G		Vision Products Line Card															Overview			
CL-Electronics GmbH Furtbachstrasse 4 CH-8107 Buchs / ZH Tel. +41 (0) 44 857 12 00 Fax +41 (0) 44 857 12 01 sales@cl-electronics.com www.cl-electronics.com		3AM	©psys Technologies	ENSENSO	EURESYS	HIKROBOT	50	Cameras	LENSATION	LMI TECHNOLOGIES		Mucline (4)	SEYONE	TELEDYNE DALSA Everywhereyoulook	Xcitex	Xenics	Z-LASER	STEIMAGINGSOURCE® TECHNOLOGY BASED ON STANDARDS	MECH MIND	
Interface	GigE		<b>✓</b>	<b>✓</b>		<b>✓</b>	<b>✓</b>					<b>√</b>		<b>✓</b>		<b>✓</b>		<b>✓</b>	<b>√</b>	
	Camera Link			<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>							<b>✓</b>		<b>✓</b>				
	CoaXPress				<b>√</b>	<b>✓</b>								<b>√</b>						
	USB3.0					<b>√</b>								<b>√</b>						
	Embedded					<b>√</b>	<b>√</b>							<b>√</b>				<b>√</b>		
Camera & Frame Grabber	Line Scan Camera					<b>√</b>						<b>√</b>		<b>√</b>						
	Vision Sensor / Embedded					<b>√</b>	<b>√</b>					<b>√</b>		<b>√</b>				<b>√</b>		
	3D Camera			<b>√</b>		<b>✓</b>	<b>√</b>			<b>√</b>			<b>&gt;</b>	<b>√</b>					<b>✓</b>	
	High Speed Camera							<b>√</b>												
	Infrared / Thermal Camera													<b>√</b>		<b>√</b>		<b>√</b>		
	Frame Grabber				<b>✓</b>	<b>✓</b>	<b>√</b>							<b>✓</b>				<b>✓</b>		
Software	Smart Vision Software					<b>√</b>					<b>√</b>	<b>√</b>		<b>√</b>					<b>✓</b>	
	Machine Vision Software				<b>√</b>	<b>√</b>					<b>√</b>			<b>√</b>						
	Motion Analysis Measure														<b>√</b>					
PC	Vision Controller / PC					<b>✓</b>						<b>√</b>		<b>√</b>				<b>✓</b>		
Accessory	Lighing	<b>√</b>			<b>√</b>				<b>√</b>			<b>√</b>					<b>✓</b>	<b>✓</b>		
	Optic				<b>✓</b>				<b>√</b>			<b>√</b>				<b>√</b>	<b>√</b>	<b>✓</b>		





HikRobot is a part of HikVision with a large range of machine vision equipment. From line to area scan camera up to 25 Megapixel and embedded boards. The smart cameras and vision sensors are available as open-source version.

3D application can by covered with the specific products.



Euresys is a leading supplier of video acquisition and processing components for machine vision and video surveillance applications.

The offer covers a wide range of video sources like SDI / HDMI / DVI and CoaXPress.



No other manufacturer owns as much experience as IDS in the development and use of USB industrial cameras. IDS offers Frame Grabbers, USB2.0, USB3.0 and GigE cameras with resolutions up to 10 megapixels and incomparable drivers tool and SDK.





Full range of camera for every application, from VGA to 86 Megapixel. With GigE, GigE 5 or 10 and CameraLink. A supplier which cover all needs with the production of the own sensors. DALSA's proprietary TurboDrive technology allows Genie Nano to deliver its full image quality at faster frame rates — often 150% or higher — with no changes to your GigE network.



The Imaging Source is a long-standing camera manufacturer offering cameras with USB 2.0, USB 3.0, GigE as well as MIPI such as CSI-2, FDP-Link III and GMSL2. Embedded boards such as deserialiser boards are available. Cameras with integrated zoom optics and autofocus solutions are also available. Video signal converters enable flexible connection of different video sources to end devices.

Camera and Frabe Grabber





Smart / Embedded



From the simple Vision Sensor to the smart camera up to the Vision Systems including hardware and software.

