

# WORLDWIDE INDUSTRIAL CAMERA DIRECTORY

## CAMERA MANUFACTURERS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
<b>ABS Gesellschaft für Automatisierung Bildverarbeitung und Software GmbH</b> Jena, Germany; 49-3641-2226-0; www.kameras.abs-jena.de; info@abs-jena.de								
DK8075-DVI	CMOS	C	Area array	2048 x 1536	VIS	DVI	60	—
DK8475 remote head	CCD	C	Area array	2048 x 1536	VIS	DVI	60	—
IK1112 SWIR	InGaAs	—	Area array	320 x 256	SWIR	USB 1.0/2.0	110	—
IK1512 SWIR	InGaAs	—	Area array	320 x 256	SWIR	USB 1.0/2.0	110	—
IK1513 SWIR	InGaAs	—	Area array	320 x 256	SWIR	USB 1.0/2.0	110	—
IK1523 SWIR	InGaAs	—	Area array	640 x 512	SWIR	USB 1.0/2.0	30	—
PK52165	CCD	C+M	Area array	2336 x 1752	VIS	PCIe	32	—
HK39078	CMOS	C+M	Area array	2048 x 1536	VIS	DVI, HD-SDI, HDTV	60	—
UK31053	CMOS	C+M	Area array	1280 x 1024	VIS	USB 1.0/2.0, USB3	60	—
UK1155/GK1155	CMOS	C+M	Area array	1280 x 1024	VIS	GigE, USB 1.0/2.0	30	—
<b>Adimec</b> Woburn, MA, USA; 781-279-0770; www.adimec.com; salesus@adimec.us								
TMX50-x25/CL	CMOS	C+M	Area array	2464 x 2056	SWIR	Camera Link, CoaXPress	40	—
Quartz Q-4A180	CMOS	C+M	Area array	2048 x 2048	VIS	Camera Link, CoaXPress	180	—
TMX55m/b-30/CXP	CMOS	C+M	Area array	4112 x 2176	—	CoaXPress	≤41	—
Sapphire S-25A30	CMOS	C+M	Area array	5120 x 5120	VIS	Camera Link	32	—
Quartz Q-12A180	CMOS	C+M	Area array	4096 x 3072	VIS	CoaXPress	187	—
OPAL Cameras	CCD	C+M	Area array	1024 x 1024, 1600 x 1200, 1920 x 1080, 2336 x 1752, 3269 x 2472	VIS	Camera Link, CoaXPress, GigE	123, 70, 66, 32, 16	—
TMX74	CMOS	C+M	Area array	1920 x 1080	VIS	Camera Link	60	—
Sapphire S-25A70	CMOS	C+M	Area array	5120 x 5120	VIS	CoaXPress	73	—
Qs-4A60	CMOS	C+M	Area array	2048 x 2048	VIS	Camera Link, CoaXPress	60	—
S-50A30 CoaXPress	CMOS	C+M	Area array	7920 x 6004	—	CoaXPress	30	—
<b>ADLINK Technology Inc</b> San Jose, CA, USA; 408-360-0200; www.adlinktech.com; info@adlinktech.com								
NEON-1021 All-in-One Smart Camera	CMOS	M	Area array	1600 x 1200	VIS	Digital I/O, GigE, RS-232, USB 1.0/2.0	60	—
NEON-1021-M New Generation x86 Smart Camera	CMOS	M	—	1600 x 1200	—	GigE, RS-232, USB 1.0/2.0	60	—
<b>Alkeria</b> Pisa, (PI), Italy; 39-050-778-060; www.alkeria.com; sales@alkeria.com								
NECTA N2K-7	CMOS	M	Linescan	2048 x 1	VIS	USB3	—	≤95 kHz
NECTA N2K2-7C	CMOS	C	Linescan	2048 x 2	VIS	USB3	—	≤95 kHz
NECTA N4K-3	CMOS	M	Linescan	4096 x 1	VIS	USB3	—	≤95 kHz
NECTA N4K-7	CMOS	M	Linescan	4096 x 1	VIS	USB3	—	≤95 kHz
NECTA N4K2-7C	CMOS	C	Linescan	4096 x 2	VIS	USB3	—	≤95 kHz
NECTA N8K-3	CMOS	M	Linescan	8192 x 1	VIS	USB3	—	≤95 kHz
CELERA C2K-M	CMOS	M	Area array	2048 x 1088	VIS	USB3	340	—
CELERA C2K-C	CMOS	C	Area array	2048 x 1088	VIS	USB3	170	—
CELERA C4K-M	CMOS	M	Area array	2048 x 2048	VIS	USB3	180	—
CELERA C4K-C	CMOS	C	Area array	2048 x 2048	VIS	USB3	90	—
<b>Allied Vision Technologies GmbH</b> Stadtroda, Germany; 49-36428-677-0; www.alliedvision.com; info@alliedvision.com								
Mako	CCD & CMOS versions	C+M	Area array	0.3–5 Mpixels	NIR, VIS	GigE, USB3	≤550	—
Manta	CCD & CMOS versions	C+M	Area array	0.3–12 Mpixels	NIR, VIS	GigE	≤125	—

