MX-E Series

MX-E SERIES

The MX-E Series of Vision Processors provides the highest performance in image processing with even more flexibility through GigE multi-camera connectivity support.

The MX-E Series allows users to choose the level of system performance and complexity based on their application needs. Three different MX-E models are available, each featuring the latest Intel chipsets and high speed PoE (Power over Ethernet) camera ports.

MX-E vision processors are equipped with NPN or PNP digital I/Os and power 2 or 4 GigE cameras

The MX-E20 is an entry-level, affordable processor featuring an Intel® Celeron dual core 1.4 GHz processor and two independent Gigabit PoE camera ports. The MX-E20 offers cost-effective means to migrate from smart-camera applications to an embedded vision system.

The MX-E40 Series is a rugged and compact embedded vision processor that features Intel® multi-core processors and two or four independent Gigabit PoE camera ports. The MX-E40's long-life embedded components provide a robust and reliable vision system for critical inspection applications.

The next generation MX-E80 Vision Processor extends the power and performance of MX-E Series to applications that demand faster, more advanced algorithms and higher-resolutions with its Intel® Core™ i7 quad-core processor, 8GB memory and two or four independent Gigabit PoE ports.

Powered by IMPACT, the MX-E Series is the ideal solution for the deployment of embedded vision systems with multiple indipendent inspection points.

GiGE VISION

HIGHLIGHTS

- Rugged, industrial, high-powered vision processors
- State-of-the-art Intel® Chipsets and highest-quality HW components
- Long-term product availability
- Ethernet (GigE Vision) connectivity and multi-camera support
- 3 models covering different performance and 10 different HW configurations
- Wide range of cameras from VGA up to 16MP resolution (areascan), from 2K up to 8K (linescan)
- Universal dongle for easier SW license management
- Complete IMPACT Software suite included for ultimate programming flexibility – addresses any inspection and user interface needs
- Two or four Channel Power over Ethernet (PoE) camera ports – PoE compliant cameras need no power cables and support up to 100 meter cable lengths

BENEFITS

- The ultimate Intel® multi-core chipsets guarantee extraordinary computing power and maximize multi-camera inspection speed.
- Highest-quality hardware components packed in a rugged and compact processor chassis guarantee robustness and long-life service even in the harshest industrial environments
- Multi-camera capability - allows data collection and analysis from multiple points and reduces integration costs
- Three different models allow to choose the correct level of performance based on the application needs
- Simplifies cabling by eliminating the need for camera power cables
- Universal dongles enable IMPACT software license and add-on licensed functionalities on all the vision processor models. Users can move licenses from one vision processor to another
- Ten harwdare configuration options deliver unmatched application flexibility

MX-E Series

DATALOGIC

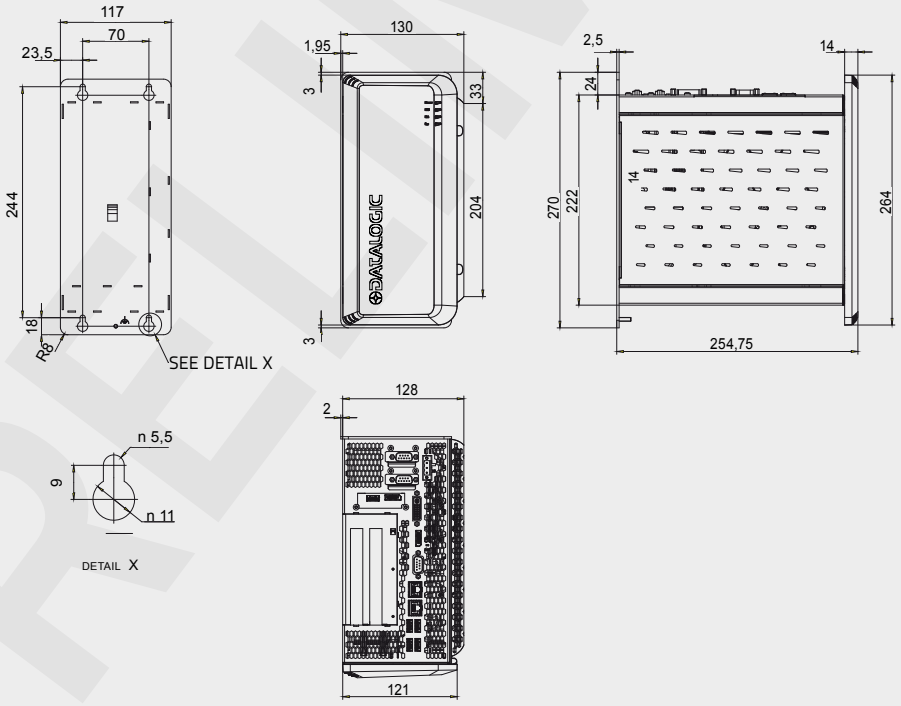
TECHNICAL DATA

	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 interface	See table below		
Camera imager limit	2Mpix or lower	None	
Network interface	2x LAN ports - 10/100/1000 Mbps Base-T		
Serial communications	1x RS-232 serial port		
Keyboard/mouse	4x USB3.0 ports		
Comm connectivity	Supports Ethernet/IP, Modbus TCP and OPC		
I/O	See table below		
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		
Housing	Galvanized plate - plastic		
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		