Dalsa offer a complete line to solution for every application and needs









Hik Robot offers a wide range of code reader, vision sensor and smart camera. The resolution goes up to 8 Megapixel. The software is easy to us and high performance.

A build in illumination helps to acquire the best image quality. The Lenses covers the c-mount and the s-mount standard. The design is robust and compact to fits in all situations.



ine Scan



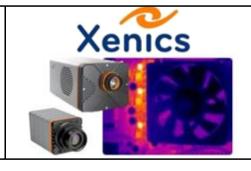






CoaxPress, CameraLink & GigE Vision Line Scan Camera designed to meet the most demanding requirements of today's machine vision applications.

R / Thermal



Xenics is a well-established Belgian company which develops high end infrared cameras for Security, Science or Industrial applications. The solutions offered by Xenics cover the SWIR to LWIR (thermal) range from 0.4 to 14µm and not under ITAR limitations.

/ision Controller



Designed from Dalsa for the factory floor and machine vision use. For multi camera configuration and Embedded Application Software.



**High Speed** 

Software



iX-Cameras offers high speed cameras with resolution up to 3.0 MPixel, capable of capturing 12,500 frames per second@1080p resolution which makes the i-SPEED 7 simply the fastest HD cameras available on the market!





Open eVision 1.2 is a rich suite of reliable, powerful and flexible software tools dedicated to image processing and analysis. Open eVision contains a set of 64-bit and 32-bit libraries designed to be integrated into our C++, .NET or ActiveX application.









HALCON provides outstanding performance and a comprehensive support of multi-core platforms. SSE2 and AVX. As well as GPU acceleration. It serves all industries with a library of more than 2000 operators for blob analysis, morphology, matching, measuring, identification, and 3D vision, depp learning to name just a few. MERLIC is an all-in-one software product for quickly building machine vision applications without programming.







iNspect is a vision software designed to simplify design in automated inspections. Configure quickly vision application. Sherlock is an advance machine vision software with a high flexibility and provides a rich suite of fast tools and capabilities.





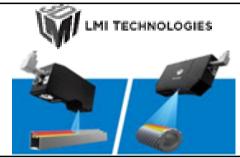


ProAnalyst provides motion analysis tools that can be applied to any video or image sequence. With ProAnalyst, any digital video camera becomes a measurement instrument.

## ENSENSO



Very compact & easy to use 3D system, based on "Projected Texture Stereo Vision" make possible to run live viewing of 3D data points at a speed of 30fps.



LMI technologies offer world-class 3D scanning and inspection solutions engineered from the chip level up. LMI have solutions for 3D Modeling, Quality control and 3D Surface Metrology with resolutions down to 70nm.



Mech Mind offers a simple and safe system for picking loose products in the bin. The symbiosis of hardware and software provides a stable solution for bin picking applications with robots. All known robots are integrated in the software. Thanks to artificial intelligence and object-oriented parameterization, complicated programming is not necessary.









Seyond is a leading manufacturer of LIDAR sensors for industry. With a range of up to 500 metres and a frame rate of 30 scans per second, these sensors are suitable for fast and precise applications. The high measurement precision and the adapted wavelength of the laser make these devices robust and reliable. Seyond LIDARs are already used in applications such as Driver assistance, smart city, smart highway, vehicle over management, smart railway, smart mining and many more.





OPSYS has specialised in compact LIDAR devices without any moving parts. The service life is very long thanks to this precise and robust technology. The devices have built-in intelligence (on the harrow) which recognises objects, vehicles and living creatures. A simple adjustment of the 3D areas is easily possible. The devices are used in industry, security and healthcare.







3AM offers a wide range of lightings for cost sensitive Machine Vision applications.







The Lens company with M12 and C/CS mount lenses also special and zoom lens.





Z-Laser is a manufacturer of laser systems and laser projectors in a variety of industries. High qualities standard as well tailor made solution works with a very high life time and reliability.









Large range of lightings and optical lenses. Dome, Ring, coaxial line Illuminations and also standard, megapixels and telecentric lenses.