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<b>Allied Vision Technologies GmbH</b> Stadtroda, Germany; 49-36428-677-0; www.alliedvision.com; info@alliedvision.com								
Prosilica GT	CCD & CMOS versions	C+M	Area array	1.3–29 Mpixels	NIR, VIS	GigE	≤62	—
Goldeye	InGaAs Photodiode array	M	—	—	SWIR	Camera Link, GigE	≤344	—
Bonito PRO	CMOS	C+M	Area array	12.5–26.2 Mpixels	NIR, VIS	CoaXPress	≤142.6	—
<b>ATA-Vision</b> Thon, Belgium; 32-81-58-18-31; www.ata-vision.com; info@ata-vision.com								
Application Specific Smart Camera	I-CCD	—	Area array	—	Multispectral	Ethernet	—	—
<b>AVAL DATA Corp</b> Tokyo, Japan; 81-42-7321-030; www.avaldata.co.jp; support@avaldata.co.jp								
ABA-003IR SWIR Camera	InGaAs	M	Area array	—	IR, LWIR, SWIR, NIR	Camera Link, GigE	66	45 MHz
ABL-005IR SWIR Camera	InGaAs	M	Linescan	—	IR, LWIR, SWIR, NIR	Camera Link, GigE	—	8 kHz
<b>Basler AG</b> Ahrensburg, Germany; 49-4102-463-500; www.baslerweb.com; sales.europe@baslerweb.com								
Basler ace classic	CCD & CMOS versions	C+M	Area array	658 x 492–4608 x 3288	NIR, VIS	Camera Link, GigE, USB3	≤340	—
Basler ace U	CMOS	C+M	Area array	640 x 480–5472 x 3648	NIR, VIS	GigE, USB3	≤751	—
Basler ace L	CMOS	C+M	Area array	4096 x 2160, 4096 x 3000	VIS	GigE, USB3	≤42	—
Basler dart Series	CMOS	C+M	Area array	1280 x 960–2592 x 1944	VIS	LVDS, USB3	14–60	—
Basler ToF Camera	CCD	M	Area array	640 x 480	NIR	GigE	20	—
Basler pulse Series	CMOS	C+M	Area array	1280 x 960–2592 x 1944	VIS	USB3	≤60	—
Basler beat Series	CMOS	C+M	Area array	4088 x 3070, 4096 x 3072	VIS	Camera Link	62	—
Basler racer Series	CMOS	M	Linescan	2048 x 1, 4096 x 1, 6144 x 1, 8192 x 1, 12,288 x 1	VIS	Camera Link, GigE	—	≤80 kHz
<b>Baumer Optronic GmbH</b> Radeberg, Germany; 49-3528-43-86-0; www.baumer.com/vision; sales@baumeroptronic.com								
CX series	CMOS	C+M	Area array	≤12 Mpixels	—	GigE, USB3	≤891	—
EX series	CMOS	C+M	Area array	≤2 Mpixels	—	GigE, USB3	≤217	—
LX series	CMOS	C+M	Area array	2–48 Mpixels	—	Camera Link, GigE	≤337	—
QX series	CMOS	C+M	Area array	—	—	10 GigE	335	—
LX VisualApplets cameras	CMOS	M	Area array	4–20 Mpixels	—	GigE	≤338	—
MX series	CMOS	C+M	Area array	VGA–4 Mpixels	—	GigE, USB3	27–373	—
VeriSens XF vision sensors	CMOS	M	Area array	752 x 480	—	Digital I/O, Ethernet	>8000	—
VeriSens XC vision sensors	CCD	C+M	Area array	VGA–2 Mpixels	—	Digital I/O, Ethernet	>8000	—
VeriSens IP 69K vision sensors	CMOS	M	Area array	752 x 480	—	Digital I/O, Ethernet	>8000	—
Baumer CX IP 65/67 cameras	CMOS	C+M	Area array	—	—	GigE	—	—
<b>Chromasens GmbH</b> Konstanz, Germany; 49-7531-876-0; www.chromasens.de; info@chromasens.de								
allPIXa pro 2048	CCD	C	Linescan	2048 x RGB	VIS	Camera Link, Digital I/O, RS-232	—	92.7 kHz
allPIXa pro 4096	CCD	C	Linescan	4096 x RGB	VIS	Camera Link, Digital I/O, RS-232	—	50.8 kHz
allPIXa pro 7300	CCD	C	Linescan	7300 x RGB	VIS	Camera Link, Digital I/O, RS-232	—	29.7 kHz
allPIXa pro customized	CCD	C	Linescan	1024–7300 x RGB	VIS	Camera Link, Digital I/O, RS-232	—	156 kHz
allPIXa pro 6000	CCD	C	Linescan	6000 x RGB	VIS	Camera Link, Digital I/O, RS-232	—	34.4 kHz
allPIXa Linescan Cameras	CCD	C	Linescan	3 x 2048, 3 x 4096, 3 x 7300	VIS	Digital I/O, RS-232	—	≤60.7 kHz