PART NUMBER KEY

MODEL	PROCESSING POWER	-	NO. OF PORTS	-	I/O TYPE	-	OPERATING SYSTEM
MX-E	XX	-	X	-	X	-	X
	20 = Celeron - 1.4GHz Dual Core 40 = Celeron - 2.2GHz Dual Core 80 = i7 - 2.3GHz Quad Core		2x 1000 Mbps Base-T, PoE camera ports (Up to 7W per channel) 4x 1000 Mbps Base-T, PoE camera ports (Up to 7W per channel)		P = 16 IN - 16 OUT PNP N = 16 IN - 16 OUT NPN		1 = WES7
Examples	MX-E20-2-P-1 = MX-E20 with 2 camera ports, PNP I/Os, WES7 OS MX-E80-4-N-1 = MX-E80 with 4 camera ports, NPN I/Os, WES7 OS						

MECHANICAL DRAWINGS



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MX-E Series

E-CAMERA

The E-Cameras Series features a state-of-art grayscale or color CMOS image sensor and support standard vision GigE connectivity. Thanks to their small housing, E-cameras enable easy installation in space-constrained locations. The E-Camera Series represents the ideal solution for fast embedded vision system integration and ensures an outstanding price/performance ratio. High resolution and frame rate guarantee a superior image acquisition for tackling the most complex machine vision applications.

BENEFITS

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

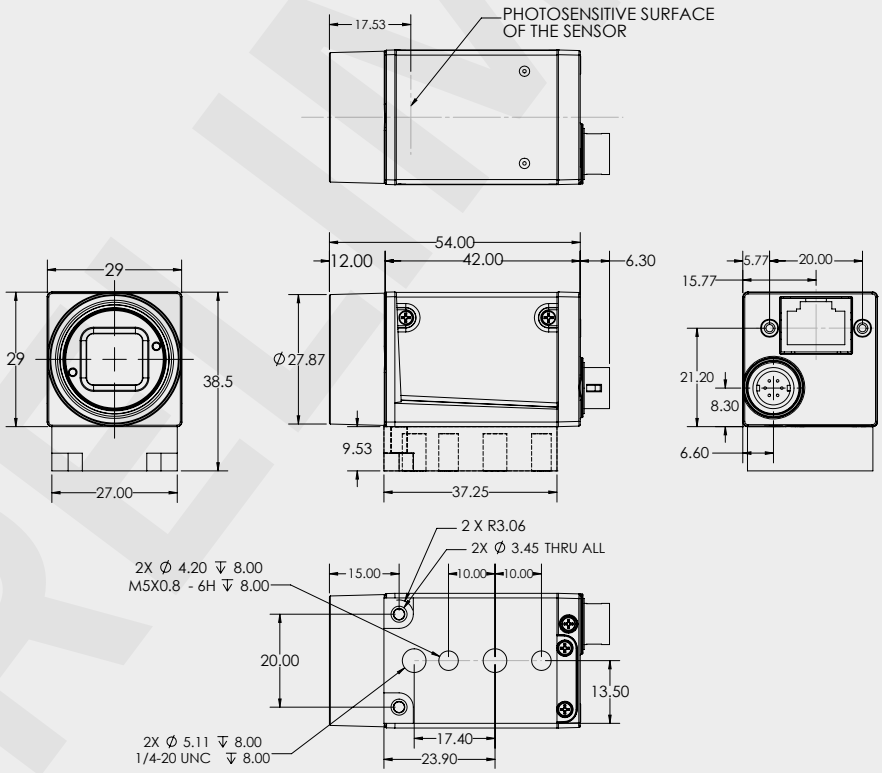
HIGHLIGHTS

- GigE compatible to MX-E Series vision processors
- VGA to 2MP resolution, in both gray scale and color
- CMOS image sensors for higher speed performances
- Power over Ethernet (PoE) guarantees minimum wiring and ease of installation
- Small housing (as little 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

