

# LXT cameras with 10 GigE

Powerful, robust, and easy to integrate



# LXT cameras

## High-performance CMOS cameras with 10 GigE interface

Built around the latest global shutter CMOS sensors, these cameras offer superior image quality, very high frame rates and resolutions up to 65 megapixel. At the same time, you can also easily implement special application requirements due to an extensive scope of functions. The 10 GigE interface allows for quick and cost-effective integration. The highly robust design ensures stable operation even in demanding environments.

With LXT cameras you can rely on the full 1.1 GB/s bandwidth allowing you to simultaneously benefit from high resolution and high speed. The very short transmission times improve the response time of your system. Variations with copper or optical fiber cables offer full flexibility when implementing application solutions.



### LXT camera highlights

- Detailed inspections with resolutions up to 65 MP
- High throughput with up to 1622 fps
- Easy integration thanks to a large range of functions
- Complete flexibility with 10GBase-T for M12 copper cables or SFP+ slot for optical cables
- Long-term stable image evaluation based on the robust industrial design

### 10 GigE – high-speed for your industrial image processing



**Bandwidth: 1.1 GB/s**  
Transfer large data volumes of fast production processes or high-resolution images.



**CPU load < 5%**  
Maximum bandwidth and more computing power for your application thanks to a low CPU load.



**Latency 5 – 50  $\mu$ s**  
Low latency to keep pace with ever increasing machine speeds.

### 10 GigE Vision

10 GigE is based on the internationally established GigE Vision® standard but provides 1.1 GB/s, which is the 10-fold speed, in addition to all the advantages:

- Cable lengths of up to 100 m for copper cables or up to 10 km for optical cables
- No need for frame grabbers or media converters
- Reliable, easy, and cost-effective integration with standard network components
- Excellent compatibility with third-party software



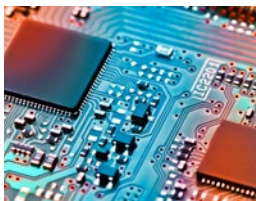
## Easy system integration with added functionality

LXT cameras are based on a powerful platform, and their clever design and comprehensive functionality offer true added value for your machine vision needs.

✓ Exposure time from 1 $\mu$ s	Minimized motion blur of fast objects or processes
✓ Auto features: exposure, gain, white balance, color transformation	Easy camera integration with changing light conditions
✓ Sequencer	Quick parameter adjustment for each image for the precise control of image acquisition
✓ Burst Mode with up to 1000 images	Utilization of the full sensor speed for image sequences also during transfer via GigE
✓ Multi ROI	Increased frame rate or relief of data transmission
✓ Color processing with edge enhancement and noise reduction	Improved image quality for easy evaluation
✓ Shading correction	Easy image evaluation thanks to the correction of lens and lighting artifacts
✓ High Dynamic Range (HDR)	Simple evaluation of light and dark areas of a scene
✓ Integrated JPEG image compression	Save bandwidth, CPU load and storage capacity
✓ Precision Time Protocol (PTP) according to IEEE 1588	Exact time synchronization of the images captured by several cameras in a system
✓ 4 power outputs	Control lightings up to 120 W directly and without additional illumination controller
✓ UART / RS232	Easy control of external devices with serial interface
✓ Liquid lens support with dynamic focus adjustment	Easy adjustment to changing working distances
✓ Models with integrated Canon® EF mount	Direct integration of Canon® EF lenses for the dynamic adjustment of focus and aperture
✓ M12 connector	Reliable connection for demanding applications
✓ Operating temperature up to 65 °C	Robust, long-term stable image acquisition
✓ Patented modular tube system (protection class IP 54, IP 67)	Protection of the camera and lenses with various lengths and diameters from dust, dirt, and misalignment
✓ Mechanical load tests up to 100 g (IEC 60068-2-27)	Long service life for the most discerning demands

## Application areas

Across all industries, LXT cameras are the best choice when it comes to applications with strict demands on high-definition image quality, throughput, or reliability in demanding environments.