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<b>Chromasens GmbH</b> Konstanz, Germany; 49-7531-876-0; www.chromasens.de; info@chromasens.de								
3DPIXA - Stereo Linescan Camera	3-D	C	Linescan	—	VIS	Camera Link, Digital I/O, RS-232	—	60 kHz
truePIXA	Multi-spectral	C	Linescan	—	Multispectral, VIS	Camera Link, Digital I/O, RS-232	—	≤30 kHz
allPIXA wave - 15k	CMOS	C+M	Linescan	4 x 15,360	VIS	Digital I/O, RS-232, RS-422/LVDS	—	≤150 kHz
allPIXA wave - 10k	CMOS	C+M	Linescan	4 x 10,240	VIS	Digital I/O, RS-232	—	≤150 kHz
<b>Cognex</b> Natick, MA, USA; 508-650-3000; www.cognex.com; news@cognex.com								
In-Sight 7000 Vision Systems	CMOS	C+M	Area array	800 x 600	VIS	Ethernet	—	—
In-Sight Micro Vision Systems	CCD	C	Area array	640 x 480	VIS	Ethernet	60	—
3D Displacement Sensors	3-D	C+M	—	—	—	Ethernet	—	10 kHz
<b>Contrast Inc</b> Albuquerque, NM, USA; 505-872-2123; www.contrastoptical.com; info@contrastoptical.com								
VIA Camera	CMOS	C	—	—	NIR, VIS	Digital I/O, Ethernet, GigE, HDMI, USB3	30–120	255 Mp/s
ARC HDR Camera	CMOS	C	Area array	—	NIR, VIS	Digital I/O, Ethernet, GigE, HDMI, USB3	30–120	255 Mp/s
LUX HDR Camera	CMOS	C	Area array	—	NIR, VIS	Digital I/O, Ethernet, GigE, HDMI, USB3	30–120	255 Mp/s
<b>Critical Link LLC</b> Syracuse, NY, USA; 315-425-4045; www.criticallink.com; info@criticallink.com								
48MP Camera with On-Board Processing	CMOS	C+M	Area array	7920 x 6004	VIS	Camera Link, Camera Link Full, Ethernet, GigE, HDMI, USB 1.0/2.0, USB3	30	—
Embedded Vision Development Kit for Basler Dart	CMOS	C+M	Area array	—	—	Digital I/O, Ethernet, GigE, HDMI, LVDS, USB 1.0/2.0, USB3	—	—
MityCAM-C8000	CMOS	C+M	Area array	—	Multispectral, NIR, VIS	Camera Link, Camera Link Full, Ethernet, GigE, HDMI, USB 1.0/2.0, USB3	95	—
MityCAM-B2521F	CMOS	C+M	Area array	2560 x 2160	Multispectral, NIR, VIS	Camera Link, Ethernet, GigE, USB 1.0/2.0	100	—
MityCAM-B1910F	CMOS	C+M	Area array	1920 x 1080	Multispectral, NIR, VIS	Camera Link, Ethernet, GigE, USB 1.0/2.0	100	—
MityCCD-H7031	CCD	M	Area array	1024 x 250	—	Camera Link, Camera Link Full, Digital I/O, Ethernet, GigE, HDMI, USB 1.0/2.0, USB3	—	—
MityCCD-H10141	CCD	M	Area array	2048 x 506	—	Digital I/O, Ethernet, USB 1.0/2.0	—	—
MityCCD-H9971	CCD	M	Area array	1024 x 252	—	Digital I/O, Ethernet, USB 1.0/2.0	—	—
MityCCD-H11501	CCD	M	Area array	1024 x 122	NIR	Digital I/O, Ethernet, GigE, USB 1.0/2.0, USB3	—	—
MityCCD-SU256LSB / SU512LSE	InGaAs	—	Linescan	—	—	Camera Link, Camera Link Full, Digital I/O, Ethernet, GigE, HDMI, USB 1.0/2.0, USB3	20	1250 kHz
<b>The Crowley Co</b> Frederick, MD, USA; 240-215-0224; www.machcamera.com; machcam@thecrowleycompany.com								
MACHCAM 71MP Machine Vision Camera	CMOS	C+M	Area array	71 Mpixels	VIS	USB3	3	~400 Mbps
<b>China Daheng Group Inc</b> Beijing, China; 86-10-8282-8878-8081; www.daheng-imaging.com; isales@daheng-imaging.com								
MER-230-168U3M/C	CMOS	C+M	Area array	—	—	USB3	168	—
MER-301-125U3M/C	CMOS	C+M	Area array	—	—	USB3	125	—
MER-502-79U3M/C	CMOS	C+M	Area array	—	—	USB3	79	—
MARS-880-13GM/C-P	CMOS	C+M	Area array	—	—	Ethernet, GigE	13	—
MARS-1230-9GM/C-P	CMOS	C+M	Area array	—	—	Ethernet, GigE	9	—
MER-031-300GM/C-P	CMOS	C+M	—	—	—	10 GigE, GigE	300	—
MER-231-41GM/C-P	CMOS	C+M	Area array	—	—	Ethernet, GigE	41	—
MER-503-20GM/C-P	CMOS	C+M	—	—	—	Ethernet, GigE	20	—
MER-2000-5GM/C-P	CMOS	C+M	Area array	—	—	Ethernet, GigE	5	—
MER-131-75GM/C-P	CMOS	M	Area array	—	—	—	75	—
MER-050-560U3M/C	CMOS	C+M	Area array	—	—	USB3	560	—
<b>Datalogic USA Inc</b> Eugene, OR, USA; 800-227-2633; www.datalogic.com; marketing.na@datalogic.com								
Matrix 120	CMOS	M	Area array	—	VIS	Digital I/O, Ethernet, RS-232, USB 1.0/2.0	≤57 (WVGA), ≤36 (MP)	—

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<b>Diffraction Ltd</b> Ottawa, ON, Canada; 613-225-2732; www.cyanogen.com								
SBIG STX	CCD	M	Area array	16 Mpixels	VIS	Ethernet, USB 1.0/2.0	—	—
SBIG STXL	CCD	M	Area array	6, 11 Mpixels	VIS	Ethernet, USB 1.0/2.0	—	—
SBIG STT	CCD	M	Area array	8, 3, 1.6 Mpixels	VIS	Ethernet, USB 1.0/2.0	—	—
SBIG STF	CCD	C+M	Area array	0.4–8.3 Mpixels	VIS	USB 1.0/2.0	—	—
SBIG ST-I	CCD	C+M	Area array	0.3 Mpixels	VIS	USB 1.0/2.0	—	—
AllSky 340 Camera	CCD	C+M	Area array	640 x 480	VIS	RS-232	—	100 kHz
<b>Emergent Vision Technologies Inc</b> Maple Ridge, BC, Canada; 866-780-6082; www.emergentvisiontec.com; info@emergentvisiontec.com								
HR/HT-2000	CMOS	C+M	Area array	—	NIR	10 GigE	338	—
HR/HT-4000	CMOS	C+M	Area array	—	NIR	10 GigE	179	—
HR/HT-5000	CMOS	C+M	Area array	—	—	10 GigE	163	—
HR/HT-20000	CMOS	C+M	Area array	—	—	10 GigE	32	—
HR/HT-50000	CMOS	C+M	Area array	—	—	10 GigE	23	—
HR/HT-12000S	CMOS	C+M	Area array	—	NIR	10 GigE	80	—
HR/HT-8000S	CMOS	C+M	Area array	—	—	10 GigE	110	—
PACE Series LR-8K 10GigE Line Scan Camera	CMOS	C+M	Linescan	8192 x 1	—	10 GigE	—	45–137 KHz
Accel Series LB-8K 25GigE Line Scan Camera	CMOS	C+M	Linescan	—	—	—	—	66–200 KHz
25GigE Bolt Series HB-30000 Sony IMX342 Camera	CMOS	C+M	Area array	—	—	25 GigE	35.4	—
<b>Entwicklungsbuero Stresing</b> Berlin, Germany; 49-30-685-4506; www.stresing.de; info@stresing.de								
CCD1000	CCD	C+M	Linescan	7500 x 1	UV, VIS	Digital I/O	—	—
CCD2000-EM	EMCCD	M	Area array	1000 x 1000	VIS	Digital I/O	—	—
CCD2000-IR	IR	M	Linescan	1024 x 1	MWIR	Digital I/O	—	500 kHz
CCD2000-PDA	InGaAs Photodiode array	M	Linescan	2048 x 1	NIR, UV, VIS	Digital I/O	—	2 MHz
<b>EPIX Inc</b> Buffalo Grove, IL, USA; 847-465-1818; www.epixinc.com; epix@epixinc.com								
SILICON VIDEO 1C45, 1M45	CMOS	C+M	Area array	1280 x 960	VIS	LVDS, Proprietary	45–1200	1000 MHz
SILICON VIDEO 643	CMOS	C+M	Area array	640 x 480	VIS	LVDS, Proprietary	212	1000 MHz
SWVGAC or SWVGAM	CMOS	C+M	Area array	752 x 480	VIS	LVDS, Proprietary	60–1338	1000 MHz
SILICON VIDEO 1514	CMOS	C+M	Area array	4912 x 3684	VIS	Camera Link, Camera Link Extended-Full, Camera Link Extended, Camera Link Full	24	—
SILICON VIDEO 035	CMOS	C	Area array	640 x 480	VIS	Analog, NTSC, NTSC/PAL/RS-170, PAL	30	768 kHz
SILICON VIDEO 1820CL	CMOS	C	Area array	4608 x 3288	VIS	Camera Link, Camera Link Extended-Full, Camera Link Extended, Camera Link Full, LVDS	14	153,600 Mbps
SILICON VIDEO 20	CMOS	C+M	Area array	—	VIS	Camera Link, Camera Link Extended-Full, Camera Link Extended, Camera Link Full, CCIR, NTSC, NTSC/PAL/RS-170, PAL, PCIe, Proprietary	30–240	—
SILICON VIDEO 10C6 & 10M6	CMOS	C	Area array	3840 x 2764	VIS	LVDS, Proprietary	7	1000 MHz
SILICON VIDEO 5C10/5M10	CMOS	C+M	Area array	2592 x 1944	VIS	LVDS, Proprietary	10	700 MHz
SILICON VIDEO 9M001	CMOS	M	Area array	1280 x 1024	VIS	LVDS	43	600 kHz
<b>EVK DI Kerschhagl GmbH</b> Graz, Austria; 43-316-461664; www.evk.biz; office@evk.biz								
HELIOS NIR SORT 1.1-1.7µm	InGaAs	—	Linescan	—	NIR	GigE	—	1 kHz
HELIOS_SORT SWIR 1.3-2.3µm	—	—	Linescan	—	SWIR	GigE	—	360 Hz
HELIOS_CLASS NIR 1.1-1.7µm	InGaAs	—	Linescan	—	NIR	GigE	—	1 kHz
HELIOS_CLASS SWIR 1.3-2.3µm	—	—	Linescan	—	SWIR	GigE	—	105 Hz
HELIOS_CORE NIR 1.1-1.7µm	InGaAs	—	Linescan	—	NIR	GigE	—	1 kHz