TECHNICAL DATA

GRAYSCALE MODEL	COLOR MODEL	RESOLUTION	IMAGER	SHUTTER	FRAME RATE (FPS)	PoE
E101	E101C	640 x 480	1/4" CMOS	Global	300	▪
E151	E151C	1280 x 1024	1/2" CMOS	Global	75	▪
E182	E182C	1600X1200	1/1.8" CMOS	Global	60	▪

MECHANICAL DRAWINGS



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M-CAMERAS

M-Series cameras allow for fast integration to solve the most complex machine vision applications.
The unique ability to mix and match color, grayscale, multi-imager, area and linescan cameras with an MX-Series processor lets you define, select and deploy the perfect imaging solution for high-speed, multi-camera machine vision inspections.

M100 Series

M200 Series

M300 Series

M500 Series

BENEFITS

- GigE compatible for fast integration with MX-Series processors
- Compact size fits many machine configurations
- High-speed trigger input
- High-speed strobe light output
- C-mount lens support
- IP30 rated housing
- CE, FCC and RoHS compliant

HIGHLIGHTS

- GigE compatible for easy communication to MX Series processors
- VGA to 5MP resolution, in both grayscale and color
- Camera settings fully controllable by IMPACT Software
- Power over Ethernet (PoE) reduces cabling complexity (only M1xx)
- Small form factor (as little as 29 mm x 29 mm x 60 mm) enables mounting in space-constrained locations
- Asynchronous triggering enables each camera to independently capture images at rates up to 210 frames per second (fps)
- Trigger and strobe I/O on camera eases integration

TECHNICAL SPECIFICATIONS

AREASCAN

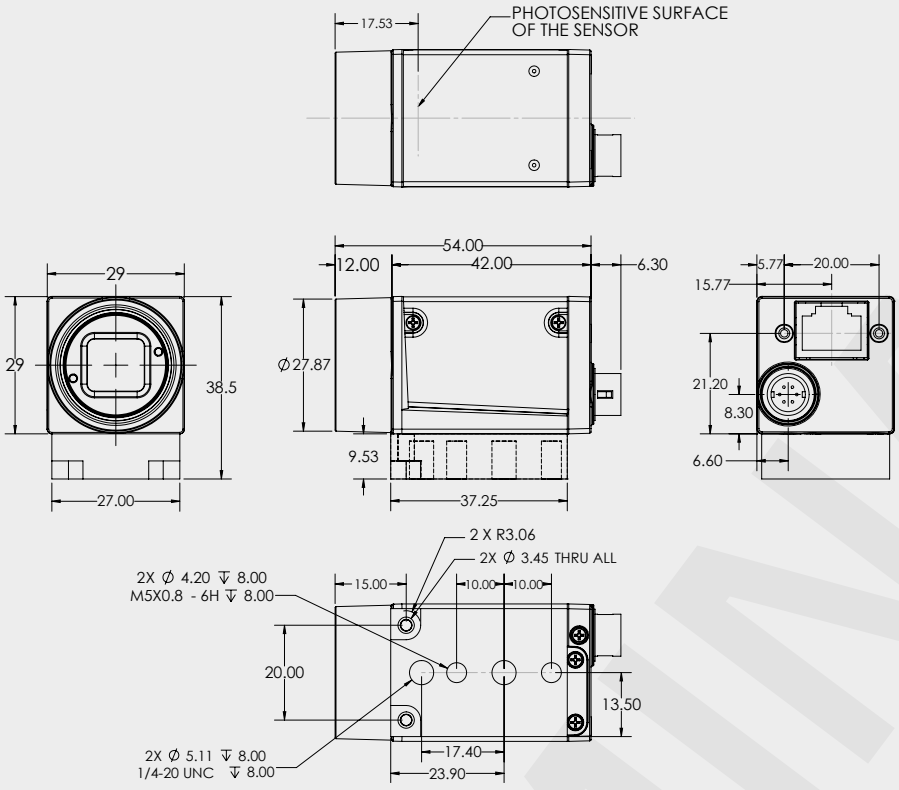
	GRAYSCALE MODEL	COLOR MODEL	RESOLUTION	IMAGER	SHUTTER	FRAME RATE (FPS)	PoE
	M100	M100C	640 x 480	1/4" CCD	Global	100	▪
	M110	M110C	640 x 480	1/3" CCD	Global	90	▪
	M115	M115C	659 x 494	1/2" CCD	Global	100	▪
	M125	M125C	782 x 582	1/2" CCD	Global	75	▪
	M150	M150C	1296 x 966	1/3" CCD	Global	30	▪
	M180	M180C	1628 x 1236	1/1.8" CCD	Global	20	▪
	M190	M190C	2048 x 1088	2/3" CMOS	Global	50	▪
	M195	M195C	2048 x 2048	1" CMOS	Global	25	▪
	M197	M197C	2592 x 1944	1/2.5" CMOS	Rolling	14	▪
	M200	M200C	659 x 494	1/3" CCD	Global	70	
	M202	M202C	659 x 494	1/2" CCD	Global	79	
	M250	M250C	1280 x 960	1/3" CCD	Global	32	
	M295	M295C	1628 x 1236	1/1.8" CCD	Global	28	
	M300	M300C	648 x 488	1/3" CCD	Global	210	
	M330	M330C	1004 x 1004	2/3" CCD	Global	60	
	M350	M350C	1608 x 1208	1" CCD	Global	35	
	M390	M390C	2448 x 2050	2/3" CCD	Global	17	

