



## MX-U SERIES

The MX-U Series of Industrial Vision Processors offers superior image processing capabilities and outstanding inspection flexibility. The MX-U Series supports the USB 3.0 Vision interface standard for high speed digital camera communication. Featuring the latest Intel® chipsets, the MX-U Vision Processors deliver outstanding computing performance at affordable prices. Three different models are available according to the application requirements: the entry-level cost-effective MX-U20 supporting two cameras, the mid-range MX-U40 powering four cameras, the high-end quad core MX-U80 delivering maximum processing speed to four cameras. A single vision processor supports multiple independent cameras resulting in application flexibility while dramatically reducing the cost per inspection point. Powered by IMPACT Software, the MX-U Series offers quick and easy application prototyping and deployment as well as seamless integration.



VISION



## HIGHLIGHTS

- Rugged, industrial, high-powered vision processors
- Multi-camera capability
- Multiple camera resolutions simultaneously supported by a single vision processor
- 2 or 4 high-speed USB3.0 camera ports
- Supports a wide selection of USB3.0 grayscale and color cameras, from VGA up to 5Mpix
- Complete IMPACT Software Suite included for ultimate programming flexibility

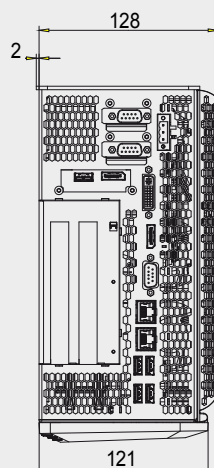
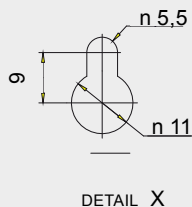
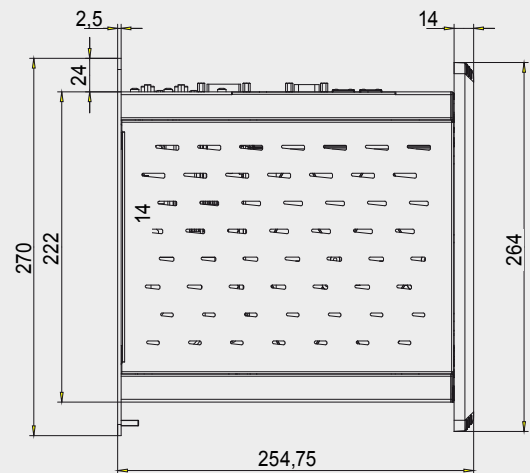
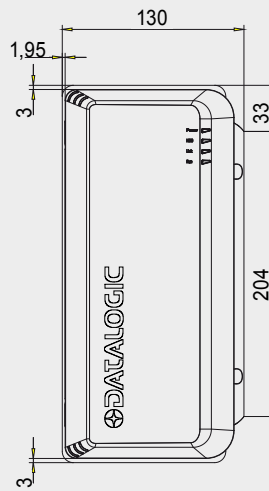
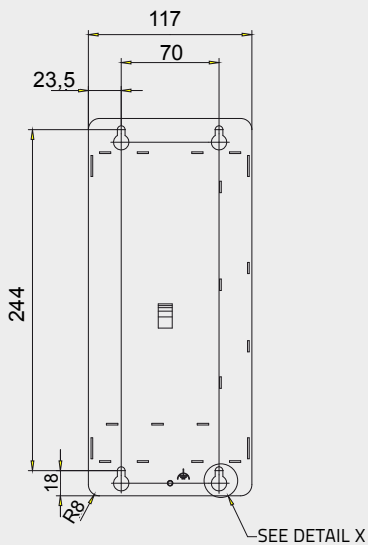
## BENEFITS

- Supports up to four unique cameras to meet varying application requirements
- Shared processing reduces cost per inspection point
- Increased inspection power and USB3.0 data transfer speed for higher inspection rates
- Reduces cost by eliminating additional PC for operator user interface
- State-of-the-art Intel chipsets ensure long term product availability
- Easily integrates with smart cameras for data sharing and inter-camera communication without needing a PC

## TECHNICAL DATA

	MX-U20	MX-U40	MX-U80
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	2x USB3.0 ports – 5 Gb/s max 1 A max per connection	4x USB3.0 ports – 5 Gb/s max 1 A max per connection	
Camera imager limit	2Mpix or lower		
Network interface	2x LAN ports – 10/100/1000 Mbps Base-T		
Serial communications	1x RS-232 serial port		
Keyboard/mouse	2x USB3.0 ports		1x USB2.0 port
Comm connectivity	Supports Ethernet/IP, Modbus TCP and OPC		
I/O	16x opto-isolated digital inputs 16x opto-isolated digital outputs – current sinking		
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		

