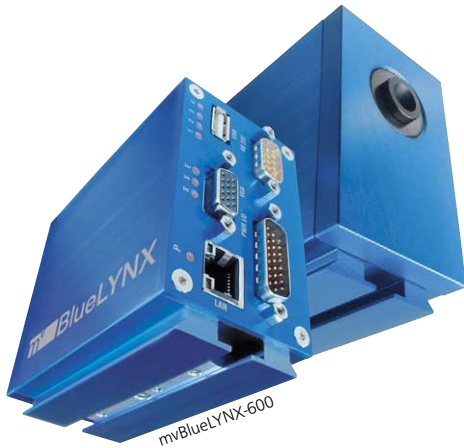


The intelligent camera

See your World  
through a  
new Eye.

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- versatile, powerful video sensor and intelligent camera
- compact Embedded Linux OS with optimum network integration
- mvIMPACT as well as different standard solutions available
- C/C++ - software - development environment on standard PC
- area and line scan sensor versions available



## mvBlueLYNX

more and up-to-date infos see ▼

[www.matrix-vision.com/mvBlueLYNX](http://www.matrix-vision.com/mvBlueLYNX)

The new mvBlueLYNX design with its fast PowerPC processor covers video sensor and intelligent camera applications.

Easy development and smooth integration in your network offer a significant reduction of time-to-market for image processing solutions.

The compact, integrated design forms the base for reliable usage in harsh environments.

Hardware			
▶ PowerPC - CPU with MMU & FPU			
▶ FLASH memory for OS and applications			
▶ CCD with trigger input and add. illumination connector			
▶ image acquisition with DMA			
▶ C-mount lens, on request: S-mount, CS-mount, F-mount (CCD Line 2k)			
▶ TV interface on request			
▶ dig. I/O to PLC and peripherals			
▶ power supply 12..24 V DC, typ. 10 W			
Series	200	400	600
CPU [MHz]	133	200	400
FLASH [MB]	32+4	32+4	32+4
SDRAM [MB]	32	32	64
display	SVGA	XGA	XGA
LAN [Mbps]	10/100	10/100	10/100
serial I/O	2	2	2
USB	-	-	1
I/O	8/8	8/8	8/8
weight [g]	390	390	450
size (w x h x l in [mm])	50 x 88 x 81	50 x 88 x 81	50 x 88 x 107
perm. ambient temp. [°C]	0..45	0..45	0..40
Software			
▶ comes with free mvIMPACT Base			
▶ many open source applications available			

Application areas	
General purpose	
▶ replaces complete PC based image processing systems	
▶ replaces div. sensors: light barriers, color sensors, laser sensors	
▶ replaces central image processing systems with many cameras by distributed intelligence	
Machine Vision	Security/Surveillance
▶ 2D/3D - measurement	▶ video sensors
▶ OCR, OCV	▶ motion detection
▶ barcode reader	▶ video compression
▶ data matrix code reader	▶ image transfer via LAN
▶ pattern recognition	▶ digital alarm I/Os
▶ color control	
▶ production control	
▶ robotics	
▶ inspection	

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## Area scan sensors

Model name	-X20		-X20a		-X21		-X24		-X00		-X02		-X02a
	G Gray	C Color	G Gray	C Color	G Gray	C Color	G Gray	C Color	G Gray	C Color	G Gray	C Color	G Gray
sensor supplier	Sony		Sony		Sony		Sony		Kodak		Kodak		Micron
sensor name	ICX098AL/BL		ICX424AL/AQ		ICX204AL/AQ		ICX274AL/AQ		KAC-9638/28		KAC-9638/48		MT9M001
sensor type	CCD		CCD		CCD		CCD		CMOS		CMOS		CMOS
indication of lens category to be used	1/4"		1/3"		1/3"		1/1.8"		1/3"		1/2"		1/2"
resolution of sensor's active area (width x height in [pixels])	640 x 480		640 x 480		1024 x 768		1600 x 1200		640 x 480		1280 x 1024		1280 x 1024
pixel size (width x height in [ $\mu\text{m}$ ])	5.6 x 5.6		7.4 x 7.4		4.65 x 4.65		4.4 x 4.4		7.5 x 7.5		6 x 6		5.2 x 5.2
readout type (CCD only)	progressive		progressive		progressive		progressive		-		-		-
transfer type (CCD only)	full frame		full frame		full frame		full frame		-		-		-
shutter type (CMOS only)	-		-		-		-		rolling		rolling		rolling
overlap capabilities	yes		yes		yes		yes		yes		yes		yes
maximum frame rate [Hz]	62		100		39		16		30		18		30
integration time	5 $\mu\text{s}$ - 128 s		5 $\mu\text{s}$ - 128 s		5 $\mu\text{s}$ - 128 s		5 $\mu\text{s}$ - 128 s		64 $\mu\text{s}$ - 262 ms		64 $\mu\text{s}$ - 1 s		31 $\mu\text{s}$ - 0.5 s