LINESCAN

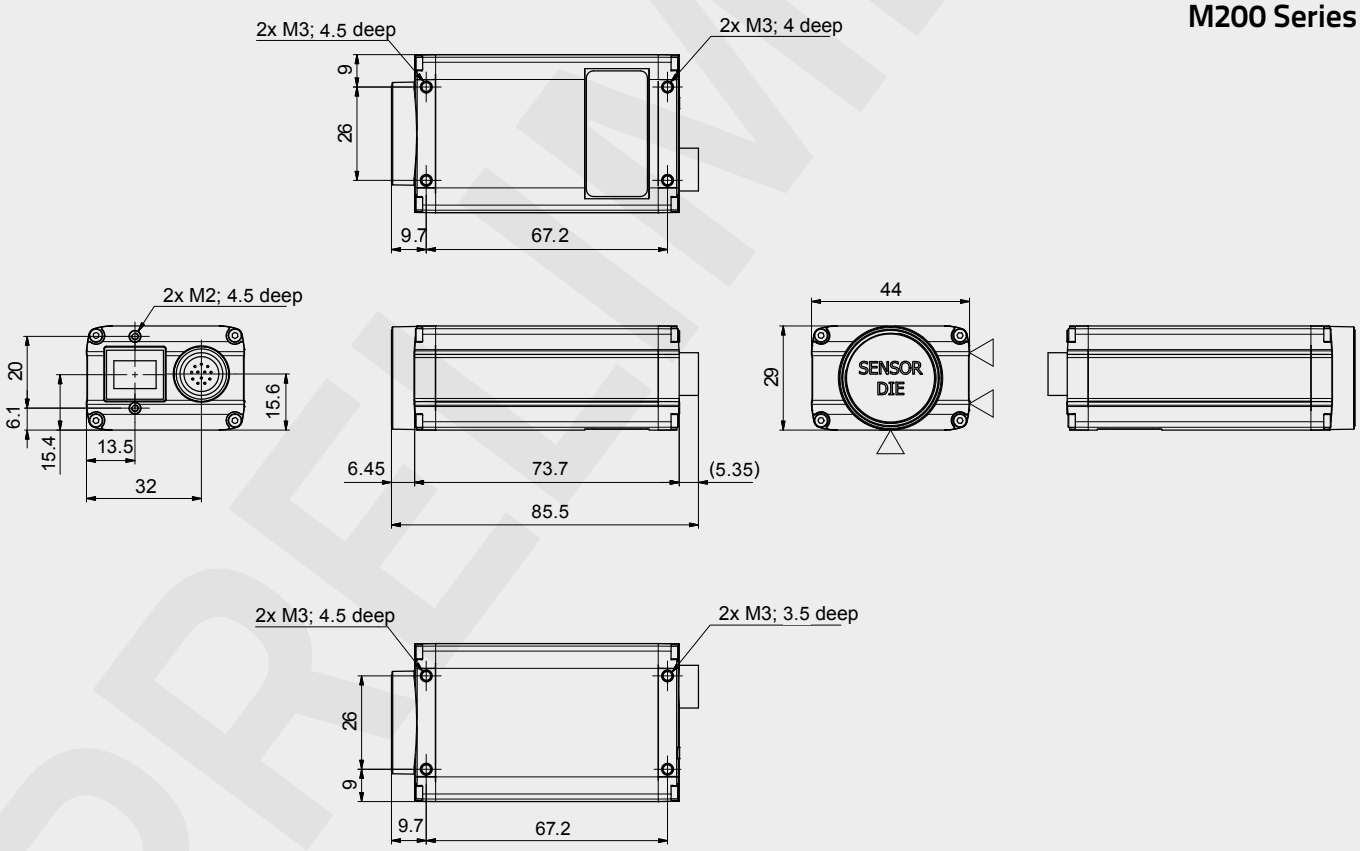
	MODEL	RESOLUTION	MAX LINE RATE	PIXEL SIZE	C-MOUNT	F-MOUNT	M42-MOUNT
	M565	2048	48 KHz	7 µm x 7 µm	▪	▪	▪
	M570	4096	24 KHz	7 µm x 7 µm		▪	▪
	M575	6144	17 KHz	7 µm x 7 µm		▪	▪
	M580	8192	12 KHz	3.5 µm x 3.5 µm		▪	▪