## MECHANICAL DRAWINGS



All dimensions in mm

## U-CAMERA

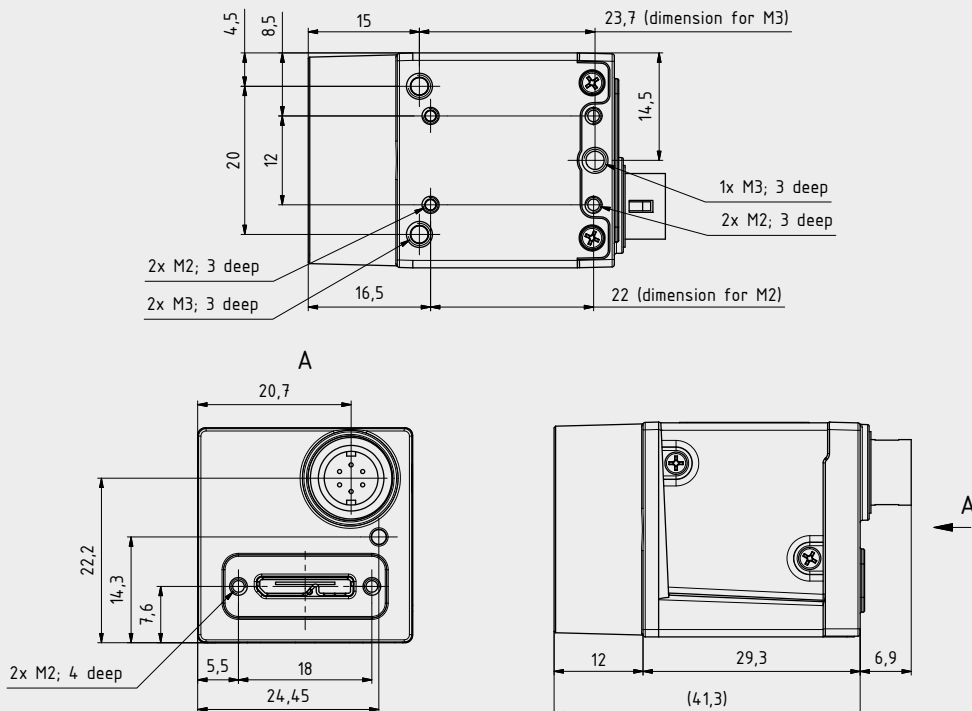
The U-Camera Series offers excellent performance packed into an incredibly compact housing (29x29x47mm). Ranging from VGA up to 5 MPix imager resolutions, the U-Cameras are available in both grayscale or color models providing the maximum application flexibility. The U-Camera Series supports the new USB 3.0 Vision communication protocol delivering ultra-high image transfer speeds to tackle even the most challenging machine vision applications.



## MODELS

GRAY-SCALE MODEL	COLOR MODEL	SHUTTER	RESOLUTION	IMAGER	FRAME RATE (FPS)	DIMENSIONS
U100	U100C	Global	658x492	1/4" CCD	120	29 x 29 x 47 mm (1.14 x 1.14 x 1.85 in)
U101	U101C	Global	640 x 480	1/4" CMOS	750	
U110	U110C	Global	658x492	1/3" CCD	90	
U150	U150C	Global	1294x964	1/3" CCD	30	
U151	U151C	Global	1280 x 1024	1/2" CMOS	200	
U180	U180C	Global	1624x1234	1/1.8" CCD	20	
U190	U190C	Global	2048x1088	2/3" CMOS	165	
U193	U193C	Global	2048 x 1536	1/1.8" CMOS	55	
U195	U195C	Global	2048x2048	1" CMOS	90	
U197	U197C	Rolling	2590x1942	1/2.5" CMOS	14	
U198	U198C	Global	2448 x 2048	2/3" CMOS	35	

