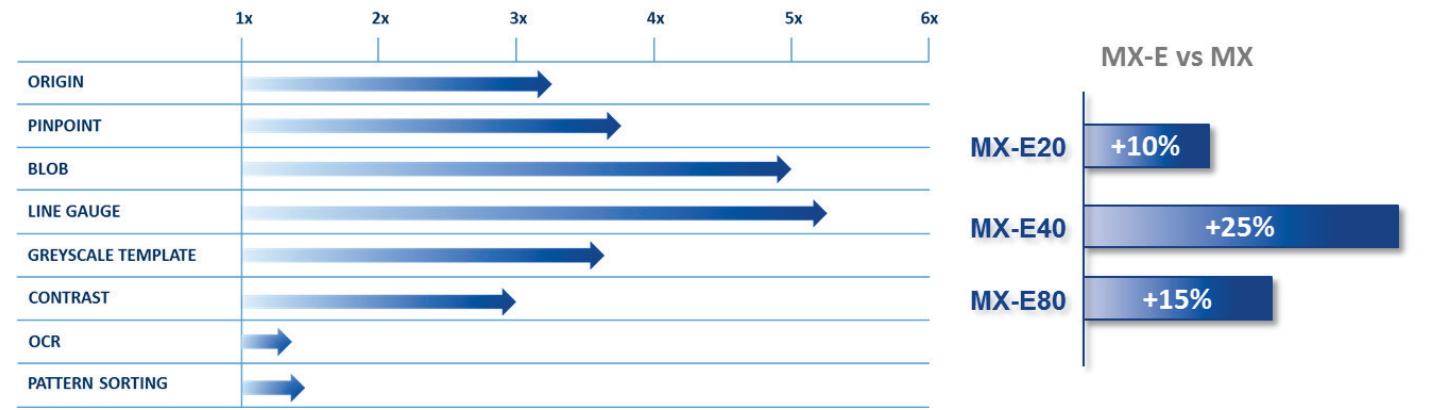


COMPUTING PERFORMANCE AND SUPERIOR QUALITY

The MX-E vision processors feature the latest Intel® chipsets on the market, delivering the best computing performance and the fastest processing speeds in the industry, while ensuring long term product availability. The MX-E processors integrate the highest-quality hardware components for guaranteed reliability and long-life service.

The MX-E Series encompasses three different models: MX-E20, MX-E40 and MX-E80. The MX-E20 model has a Celeron dual core running at 1.4 GHz, the MX-E40 features a Celeron dual core at 2.2 GHz and the MX-E80 models are powered by an i7 quad core at 2.3 GHz.

These chipsets, combined with best-in-class IMPACT software, result in a significant performance improvement over the current MX-Series vision processors. IMPACT inspection tools are up to five times faster than before.



TECHNICAL DATA

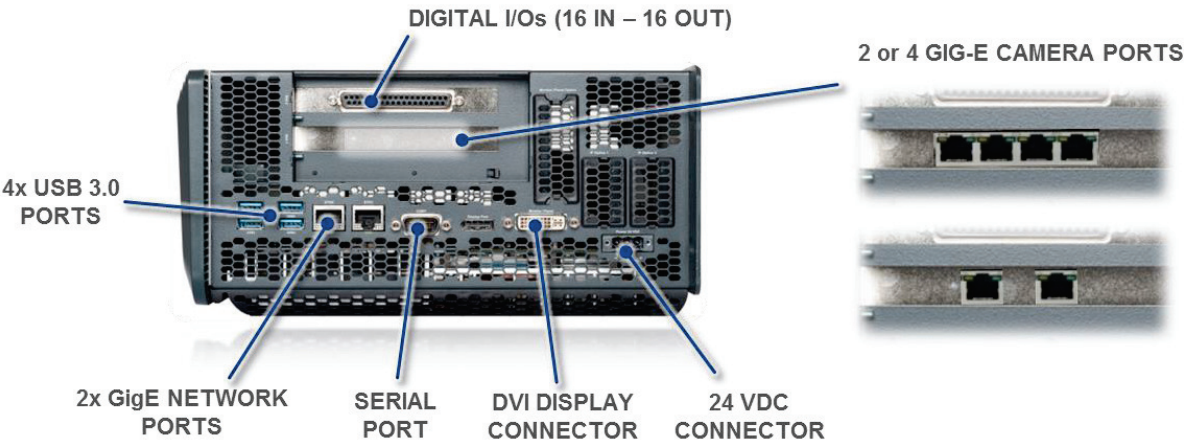
	MX-E20	MX-E40	MX-E80
CPU	Intel® Celeron 1047UE 1.4 Ghz dual core	Intel® Celeron 1020E 2.2 Ghz dual core	Intel® Core i7 3615QE 2.3 Ghz quad core
System Memory	4 GB DDR3 RAM		8 GB DDR3 RAM
Storage	60 GB SATA SSD (MLC)		128 GB SATA SSD (MLC)
Graphics	Intel® HD 3000 (1920x1200 resolution) - DVI		
Camera Imager Limit	2Mpix or lower	None	
Network Interface	2x LAN ports - 10/100/1000 Mbps Base-T		
Serial Communication	1x RS-232 serial port		
Keyboard/Mouse	4x USB3.0 ports		
Comm Connectivity	Supports Ethernet/IP, Modbus TCP and OPC		
I/O	16x opto-isolated digital inputs 16x opto-isolated digital outputs		
Operating System	Windows Embedded Standard 7		
Supply Voltage	24 VDC +/- 25%		
Nominal Current Draw	5.5 A @ 24 VDC		
Dimensions	270 (H) x 130 (W) x 255 (D) mm 10.6 (H) x 5.1 (W) x 10 (D) in.		
Weight	2050 g		
Operating Temperature	0 to 55° C - 32 to 131° F		
Operating Humidity	10 to 90% (non-condensing)		
Mechanical Protection	IP20		
Certifications (Safety Compliance)	CE, c-UL-us		