DIMENSIONS

M100 Series

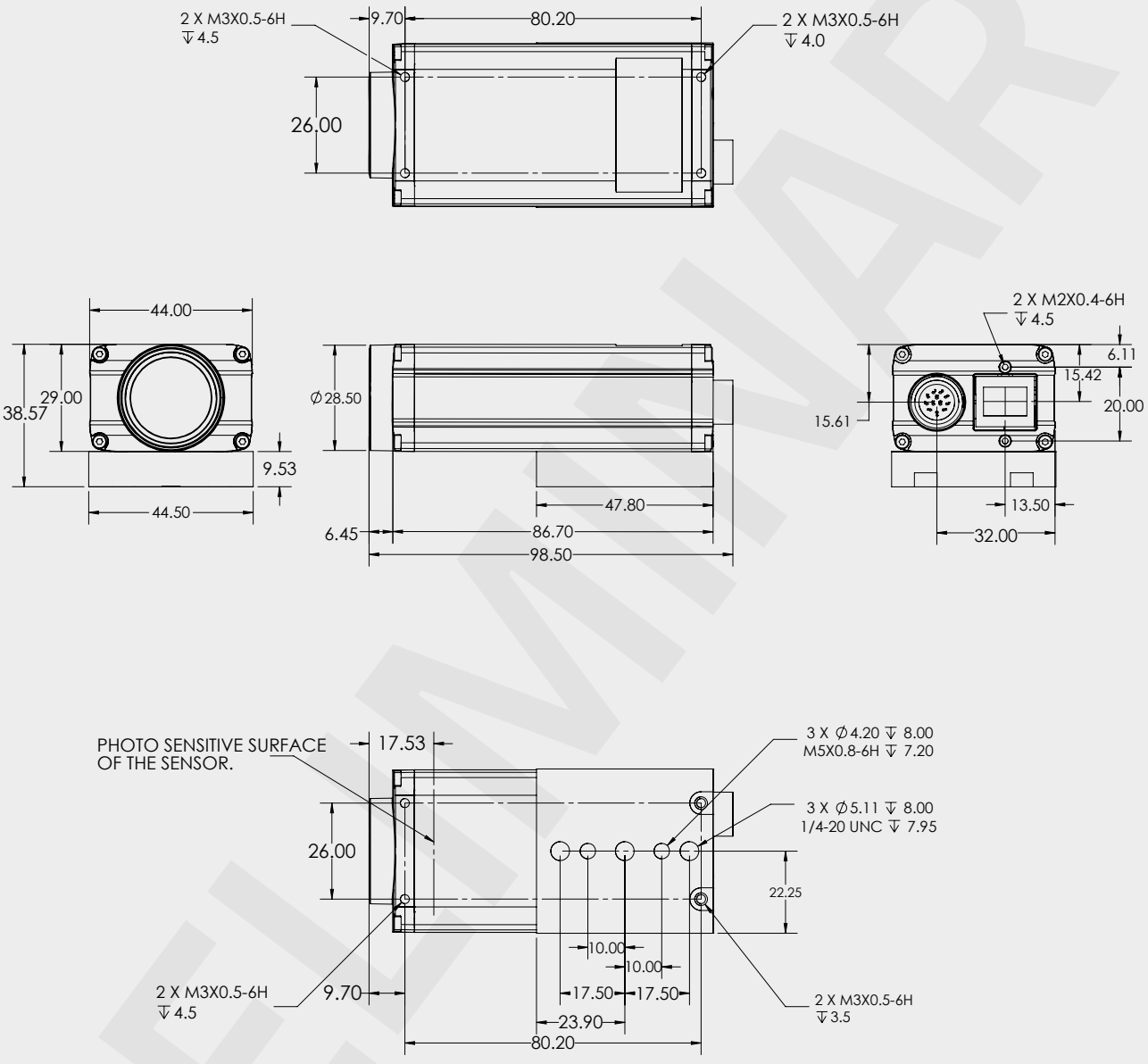


M200 Series



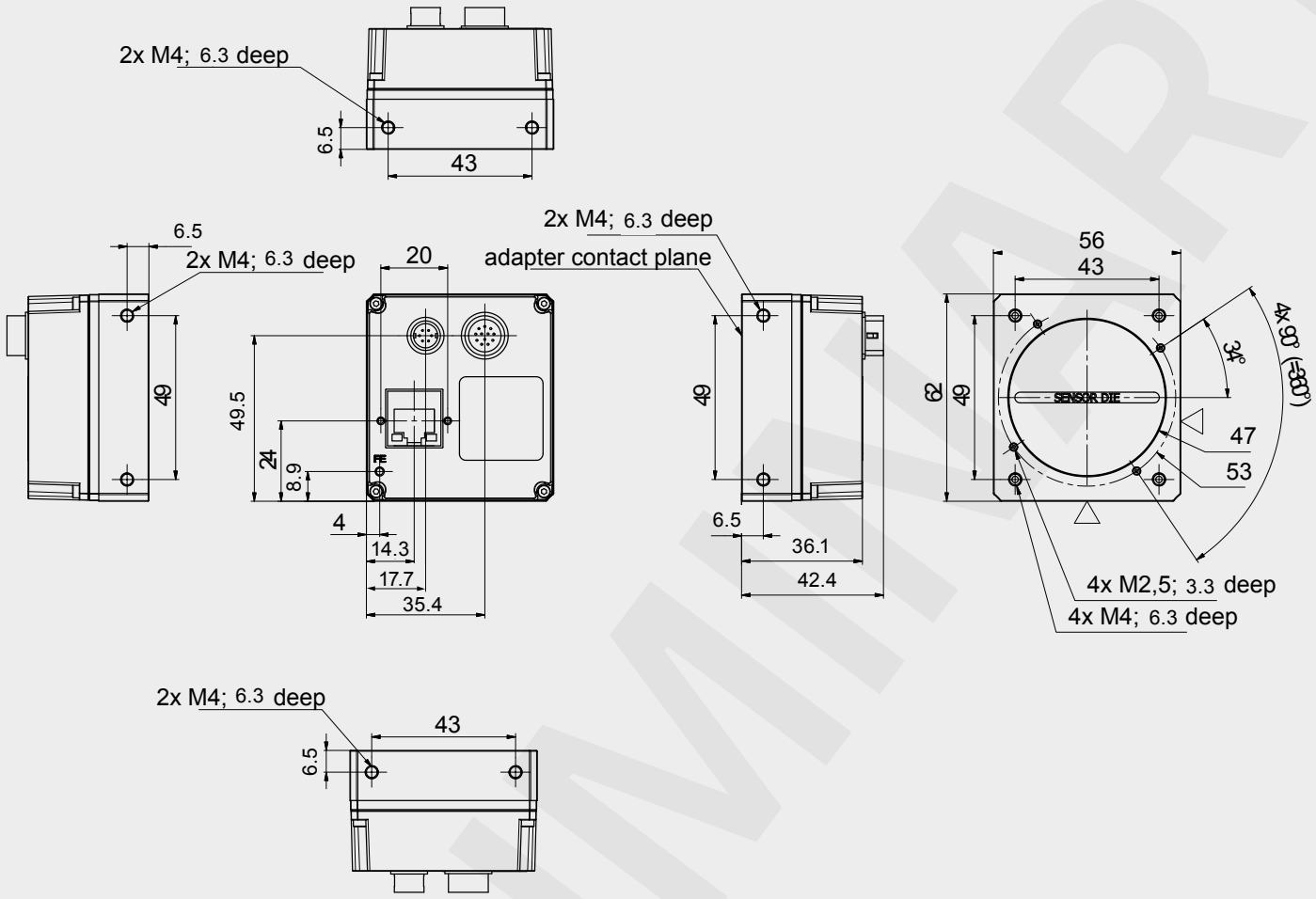
DIMENSIONS

M300 Series



DIMENSIONS

M500 Series



MODELS

DESCRIPTION	ORDER N°
PRODUCTS	
VISION PROCESSORS	
MX-E20-2-P-1, Vision Processor, 2 ports, PNP, WES7	959912103
MX-E20-2-N-1, Vision Processor, 2 ports, NPN, WES7	959912104
MX-E40-2-P-1, Vision Processor, 2 ports, PNP, WES7	959914107
MX-E40-2-N-1, Vision Processor, 2 ports, NPN, WES7	959914108
MX-E40-4-P-1, Vision Processor, 4 ports, PNP, WES7	959914109
MX-E40-4-N-1, Vision Processor, 4 ports, NPN, WES7	959914110
MX-E80-2-P-1, Vision Processor, 2 ports, PNP, WES7	959918105
MX-E80-2-N-1, Vision Processor, 2 ports, NPN, WES7	959918106
MX-E80-4-P-1, Vision Processor, 4 ports, PNP, WES7	959918107
MX-E80-4-N-1, Vision Processor, 4 ports, NPN, WES7	959918108
DONGLES	
DONGLE, IMPACT	93ACC0185
DONGLE, IMPACT, OCR*	93ACC0186
DONGLE, IMPACT, PST*	93ACC0187
DONGLE, IMPACT, 3rd party camera*	93ACC0188
DONGLE, IMPACT, OCR, 3rd party camera*	93ACC0189
DONGLE, IMPACT, PST, 3rd party camera*	93ACC0190
DONGLE, IMPACT, PST, OCR*	93ACC0191
DONGLE, IMPACT, PST, OCR, 3rd party camera*	93ACC0192
E-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, E182, Gig-E, 1600 x 1200, 60 FPS, Grayscale, 1/1.8" CMOS	959933038