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<b>EVT - Eye Vision Technology GmbH</b> Karlsruhe, Germany; 49-721-668-004-23-0; www.evt-web.com; info@evt-web.com								
EC2600	CMOS	C+M	Area array	2592 x 1944	IR, UV, VIS	Ethernet, RS-232, USB 1.0/2.0	14.4	—
EC900	CMOS	C+M	Area array	—	—	Digital I/O, Ethernet, RS-232	—	—
EyeCheck 4000	CMOS	C+M	Area array	—	—	Ethernet, RS-232	—	—
EyeCheck Raze 15-1000	CMOS	C+M	Area array	—	—	Ethernet, GigE, RS-232	—	—
EyeCheck Raze 30-1000	CMOS	C+M	Area array	—	—	Ethernet, GigE, RS-232, USB 1.0/2.0	—	—
<b>FLIR Integrated Imaging Solutions</b> Richmond, BC, Canada; 604-242-9937; www.flir.com/mv; mv-sales@flir.com								
Blackfly S	CMOS	C+M	Area array	1.3–5 Mpixels	VIS	Digital I/O, Ethernet, GigE, USB3	22–170	—
Blackfly	CCD & CMOS versions	C+M	Area array	0.3–5 Mpixels	VIS	Digital I/O, Ethernet, GigE, USB3	7.5–90	—
Grasshopper3	CCD & CMOS versions	C+M	Area array	1.4–12 Mpixels	VIS	Digital I/O, Ethernet, GigE, USB3	7–163	—
Chameleon3	CCD & CMOS versions	C+M	Area array	1.3–2.8 Mpixels	VIS	Digital I/O, USB3	13–149	—
Flea3	CCD & CMOS versions	C+M	Area array	0.3–8.8 Mpixels	VIS	Digital I/O, Ethernet, FireWire, GigE, USB3	8–150	—
Bumblebee2	CCD	C+M	Area array	0.3–0.8 Mpixels	VIS	Digital I/O, FireWire	20–48	—
Bumblebee XB3	CCD	C+M	Area array	1.3 Mpixels	VIS	Digital I/O, FireWire	16	—
Ladybug3	CCD	C	Area array	12 Mpixels	VIS	Digital I/O, FireWire	6.5	—

# MATRIX 120

Smallest in size, Giant in performance.



**Matrix 120™** is the smallest ultra-compact industrial 2D imager that fits into any integration space. This is the newest entry level member of the best-in-class Matrix family of high performance industrial 2D imagers. Matrix 120 is the ideal product for the electronics industry and for OEM customers in biomedical applications and Print & Apply, where small size, easy integration and high reading performance are key requirements.