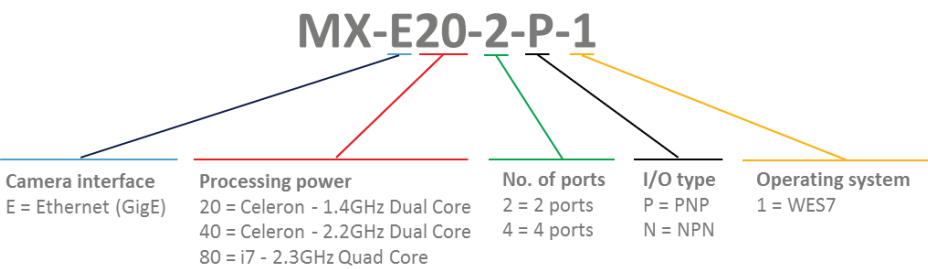
CONNECTIVITY AND HARDWARE CONFIGURATIONS

The MX-E Series offers three different models delivering up to ten hardware configuration options. The MX-E20 models feature 2 Gig-E PoE camera ports, whereas the MX-E40 and MX-E80 integrate two or four Gig-E PoE camera ports. All physical ports on MX-E vision processors are enabled.

All MX-E processors are equipped either with PNP or NPN digital I/O interfaces. These digital I/O boards feature an external connector with 16 inputs and 16 outputs that deliver extended connectivity to any PLC brand.



Two Gig-E camera interfaces, plus two digital I/O options, result in the following hardware configurations:



MODELS	NUMBER OF PORTS		I/O TYPE	
	2	4	PNP	NPN
MX-E20-2-P-1	●		●	
MX-E20-2-N-1	●			●
MX-E40-2-P-1	●		●	
MX-E40-2-N-1	●			●
MX-E40-4-P-1		●	●	
MX-E40-4-N-1		●		●
MX-E80-2-P-1	●		●	
MX-E80-2-N-1	●			●
MX-E80-4-P-1		●	●	
MX-E80-4-N-1		●		●



UNIVERSAL DONGLE

The MX-E processors feature an external USB port protected under the processor front door. This port is reserved for external micro dongles for the IMPACT software license, including add-on licensed functionalities (e.g. Pattern Sorting Tool).

External dongles are universal, enabling software licenses on both MX-E and MX-U models.



DONGLE OPTIONS
Dongle, IMPACT
Dongle, IMPACT, OCR*
Dongle, IMPACT, PST*
Dongle, IMPACT, 3rd party camera*
Dongle, IMPACT, OCR, 3rd party camera*
Dongle, IMPACT, PST, 3rd party camera*
Dongle, IMPACT, PST, OCR*
Dongle, IMPACT, PST, OCR, 3rd party camera*

*add-on functionalities are enabled on all physical camera ports

CAMERA SUPPORT

E100 SERIES CAMERA SUPPORT

MX-E processors support the new E100 Series cameras, next generation high speed CMOS GigE cameras. Thanks to their small housing, E100 Series cameras enable easy installation in space-constrained locations.

Product Highlights

- VGA to 5MP resolution, in both gray scale and color
- CMOS image sensors for high speed performance
- Power over Ethernet (PoE) guarantees minimal wiring and easy Installation
- Compact housing (as small as 29 mm x 29 mm x 60 mm) for 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



GRAYSCALE MODEL	COLOR MODEL	SHUTTER	RESOLUTION	IMAGER	FRAME RATE (FPS)	PoE
E101	E101C	Global	640 x 480	1/4" CMOS	300	•
E151	E151C	Global	1280 x 1024	1/2" CMOS	75	•
E181	E181C	Global	1920 x 1200	2/3" CMOS	48	•
E198	E198C	Global	2590 x 2048	1" CMOS	20	•



M SERIES AND 3RD PARTY CAMERA COMPATIBILITY

The MX-E processors are fully compatible with the complete M Series areascan and linescan camera lineup.