Camera, E182C, Gig-E, 1600 x 1200, 60 FPS, Color, 1/1.8" CMOS	959933039
M-CAMERAS	
Camera, M100, Gig-E, 659 x 494, 100 FPS, Grayscale, 1/4" CCD	601-0351
Camera, M100C, Gig-E, 659 x 494, 100 FPS, Color, 1/4" CCD	601-0378
Camera, M110, Gig-E, 659 x 494, 90 FPS, Grayscale, 1/3" CCD	601-0423
Camera, M110C, Gig-E, 659 x 494, 90 FPS, Color, 1/3" CCD	601-0424
Camera, M115, Gig-E, 659 x 494, 100 FPS, Grayscale, 1/2" CCD	601-0450
Camera, M115C, Gig-E,659 x 494, 100 FPS, Color, 1/2" CCD	601-0451
Camera, M125, Gig-E, 782 x 582, 75 FPS, Grayscale, 1/2" CCD	601-0452
Camera, M125C, Gig-E, 782 x 582, 75 FPS, Color, 1/2" CCD	601-0453
Camera, M150, Gig-E, 1296 x 966, 30 FPS, Grayscale, 1/3" CCD	601-0352
Camera, M150C, Gig-E, 1296 x 966, 30 FPS, Color, 1/3" CCD	601-0379
Camera, M180, Gig-E, 1628 x 1236, 20 FPS, Grayscale, 1/1.8" CCD	601-0357
Camera, M180C, Gig-E, 1628 x 1236, 20 FPS, Color, 1/1.8" CCD	601-0384
Camera, M190, Gig-E, 2048 x 1088, 50 FPS, Grayscale, 2/3" CMOS	601-0454
Camera, M190C, Gig-E, 2048 x 1088, 50 FPS, Color, 2/3" CMOS	601-0455
Camera, M195, Gig-E, 2048 x 2048, 25 FPS, Grayscale, 1" CMOS	601-0456
Camera, M195C, Gig-E, 2048 x 2048, 25 FPS, Color, 1" CMOS	601-0457
Camera, M197, Gig-E, 2592 x 1944, 14 FPS, Grayscale, 1/2.5" CMOS	959931010