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<b>FLIR Integrated Imaging Solutions</b> Richmond, BC, Canada; 604-242-9937; www.flir.com/mv; mv-sales@flir.com								
Ladybug5	CCD	C	Area array	30 Mpixels	VIS	Digital I/O, USB3	10 (compressed), 5 (uncompressed)	—
Grasshopper3	CMOS	M	Area array	3.2–5 Mpixels	VIS	Digital I/O, USB3	75–151	—
<b>FLIR Systems Inc</b> Wilsonville, OR, USA; 877-773-3547; www.flir.com; sales@flir.com								
A310	Microbolometer	M	Area array	320 x 240	LWIR	Ethernet, NTSC/PAL/RS-170, PAL, RS-170	30	30 Hz
A315	Microbolometer	M	Area array	320 x 240	LWIR	GigE	60	60 Hz
A615	Microbolometer	M	Area array	640 x 512	LWIR	GigE	50	50–200 Hz
A65	Microbolometer	M	Area array	640 x 512	LWIR	GigE	30	30 Hz
A8300sc	InSb	M	Area array	1280 x 720	MWIR	CoaXPress, GigE, HD-SDI	60	60–388 Hz
A6750sc InSb	InSb	M	Area array	640 x 512	MWIR	GigE, NTSC	125	125 Hz (full), 4175 Hz (max)
A6260sc	InGaAs	M	Area array	640 x 480	SWIR	GigE, NTSC	125	125 Hz (full), 25,614 Hz (max)
A6600	InSb	M	Area array	640 x 512	MWIR	GigE	60	60–125 Hz (full), 4175 Hz (max)
<b>FluxData Inc</b> Rochester, NY, USA; 800-425-0176; www.fluxdata.com; info@fluxdata.com								
FD-1665 1.4MP x 3 CCD Camera	CCD	C+M	Area array	1384 x 1086	Multispectral	FireWire	30	—
FD-1665 2.0MP x 3 CCD Camera	CCD	C+M	Area array	1624 x 1224	Multispectral	FireWire	30	—
FD-1665 5.0P x 3 CCD Camera	CCD	C+M	Area array	2448 x 2048	Multispectral	FireWire	15	—
<b>GEViCAM Inc</b> Milpitas, CA, USA; 408-945-9900; www.gevicam.com; info@gevicam.com								
GD-155000/C Dual-Tap	CCD	C+M	Area array	2456 x 2058	VIS	GigE	18	—
GD-3410/C Dual-Tap	CCD	C+M	Area array	648 x 480	VIS	GigE	270	—
GD-3410UV Dual-Tap	CCD	C+M	Area array	648 x 480	UV, VIS	GigE	270	—
GF-4000/C dual-slope integration	CMOS	C+M	Area array	2048 x 2048	NIR, VIS	GigE	15	—
GP-151400/C	CCD	C+M	Area array	1392 x 1040	NIR, VIS	GigE	30	—
GP-182000/C	CCD	C+M	Area array	1628 x 1236	VIS	GigE	30	—
GP-21400/C	CCD	C+M	Area array	1392 x 1040	VIS	GigE	30	—
GP-21400UV	CCD	C+M	Area array	1392 x 1040	UV, VIS	GigE	30	—
GP-2360/C	CCD	C+M	Area array	656 x 494	VIS	GigE	100	—
GP-3360/C	CCD	C+M	Area array	656 x 494	VIS	GigE	125	—
<b>Hamamatsu Corp</b> Bridgewater, NJ, USA; 908-231-0960; www.hamamatsu.com; photonics@hamamatsu.com								
ImagEM X2 (C9100-23B)	EMCCD	M	Area array	—	VIS	FireWire	—	—
ORCA-Flash4.0 V2 (C11440-22CU)	CMOS	M	Area array	—	VIS	Camera Link, Digital I/O, USB3	—	—
Board-level sCMOS camera (C11440-52U)	CMOS	M	Area array	—	VIS	USB3	—	—
ORCA-Flash2.8 (C11440-10C)	CMOS	M	Area array	—	VIS	Camera Link, Digital I/O	—	—
X-ray TDI cameras C10650 series	CCD	M	TDI	—	X-ray	Camera Link	—	—
X-ray TDI camera C12200-461	CCD	M	TDI	—	X-ray	Camera Link	—	1–8 kHz
X-ray sCMOS camera C12849-101U	CMOS	M	Area array	—	X-ray	USB3	30 (full)	—
TDI board level camera C10000-A01	CCD	M	TDI	—	NIR, UV, VIS	Camera Link	—	0.45–50 kHz
<b>Hikvision USA Inc</b> City of Industry, CA, USA; 626-818-5842; www.hikvision.com; sales.usa@hikvision.com								
CA Series	—	C+M	Area array	—	IR, NIR	Digital I/O, GigE, USB3	17–814	1–3.5 Gbps
CE Series	—	C+M	Area array	—	IR, NIR	Digital I/O, GigE	5.5–120	1 Gbps

# CAMERA MANUFACTURERS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
<b>Hikvision USA Inc</b> City of Industry, CA, USA; 626-818-5842; www.hikvision.com; sales.usa@hikvision.com								
CH Series	—	C+M	Area array	—	IR	Camera Link, Camera Link Extended-Full, Camera Link Extended, Camera Link Full, Digital I/O, 10 GigE, GigE, RS-232	4-68	1-6.5 Gbps
Line Scan Camera Series	CMOS	C+M	Linescan	—	IR, NIR	Camera Link, Camera Link Extended-Full, Camera Link Extended, Camera Link Full, GigE	—	1-51, 1-26 kHz
X86 Smart Camera	CMOS	M	Area array	—	IR, NIR	Digital I/O, GigE, RS-232, USB 1.0/2.0	25-80	1 Gbps
Movius VPU Platform Smart Camera	CMOS	M	Area array	—	IR, NIR	Digital I/O, GigE, RS-232	40-120	1 Gbps
<b>HinaLea Imaging</b> Emeryville, CA, USA; 808-878-8247; www.hinaleaimaging.com; info@hinalaimaging.com								
HinaLea Imaging Model 4100H	CMOS	C	Area array	—	Hyperspectral, Multispectral	GigE, USB3	—	—
HinaLea Imaging Model 4200	CMOS	C	Area array	—	Hyperspectral, Multispectral	GigE, USB3	—	—
<b>Hitachi Kokusai Electric America Ltd</b> Woodbury, NY, USA; 817-379-5013; www.hitachikokusai.com/ivs; phyllis.vela@hitachikokusai.com								
HV-F130GV, HV-F130SCL	CCD	C	Area array	1280 x 960	VIS	Camera Link, GigE, RGB	30	60 Hz
KP-FM(D)500WCL	CMOS	C+M	Area array	2464 x 2056	VIS	Camera Link	45	50, 60 Hz
KP-FM(D)200UB	CMOS	C+M	Area array	1600 x 1200	VIS	USB3	60	50, 60 Hz
KP-F230SCL, KP-F230PCL	CCD	M	Area array	1628 x 1236	VIS	Camera Link	30	—
KP-HD20A, KP-HD20A-S2	CMOS	C	Area array	1920 x 1080	VIS	Analog, HD-SDI	30, 60	50, 60 Hz
KP-F31PCL, KP-FR31PCL	CCD	C+M	Area array	659 x 494	VIS	Camera Link	120	60 Hz
HV-F203GV, HV-F203SCL	CCD	C	Area array	1280 x 960	VIS	Camera Link, GigE	30	60 Hz
HV-F32SCL	CCD	C	Area array	660 x 494	VIS	Camera Link	200	60 Hz
KP-D20A, KP-D20B	CCD	C	Area array	768 x 494	VIS	Analog, S-Video	30	60 Hz
KP-F32WCL, KP-FD32WCL	CCD	C+M	Area array	659 x 494	VIS	Camera Link	200	60 Hz
<b>IDS Imaging Development Systems GmbH</b> Obersulm, Germany; 49-7134-96196-0; www.ids-imaging.com; info@ids-imaging.com								
IDS NXT vegas	CMOS	C+M	Area array	1280 x 1024	NIR, VIS	Digital I/O, Ethernet, RS-232	60	—
Ensenso X camera family	CMOS	M	Area array	1280 x 1024, 2448 x 2048	VIS	Digital I/O, GigE	—	—
Ensenso N camera family	CMOS	M	Area array	752 x 480-1280 x 1024	VIS	Digital I/O, GigE, USB 1.0/2.0	—	—
GigE uEye CP Rev. 2	CMOS	C+M	Area array	752 x 480-3088 x 2076	NIR, VIS	Digital I/O, GigE	≤205	—
USB 3 uEye CP camera family	CMOS	C+M	Area array	752 x 480-4912 x 3684	NIR, VIS	Digital I/O, USB3	≤575	—
uEye LE USB 3.1 Gen 1	CMOS	C+M	Area array	808 x 608-3088 x 2076	VIS	Digital I/O, USB3	≤135	—
GigE uEye FA camera family	CMOS	C+M	Area array	800 x 600-2448 x 2048	VIS	Digital I/O, GigE	≤205	—
USB 3 uEye LE camera family	CMOS	C+M	Area array	1280 x 1024-4912 x 3684	NIR, VIS	Digital I/O, USB3	≤60	—
GigE uEye SE camera family	CMOS	C+M	Area array	800 x 600-4104 x 3006	NIR, VIS	Digital I/O, GigE	≤205	—
uEye SE USB 3.1 Gen 1	CMOS	C+M	Area array	2456 x 2054-4104 x 3006	VIS	Digital I/O, USB3	—	—
GigE uEye LE camera family	CMOS	C+M	Area array	1280 x 1024-2560 x 1920	NIR, VIS	Digital I/O, GigE	≤50	—
USB 3 uEye XC camera	CMOS	C	Area array	4192 x 3104	VIS	USB3	1 (full), 30 (video)	—
USB 3 uEye ML camera family	CMOS	C+M	Area array	1280 x 1024-2560 x 1920	NIR, VIS	Digital I/O, USB3	≤60	—
USB 2 uEye SE camera family	CMOS	C+M	Area array	752 x 480-3840 x 2748	NIR, VIS	Digital I/O, USB 1.0/2.0	≤87	—
USB 2 uEye LE camera family	CMOS	C+M	Area array	752 x 480-3840 x 2748	NIR, VIS	Digital I/O, USB 1.0/2.0	≤87	—