## Line scan sensors

Model name	-X40		-X41		-X42	
	G Gray	-	G Gray	-	G Gray	-
sensor supplier	Dalsa		Dalsa		Dalsa	
sensor name	IL-P3-B		IL-P3-B		IL-P3-B	
sensor type	CCD Line		CCD Line		CCD Line	
resolution of sensor's active lines (pixels)	512		1024		2048	
pixel size (width x height in [ $\mu\text{m}$ ])	14 x 14		14 x 14		14 x 14	
low speed mode (KHz)	35 @ 20 MHz		18 @ 20 MHz		9 @ 20 MHz	
high speed mode (KHz)	70 @ 40 MHz		36 @ 40 MHz		18 @ 40 MHz	
shutter control	SW / HW		SW / HW		SW / HW	
integration time	1 $\mu\text{s}$ - 52.4 ms		1 $\mu\text{s}$ - 52.4 ms		1 $\mu\text{s}$ - 52.4 ms	

## mvBlueLYNX modules

mvBlueLYNX-M7XX modules are practical and complete single-board image processing systems, which can be used as stereo system for three-dimensional image acquisitions.

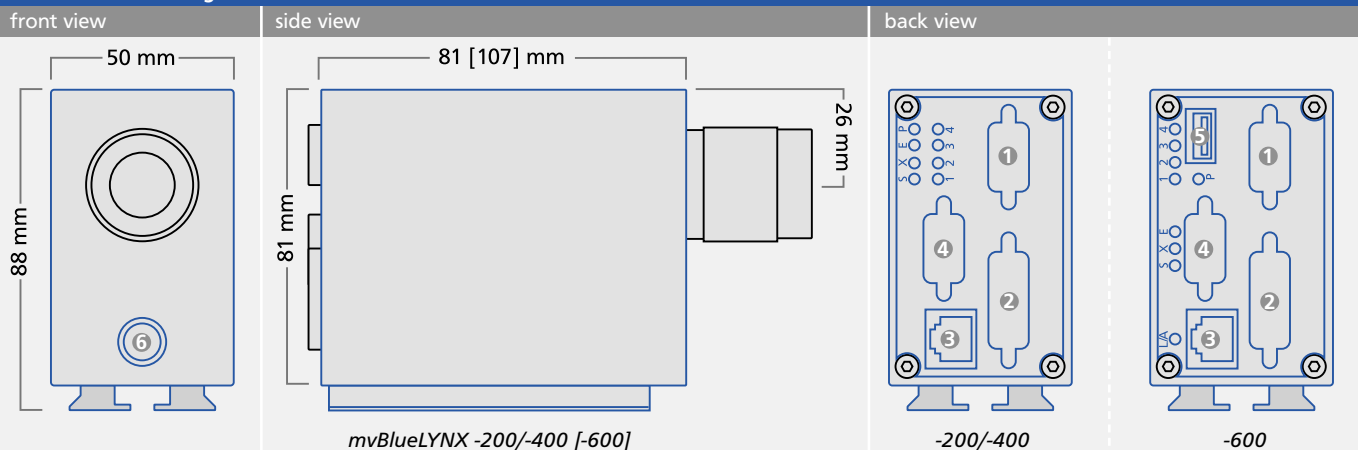
### The modules feature:

- ▶ PowerPC CPU with 400 MHz
- ▶ Linux operating system
- ▶ 2 sensors-I/F for stereo usage (sync/async)
- ▶ 512 MB DDR2-RAM
- ▶ 8 + 64 MB Flash
- ▶ 2x LAN 10/100/1000
- ▶ 4x USB 2.0
- ▶ SD/SDHC Card
- ▶ mini-PCI
- ▶ 2x RS-232
- ▶ 8x DigIn/DigOut
- ▶ 2x FlashControl
- ▶ real-time clock (RTC)
- ▶ HW watchdog
- ▶ temperature monitoring

### Product name examples:

*mvBlueLYNX-400CX* 200MHz, 640 x 480 pixels, CMOS, color  
*mvBlueLYNX-620GX* 400MHz, 640 x 480 pixels, CCD, gray scale  
*mvBlueLYNX-641GX* 400MHz, 1024 pixels, CCD Line, gray scale

## Dimensional drawing



**Interfaces:** ① SUB-D HD15: VGA display output ② SUB-D HD26: digital input / output & power ③ RJ45: 10/100 MBit Ethernet  
 ④ SUB-D 9: async. serial I/O (RS232-2) ⑤ USB A: USB (only mvBlueLYNX-600) ⑥ M12: additional flash connector (only CCD versions)

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