Camera, M197C, Gig-E, 2592x1944, 14 FPS, Color, 1/2.5" CMOS	959931011
Camera, M200, Gig-E, 659 x 494, 70 FPS, Grayscale, 1/3" CCD	601-0358
Camera, M200C, Gig-E, 659 x 494, 70 FPS, Color, 1/3" CCD	601-0385
Camera, M202, Gig-E, 659 x 494, 79 FPS, Grayscale, 1/2" CCD	601-0359
Camera, M202C, Gig-E, 659 x 494, 79 FPS, Color, 1/2" CCD	601-0386
Camera, M250, Gig-E, 1296 x 966, 32 FPS, Grayscale, 1/3" CCD	601-0362
Camera, M250C, Gig-E, 1296 x 966, 32 FPS, Color, 1/3" CCD	601-0389
Camera, M295, Gig-E, 1628 x 1236, 28 FPS, Grayscale, 1/1.8" CCD	601-0420
Camera, M295C, Gig-E, 1628 x 1236, 28 FPS, Color, 1/1.8" CCD	601-0421
Camera, M300, Gig-E, 648 x 488, 210 FPS, Grayscale, 1/3" CCD	601-0354
Camera, M300C, Gig-E, 648 x 488, 210 FPS, Color, 1/3" CCD	601-0381
Camera, M330, Gig-E, 1004 x 1004, 60 FPS, Grayscale, 2/3" CCD	601-0364
Camera, M330C, Gig-E, 1004 x 1004, 60 FPS, Color, 2/3" CCD	601-0391
Camera, M350, Gig-E, 1608 x 1208, 35 FPS, Grayscale, 1" CCD	601-0365
Camera, M350C, Gig-E, 1608 x 1208, 35 FPS, Color, 1" CCD	601-0392
Camera, M390, Gig-E, 2448 x 2050 (5MP), 17 FPS, Grayscale, 2/3" CCD	601-0355
Camera, M390C, Gig-E, 2448 x 2050 (5MP), 17 FPS, Color, 2/3" CCD	601-0382
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