# CAMERA MANUFACTURERS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
<b>illunis LLC</b> Minnetonka, MN, USA; 952-975-9203; www.illunis.com; info@illunis.com								
CMV-120	CMOS	C+M	Area array	13272 x 9176	VIS	Camera Link Full	5.49	—
CMV-50	CMOS	C+M	Area array	7920 x 6004	VIS	Camera Link, Fiberoptic, GigE, USB3	30	—
RMOD-71	CMOS	C+M	Area array	10,000 x 7096	VIS	Camera Link, USB3	2, 3, 4.2	—
RMOD-71-TEC	CMOS	C+M	Area array	10,000 x 7096	VIS	Camera Link	2, 3, 4.2	—
RMV-47	CCD	C+M	Area array	8856 x 5280	VIS	Camera Link	3.5	—
RMV-29050	CCD	C+M	Area array	6576 x 4384	VIS	Camera Link, GigE, USB3	1, 2, 4	—
RMV-16070	CCD	C+M	Area array	4864 x 3232	VIS	Camera Link, GigE, USB3	2, 4, 8	—
RMV-16050	CCD	C+M	Area array	4896 x 3264	VIS	Camera Link, GigE, USB3	2, 4, 8	—
CLS-16k-M77	CMOS	M	Linescan	16,000	VIS	Camera Link Full	—	77 kHz
<b>The Imaging Source LLC</b> Charlotte, NC, USA; 704-370-0110; www.theimagingsource.com; info@theimagingsource.com								
DFK 38UX267	CMOS	C+M	Area array	—	NIR, VIS	Digital I/O, USB3	≤35	—
DFK AFU420-CCS	CMOS	C	Area array	—	NIR, VIS	USB3	≤110 (full)	—
DMK 37BUX287	CMOS	C+M	Area array	—	NIR, VIS	USB3	≤539	—
DFK 38GX267	CMOS	C+M	Area array	—	NIR, VIS	GigE	≤13	—
DMK 37BUX264	CMOS	C+M	Area array	3.45 x 3.45 μm	NIR, VIS	USB3	≤38	—
DFM 37UX252-ML	CMOS	C+M	Area array	3.45 x 3.45 μm	NIR, VIS	USB3	≤119	—
GigE Board Camera - DFM 25GX236-ML	CMOS	C+M	Area array	2.8 x 2.8 μm	NIR, VIS	GigE	≤36	—
GigE Zoom Camera - DMK Z30GP031	CMOS	C+M	Area array	2.2 x 2.2 μm	NIR, VIS	GigE	≤15	—
Autofocus Color Camera - DFK 72AUC02-F	CMOS	C+M	Area array	2.2 x 2.2 μm	NIR, VIS	USB 1.0/2.0	≤6	—
CMOS board camera - DMM 22BUC03-ML	CMOS	C+M	Area array	6 x 6 μm	NIR, VIS	USB 1.0/2.0	≤76	—
<b>IMPERX</b> Boca Raton, FL, USA; 561-989-0006; www.imperx.com; sales@imperx.com								
16MP CMOS C4181 Cheetah Camera	CMOS	C+M	Area array	4096 x 4096	NIR, VIS	Camera Link, Camera Link Full, CoaXPress, GigE, USB3	3.3–50	—
47MP CCD T8810 Tiger Camera	CCD	C+M	Area array	8856 x 5280–8880 x 5300	NIR, VIS	Camera Link, Camera Link Full, USB3	3.3	—
12MP CMOS C4180 Cheetah Camera	CMOS	C+M	Area array	4096 x 3072	NIR, VIS	Camera Link, Camera Link Full, GigE, USB3	4.5–67	—
2MP SDI CMOS C2010 Cheetah Camera	CMOS	C+M	Area array	1920 x 1080	NIR, VIS	HD-SDI	—	—
25MP CMOS C5180 Cheetah Camera	CMOS	C+M	Area array	5120 x 5120	NIR, VIS	Camera Link, Camera Link Full, CoaX-Press, GigE, USB3	2.2–44	—
12MP CMOS C4120 Cheetah Camera	CMOS	C+M	Area array	4112 x 3008	NIR, VIS	Camera Link, Camera Link Full	42	—
6MP CMOS C2880 Cheetah Camera	CMOS	C+M	Area array	2832 x 2128	NIR, VIS	Camera Link, Camera Link Full, USB3	129 (CL), 55 (U3V)	85 MHz
9MP CMOS C4020 Cheetah Camera	CMOS	C+M	Area array	4112 x 2176	NIR, VIS	Camera Link, Camera Link Full	58	—
5MP CMOS C2420 Cheetah Camera	CMOS	C+M	Area array	2064 x 2056	NIR, VIS	Camera Link, Camera Link Full	98	—
3.1MP CMOS C2020 Cheetah Camera	CMOS	C+M	Area array	2064 x 1544	NIR, VIS	Camera Link, Camera Link Full	151	—
<b>Infrared Cameras Inc</b> Beaumont, TX, USA; 409-203-5302; www.infraredcameras.com; garys@infraredcamerasinc.com								
ICI 9640 P-Series	VOx	C+M	Area array	—	IR, LWIR	NTSC, PAL, USB 1.0/2.0	—	9, 30 Hz
ICI 8640 P-Series	VOx	C+M	Area array	—	IR, LWIR	NTSC, PAL, USB 1.0/2.0	—	9, 30 Hz
ICI IR-Pad 640 Industrial	VOx	C+M	Area array	—	IR, LWIR	NTSC, PAL, USB 1.0/2.0	—	9, 30 Hz
ICI FM320 P-Series	FPA	C+M	Area array	—	IR, LWIR	Ethernet, NTSC, PAL, S-Video	—	50, 60 Hz
ICI FM640 P-Series	FPA	C+M	Area array	—	IR, LWIR	Ethernet, NTSC, PAL, S-Video	—	9, 30 Hz
ICI Gas DetectIR VOC	FPA	C+M	Area array	—	IR, MWIR	S-Video, USB 1.0/2.0	—	50, 60 Hz