## DIMENSIONAL DRAWINGS



All dimensions in mm

## MODELS AND ACCESSORIES

DESCRIPTION	ORDER N°
<b>PRODUCTS</b>	
<b>VISION PROCESSORS</b>	
MX-U20 Vision Processor, Windows 7*	959912102
MX-U40 Vision Processor, Windows 7**	959914104
MX-U80 Vision Processor, Windows 7**	959918104
Dongle, MX-U20 Vision Processor ***	93ACC0132
Dongle, MX-U40 Vision Processor ***	93ACC0133
Dongle, MX-U80 Vision Processor ***	93ACC0134
<b>CAMERAS</b>	
Camera, U100, USB3.0, 659x494, 120fps, Grayscale, 1/4" CCD	959933003
Camera, U100C, USB3.0, 658x492, 120fps, Color, 1/4" CCD	959933004
Camera, U110, USB3.0, 659x494, 90fps, Grayscale, 1/3" CCD	959933001
Camera, U110C, USB3.0, 658x492, 90fps, Color, 1/3" CCD	959933002
Camera, U150, USB3.0, 1296x966, 30fps, Grayscale, 1/3" CCD	959933005
Camera, U150C, USB3.0, 1294x964, 30fps, Color, 1/3" CCD	959933006
Camera, U180, USB3.0, 1628x1236, 20fps, Grayscale, 1/1.8" CCD	959933007
Camera, U180C, USB3.0, 1624x1234, 20fps, Color, 1/1.8" CCD	959933008
Camera, U190, USB3.0, 2048x1088, 165fps, Grayscale, 2/3" CMOS	959933011
Camera, U190C, USB3.0, 2048x1088, 165fps, Color, 2/3" CMOS	959933012
Camera, U195, USB3.0, 2048x2048, 90fps, Grayscale, 1" CMOS	959933013
Camera, U193, USB3.0, 2048 x 1536, 55 FPS, Grayscale, 1/1.8" CMOS	959933046
Camera, U193C, USB3.0, 2048 x 1536, 55 FPS, Color, 1/1.8" CMOS	959933047
Camera, U195C, USB3.0, 2048x2048, 90fps, Color, 1" CMOS	959933014
Camera, U197, USB3.0, 2592x1944, 14fps, Grayscale, 1/2.5" CMOS	959933009
Camera, U197C, USB3.0, 2590x1942, 14fps, Color, 1/2.5" CMOS	959933010
Camera, U198, USB3.0, 2448 x 2048, 35 FPS, Grayscale, 2/3" CMOS	959933048
Camera, U198C, USB3.0, 2448 x 2048, 35 FPS, Color, 2/3" CMOS	959933049
<b>ACCESSORIES</b>	
<b>I/O CABLES, MX-U SERIES</b>	
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
<b>I/O BOARDS, MX-U SERIES</b>	
I/O Board, MX Series Processors, Female DB37, DIN Rail Mountable, no isolation	248-0110
<b>USB3.0 CABLES, U-SERIES CAMERAS</b>	
Cable, U1xx Camera, USB3.0, 3 Meter	95A906515
Cable, U1xx Camera, USB3.0, 5 Meter	95A906516
Cable, U1xx Camera, USB3.0, 8 Meter	95A906517
<b>POWER AND I/O CABLES, U-SERIES CAMERAS</b>	
Cable, M1xx and U1xx Camera, I/O, 6 pin, 2 Meter, pigtail	606-0672-02
Cable, M1xx and U1xx Camera, I/O, 6 pin, 3 Meter, pigtail	606-0672-03
Cable, M1xx and U1xx Camera, I/O, 6 pin, 5 Meter, pigtail	606-0672-05
Cable, M1xx and U1xx Camera, I/O, 6 pin, 10 Meter, pigtail	606-0672-10
Cable, M1xx and U1xx Camera, I/O, 6 pin, 2 Meter, Camera to Terminal Block	606-0674-02
Cable, M1xx and U1xx Camera, I/O, 6 pin, 3 Meter, Camera to Terminal Block	606-0674-03
Cable, M1xx and U1xx Camera, I/O, 6 pin, 5 Meter, Camera to Terminal Block	606-0674-05
Cable, M1xx and U1xx Camera, I/O, 6 pin, 10 Meter, Camera to Terminal Block	606-0674-10
Cable, M1xx and U1xx Camera, I/O, 6 pin, 15 Meter, Camera to Terminal Block	606-0674-15
Cable, M1xx and U1xx Camera, I/O, 6 pin, 20 Meter, Camera to Terminal Block	606-0674-20
<b>I/O BOARDS, U-SERIES CAMERAS</b>	
I/O Board, M1xx and U1xx Camera, 1 Input / 1 Output, Female DB9, DIN Rail Mountable, no isolation	248-0140
I/O Board, M1xx and U1xx Camera, w / isolation	661-0399
<b>CAMERA BRACKETS, U-SERIES CAMERAS</b>	
Camera Mount, M1xx, M6xx and U1xx Camera	95A903029
<b>LICENSES, MX-U SERIES PROCESSORS</b>	
License, Pattern Sorting Tool, Processor	95A906545
License, 3rd Party Cameras, Processor	95A906539
License, OCR, Processor	95A906998

### NOTES

\* Supports two USB 3.0 cameras with 2MP resolution or lower.

\*\* Supports four USB 3.0 cameras. No limitation on camera resolution.

\*\*\* Dongle must be purchased and installed to make IMPACT running on MX-U Vision Processors.