**Electronics**  
Example: Inspection of printed circuit boards for correct assembly



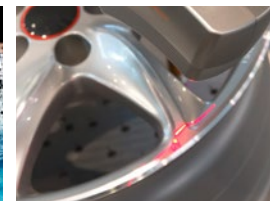
**Pharmaceutical logistics**  
Example: Track & trace in the packaging process



**Transportation systems**  
Example: Inspection of railway overhead lines



**Sports**  
Example: Analysis of correct swimming movements



**Automotive industry**  
Example: 3D surface inspection

# LXT camera model overview

	Model	Mono   Color	Sensor Type	Sensor	Resolution [px]	Pixel Size [µm]	Full Frames [fps] <sup>1)</sup>
Copper cable 60 × 60 × 100 mm	VLXT-06.I	M   –	1/1.7" CMOS	IMX426	800 × 620	9 × 9	1578   1578
	VLXT-17.I	M   –	1.1" CMOS	IMX425	1600 × 1100	9 × 9	660   660
	VLXT-28.I	M   –	2/3" CMOS	IMX421	1920 × 1464	4.5 × 4.5	415   411
	VLXT-31.I	M   C	1/1.8" CMOS	IMX252	2048 × 1536	3.45 × 3.45	216   216
	VLXT-50.I	M   C	2/3" CMOS	IMX250	2448 × 2048	3.45 × 3.45	163   163
	VLXT-55.I	M   C	1/1.8" CMOS	IMX537	2464 × 2048	2.74 × 2.74	259   243
	VLXT-71.I	M   C	1.1" CMOS	IMX420	3200 × 2200	4.5 × 4.5	209   174
	VLXT-81.I	M   C	2/3" CMOS	IMX536	2848 × 2832	2.74 × 2.74	172   150
	VLXT-90.I	M   C	1" CMOS	IMX255	4096 × 2160	3.45 × 3.45	95   95
	VLXT-123.I	M   C	1.1" CMOS	IMX253	4096 × 3000	3.45 × 3.45	69   69
	VLXT-126.I	M   C	1/1.1" CMOS	IMX535	4096 × 2992	2.74 × 2.74	119   100
	VLXT-240.I	M   C	4/3" CMOS	IMX530	5312 × 4600	2.74 × 2.74	62   50
	VLXT-490.I	M   C	2" CMOS	GMAX3249	7008 × 7000	3.2 × 3.2	23   23
	VLXT-650.I	M   C	2.3" CMOS	GMAX3265	9344 × 7000	3.2 × 3.2	23   18
Canon® EF mount	VLXT-490.I.EF	M   C	2" CMOS	GMAX3249	7008 × 7000	3.2 × 3.2	23   23
	VLXT-650.I.EF	M   C	2.3" CMOS	GMAX3265	9344 × 7000	3.2 × 3.2	23   18
JPEG image compression	VLXT-06.I.JP	M   C	1/1.7" CMOS	IMX426	800 × 608	9 × 9	1622   1622
	VLXT-28.I.JP	M   –	2/3" CMOS	IMX421	1920 × 1464	4.5 × 4.5	415   411
	VLXT-31.I.JP	–   C	1/1.8" CMOS	IMX252	2048 × 1536	3.45 × 3.45	216   216
	VLXT-90.I.JP	M   –	1" CMOS	IMX255	4096 × 2160	3.45 × 3.45	95   95
	VLXN-650.I.JP	M   –	2.3" CMOS	GMAX3265	9344 × 7000	3.2 × 3.2	11   9
Optical fiber cable 60 × 60 × 80 mm	VLXT-31.FO	M   –	1/1.8" CMOS	IMX252	2048 × 1536	3.45 × 3.45	217   217
	VLXT-50.FO	M   C	2/3" CMOS	IMX250	2448 × 2048	3.45 × 3.45	163   163
	VLXT-90.FO	M   –	1" CMOS	IMX255	4096 × 2160	3.45 × 3.45	95   95
	VLXT-123.FO	M   –	1.1" CMOS	IMX253	4096 × 3000	3.45 × 3.45	69   69

<sup>1)</sup> Burst Mode (image acquisition in the camera's internal memory) | interface

For reliable image transfer and low CPU load, we recommend the use of Intel® i7-based PCs in combination with our tested accessories:

- PCIe network cards
- Copper and optical fiber cables
- 10 GigE SFP+ transceiver
- Lenses and modular tube protection up to IP 67
- Mount adapter
- Power supply



Get further information about LX series at [www.baumer.com/cameras/LX](http://www.baumer.com/cameras/LX)

Find your local partner: [www.baumer.com/worldwide](http://www.baumer.com/worldwide)

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