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

ACCESSORIES

DESCRIPTION	ORDER N°
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, 1.5 Meter	606-0675-1.5
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
Cable, I/O, MX Series, Processor to Terminal Block, 15 Meter	95A906060
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, 2 Meter, Camera to Terminal Block	606-0674-02
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, Camera I/O, M1xx, E1xx, M5xx, 6 pin, 15 Meter, Camera to Terminal Block	606-0674-15
Cable, Camera I/O, M1xx, E1xx, M5xx, 6 pin, 20 Meter, Camera to Terminal Block	606-0674-20
Cable, Camera Power and I/O, M2xx, M3xx and M5xx, 12 pin, 2 Meter, Camera to Terminal Block	606-0673-02
Cable, Camera Power and I/O, M2xx, M3xx and M5xx, 12 pin, 3 Meter, Camera to Terminal Block	606-0673-03
Cable, Camera Power and I/O, M2xx, M3xx and M5xx, 12 pin, 5 Meter, Camera to Terminal Block	606-0673-05
Cable, Camera Power and I/O, M2xx, M3xx and M5xx, 12 pin, 10 Meter, Camera to Terminal Block	606-0673-10
Cable, Camera Power and I/O, M2xx, M3xx and M5xx, 12 pin, 15 Meter, Camera to Terminal Block	606-0673-15
Power and I/O Cables Unterminated, M and E Series Cameras	
M1xx, E1xx Cameras I/O Cable, 6 pin, 2 Meter, pigtail	606-0672-02
M1xx, E1xx Cameras I/O Cable, 6 pin, 3 Meter, pigtail	606-0672-03
M1xx, E1xx Cameras I/O Cable, 6 pin, 5 Meter, pigtail	606-0672-05
M1xx, E1xx Cameras I/O Cable, 6 pin, 10 Meter, pigtail	606-0672-10
M2xx and M3xx Camera Power and I/O Cable, 12 pin, 2 Meter, pigtail	606-0671-02
M2xx and M3xx Camera Power and I/O Cable, 12 pin, 3 Meter, pigtail	606-0671-03
M2xx and M3xx Camera Power and I/O Cable, 12 pin, 5 Meter, pigtail	606-0671-05
M2xx and M3xx Camera Power and I/O Cable, 12 pin, 10 Meter, pigtail	606-0671-10
M2xx and M3xx Camera Power and I/O Cable, 12 pin, 15 Meter, pigtail	606-0671-15
I/O Boards, M and E Series Cameras	
I/O Board, M1xx, E1xx Cameras, 1 Input / 1 Output, Female DB9, DIN Rail Mountable, no isolation	248-0140
I/O Board, M1xx, E1xx Cameras, w / isolation	661-0399
I/O Board, M2xx and M3xx Cameras, Female HD15, DIN Rail Mountable, no isolation	248-0141
I/O Board, M2xx, M3xx, & Aviator Camera, w / isolation	661-0400
I/O Board, M5xx Camera, w / isolation	661-0401
Brackets, M and E Series Cameras	
Camera Mount, M1xx, E1xx Cameras	95A903029
Camera Mount, M2xx and M3xx Cameras	381-1354
Ethernet Cables, M and E Series Cameras	
Cable, Gig-E, CAT6, 2 Meter	606-0677-02
Cable, Gig-E, CAT6, 3 Meter	606-0677-03
Cable, Gig-E, CAT6, 5 Meter	606-0677-05
Cable, Gig-E, CAT6, 7 Meter	606-0677-07
Cable, Gig-E, CAT6, 10 Meter	606-0677-10
Cable, Gig-E, CAT6, 15 Meter	606-0677-15
Cable, Gig-E, CAT6, 25 Meter	606-0677-25
Cable, Gig-E, CAT6, 50 Meter	606-0677-50
Licenses, MX-E Series Processors	
License, Pattern Sorting Tool, Processor	95A906545
License, OCR, 2 Camera Processor	95A906542
License, OCR, 4 Camera Processor	95A906544
License, 3rd Party Cameras, Processor	95A906539

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