TARGET INDUSTRY APPLICATIONS

Powered by IMPACT, the MX-E Series is the ideal solution for the deployment of any embedded vision system with multiple independent inspection points for highly demanding machine vision applications, such as:

- Robot guidance
- Laser guidance
- Electronic component and PCB inspection
- Automotive part and component verification
- Packaging and food processing inspections in the Food & Beverage industry
- Quality inspections of medical devices and disposables
- Sealing and packaging inspections in the Pharmaceutical industry

PRODUCT INFORMATION

PART NUMBER	DESCRIPTION	AVAILABILITY
VISION PROCESSORS		
959912103	MX-E20-2-P-1, Vision Processor, 2 ports, PNP, WES7	Mar, 7 th
959912104	MX-E20-2-N-1, Vision Processor, 2 ports, NPN, WES7	Mar, 7 th
959914107	MX-E40-2-P-1, Vision Processor, 2 ports, PNP, WES7	Mar, 7 th
959914108	MX-E40-2-N-1, Vision Processor, 2 ports, NPN, WES7	Mar, 7 th
959914109	MX-E40-4-P-1, Vision Processor, 4 ports, PNP, WES7	Mar, 7 th
959914110	MX-E40-4-N-1, Vision Processor, 4 ports, NPN, WES7	Mar, 7 th
959918105	MX-E80-2-P-1, Vision Processor, 2 ports, PNP, WES7	Mar, 7 th
959918106	MX-E80-2-N-1, Vision Processor, 2 ports, NPN, WES7	Mar, 7 th
959918107	MX-E80-4-P-1, Vision Processor, 4 ports, PNP, WES7	Mar, 7 th
959918108	MX-E80-4-N-1, Vision Processor, 4 ports, NPN, WES7	Mar, 7 th



DONGLES		
93ACC0185	DONGLE, IMPACT	Mar, 7 th
93ACC0186	DONGLE, IMPACT, OCR*	Mar, 7 th
93ACC0187	DONGLE, IMPACT, PST*	Mar, 7 th
93ACC0188	DONGLE, IMPACT, 3rd party camera*	Mar, 7 th
93ACC0189	DONGLE, IMPACT, OCR, 3rd party camera*	Mar, 7 th
93ACC0190	DONGLE, IMPACT, PST, 3rd party camera*	Mar, 7 th
93ACC0191	DONGLE, IMPACT, PST, OCR*	Mar, 7 th
93ACC0192	DONGLE, IMPACT, PST, OCR, 3rd party camera*	Mar, 7 th
E100 SERIES CAMERAS		
959933022	Camera, E101, Gig-E, 659 x 480, 300 FPS, Grayscale, 1/4" CMOS	Mar, 7 th
959933023	Camera, E101C, Gig-E, 659 x 480, 300 FPS, Color, 1/4" CMOS	Mar, 7 th
959933024	Camera, E151, Gig-E, 1280 x 1024, 75 FPS, Grayscale, 1/2" CMOS	Mar, 7 th
959933025	Camera, E151C, Gig-E, 1280 x 1024, 75 FPS, Color, 1/2" CMOS	Mar, 7 th
959933026	Camera, E181, Gig-E, 1920 x 1200, 48 FPS, Grayscale, 2/3" CMOS	Mar, 14 th
959933027	Camera, E181C, Gig-E, 1920 x 1200, 48 FPS, Color, 2/3" CMOS	Mar, 14 th
959933028	Camera, E198, Gig-E, 2590 x 2048, 20 FPS, Grayscale, 1" CMOS	Mar, 14 th
959933029	Camera, E198C, Gig-E, 2590 x 2048, 20 FPS, Color, 1" CMOS	Mar, 14 th

* add-on functionalities are enabled on all physical camera ports

TRAINING INFORMATION

In order to ensure the Datalogic salesforce ready to sell the MX-E processors, webinars have been planned and schedule as follows:

DATE	SESSION	TIME
Feb, 23 th	Session #1	9:00 – 9:30 AM (CET - EMEA) 4:00 – 4:30 PM (CST – APAC)
Feb, 23 th	Session #2	5:00 – 5:30 PM (CET - EMEA) 11:00 – 11:30 AM (EST - AMERICAS)
Feb, 24 th	Session #3	9:00 – 9:30 AM (CET - EMEA) 4:00 – 4:30 PM (CST – APAC)
Feb, 24 th	Session #4	5:00 – 5:30 PM (CET - EMEA) 11:00 – 11:30 AM (EST - AMERICAS)