## CAMERA MANUFACTURERS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
<b>Infrared Cameras Inc</b> Beaumont, TX, USA; 409-203-5302; www.infraredcameras.com; garys@infraredcamerasinc.com								
ICI Duracam X P-Series	FPA	C+M	Area array	—	IR, LWIR	NTSC, PAL, S-Video, USB 1.0/2.0	—	50, 60 Hz
ICI SWIR 320 P-Series	InGaAs	C+M	Area array	—	IR, SWIR, NIR	USB 1.0/2.0	≤60	—
ICI SWIR 640 P-Series	InGaAs	C+M	Area array	—	IR, SWIR, NIR	USB 1.0/2.0	—	30 Hz
ICI T-Cam 80 Lineman	FPA	C+M	Area array	—	IR, LWIR	NTSC, PAL, USB 1.0/2.0	—	50, 60 Hz
<b>InfraTec GmbH Infrarotsensorik und Messtechnik</b> Dresden, Germany; 49-351-871-8630; www.infratec.de; thermo@infratec.de								
Cooled high-end infrared camera ImagemR 9300	FPA	—	Area array	1280 x 1024	MWIR	Camera Link, Digital I/O, 10 GigE, GigE, HDMI, RS-232	—	106–3200 Hz
Infrared camera ImagemR 8300 hp Series	FPA	—	Area array	640 x 512, 1280 x 1024	MWIR	Camera Link, 10 GigE, GigE, HDMI	—	355–5000 Hz
VarioCAM HD uncooled infrared camera	FPA	—	Area array	640 x 480, 1024 x 768, 1280 x 960, 2048 x 1536	IR, LWIR	Analog, Digital I/O, DVI, GigE, RS-232, S-Video, USB 1.0/2.0	—	30–240 Hz
VarioCAM HD head stationary infrared camera	FPA	—	Area array	640 x 480, 1024 x 768, 1280 x 960, 2048 x 1536	IR, LWIR, VIS	Analog, Digital I/O, DVI, GigE, RS-232, S-Video, USB 1.0/2.0	—	30–240 Hz
Infrared camera series VarioCAM HDx head	FPA	—	Area array	640 x 480	IR, LWIR	Analog, DVI, GigE, RS-232	—	50, 60 Hz
High-end cameras ImagemR 8300/9300 Z	InSb	—	Area array	640 x 512, 1280 x 1024	MWIR	GigE, RS-232, USB 1.0/2.0	—	≤100 Hz
Cooled long-wave infrared camera series ImagemR	FPA	—	Area array	640 x 512	LWIR	10 GigE, GigE, RS-232, USB 1.0/2.0	—	≤25,000 Hz
Full HD infrared camera ImagemR 10300	FPA	—	Area array	1920 x 1536	LWIR	10 GigE, GigE, HDMI	—	100–300 Hz
<b>Integrated Design Tools Inc</b> Pasadena, CA, USA; 626-794-4649; www.idtvision.com; sales@idtvision.com								
X-Stream Series	CMOS	C+M	Area array	2560 x 1440	—	PCIe	≤1700	—
Os Series	CMOS	C+M	Area array	3840 x 2400	—	Ethernet	1000	—
CrashCam Series	CMOS	C+M	Area array	2560 x 1600	—	Ethernet, HD-SDI	1000	—
NX Series	CMOS	C+M	—	2336 x 1728	—	Ethernet	730	—
NX-Air Series	CMOS	C+M	Area array	2336 x 1728	—	GigE	730	—
Y Series	CMOS	C+M	Area array	1920 x 1080	—	Ethernet, GigE, USB 1.0/2.0	12,300	—
OS Airborne Series	CMOS	C+M	Area array	1920 x 1080	—	Ethernet	1350	—
CrashCam mini Series	CMOS	C+M	—	2560 x 1440	—	HD-SDI	2500	—
O Series	CMOS	C+M	—	3840 x 2400	—	Ethernet, GigE, HD-SDI	1000	—
<b>IO Industries Inc</b> London, ON, Canada; 519-663-9570; www.ioindustries.com; sales@ioindustries.com								
Flare 48MP	CMOS	C+M	Area array	7920 x 6004	VIS	CoaXPress	30	—
Victorem 120B68	CMOS	C+M	Area array	4112 x 3008	VIS	CoaXPress	68	—
Victorem 4KSDI-Mini	CMOS	C	Area array	4096 x 2160	VIS	HD-SDI	60	—
Flare 12MP	CMOS	C+M	Area array	4096 x 3072	NIR, VIS	Camera Link, CoaXPress	125 (CL), 180 (CX)	—
Victorem 205R26	CMOS	C+M	Area array	5496 x 3672	VIS	CoaXPress	26	—
Victorem 51B163	CMOS	C+M	Area array	2464 x 2056	VIS	CoaXPress	163	—
Victorem 4B523	CMOS	C+M	Area array	728 x 544	VIS	CoaXPress	523	—
Victorem 2KSDI-Mini	CMOS	C	Area array	2048 x 1080	VIS	HD-SDI	60	—
Flare 4MP	CMOS	C+M	Area array	2048 x 2048	NIR, VIS	Camera Link, CoaXPress	180 (CL), 140 (CX)	—
Victorem 89B93-CX	CMOS	C+M	Area array	5496 x 3672	VIS	CoaXPress	26	—

*This table is published as a service. The publisher does not assume liabilities for errors or omissions. Please visit [www.vision-systems.com](http://www.vision-systems.com) for the comprehensive online Camera Directory listings.*

# CAMERA MANUFACTURERS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
<b>IRnova AB</b> Kista, Sweden; 46-8-793-66-00; <a href="http://www.irnova.se">www.irnova.se</a> ; <a href="mailto:info@ir-nova.se">info@ir-nova.se</a>								
IRnova320ER-POL IDCA	IR	—	Area array	320 x 256	IR, LWIR	—	60 Hz	—
IRnova640-LW IDCA	IR	—	—	640 x 512	IR, LWIR	LVDS	60 Hz	—
IRnova320ER-1055 IDCA	IR	—	—	320 x 256	IR, LWIR	LVDS	60 Hz	—
IRnova640-MW IDCA	IR	—	—	640 x 512	IR, MWIR	LVDS	60	—
IRnova320ER-330-HS IDCA	IR	—	—	320 x 256	IR, MWIR	LVDS	60	—
IRnova640-1055-HS IDCA	IR	—	—	640 x 512	IR, LWIR	LVDS	60	—
<b>ISVI Corp</b> Gunpo-si, Gyeonggi-do, South Korea; 82-31-427-3245; <a href="http://www.isvi-corp.com">www.isvi-corp.com</a> ; <a href="mailto:sales@isvi-corp.com">sales@isvi-corp.com</a>								
IC-M12S-CXP	CMOS	M	Area array	4096 x 3072	NIR, VIS	CoaXPress	181	6.25 Gbps
IC-X25S-CXP	CMOS	C+M	Area array	5120 x 5120	NIR, VIS	CoaXPress	72	6.25 Gbps
IC-M29S-CL	CCD	M	Area array	6576 x 4384	VIS	Camera Link	4.5	80 MHz
IC-X25N-CL	CMOS	C+M	Area array	5056 x 5056	NIR, VIS	Camera Link	30	80 MHz
<b>ix Cameras Ltd</b> Woburn, MA, USA; 339-645-0778; <a href="http://www.ix-cameras.com">www.ix-cameras.com</a> ; <a href="mailto:michael.quzor@ix-cameras.com">michael.quzor@ix-cameras.com</a>								
i-SPEED 726	CMOS	C+M	Area array	2048 x 1536	NIR, UV, VIS	Ethernet, GigE, HD-SDI, Proprietary, USB3	5000–1,000,000	26 Gp/s
i-SPEED 720	CMOS	C+M	Area array	2048 x 1536	NIR, VIS	DVI, Ethernet, GigE, HD-SDI, Proprietary, USB3	5000–750,000	20 Gp/s
i-SPEED 716	CMOS	C+M	Area array	2048 x 1536	NIR, UV, VIS	Ethernet, GigE, HD-SDI, Proprietary, USB3	5000–500,000	16 Gp/s
i-SPEED 220	CMOS	C+M	Area array	1600 x 1600	NIR, VIS	Ethernet, GigE, Proprietary	600–204,100	1.54 Gp/s
i-SPEED 3	CMOS	C+M	Area array	1280 x 1024	IR, UV, VIS	Ethernet, GigE, Proprietary	2000–150,000	—
i-SPEED 713	CMOS	C+M	Area array	2048 x 1536	NIR, UV, VIS	Ethernet, GigE, HD-SDI, Proprietary, USB3	5,000–500,000	13 Gp/s
<b>JADAK, a Novanta Co</b> North Syracuse, NY, USA; 315-701-0678; <a href="http://www.jadaktech.com">www.jadaktech.com</a> ; <a href="mailto:info@jadaktech.com">info@jadaktech.com</a>								
Allegro LW-AL-CMV2000	CMOS	C+M	Area array	2048 x 1024	NIR, VIS	GigE, USB3	300	—
Allegro LW-AL-CMV4000	CMOS	C+M	Area array	2048 x 2048	NIR, VIS	GigE, USB3	150	—
Allegro LW-AL-CMV12000	CMOS	C+M	Area array	4096 x 3072	NIR, VIS	GigE, USB3	50	—
Allegro LW-AL-IMX172	CMOS	C+M	Area array	4000 x 3000	VIS	GigE, USB3	35	—
Allegro LW-AL-IMX178	CMOS	C+M	Area array	3094 x 2080	VIS	GigE, USB3	60	—
Allegro LW-AL-IMX249	CMOS	C+M	Area array	1920 x 1200	VIS	GigE, USB3	30	—
Allegro LW-AL-IMX250	CMOS	C+M	Area array	2448 x 2048	VIS	GigE, USB3	144	—
Allegro LW-AL-IMX253	CMOS	C+M	Area array	4096 x 3000	VIS	GigE, USB3	64	—
Allegro LW-AL-IMX255	CMOS	C+M	Area array	4096 x 2160	VIS	GigE, USB3	89	—
Allegro LW-AL-2K	CMOS	M	Linescan	2064 x 1	VIS	GigE, USB3	—	80 kHz
<b>JAI</b> San Jose, CA, USA; 408-383-0300; <a href="http://www.jai.com">www.jai.com</a> ; <a href="mailto:camerasales.americas@jai.com">camerasales.americas@jai.com</a>								
SP-20000	CMOS	C+M	Area array	5120 x 3840	VIS	Camera Link, Camera Link Full, CoaXPress, USB3	30	—
SP-12400/SP-12401	CMOS	C+M	Area array	4112 x 3008	NIR, VIS	Camera Link, Camera Link Full, GigE, USB3	9–64	—
SP-12000-CXP4	CMOS	C+M	Area array	4096 x 3072	NIR, VIS	CoaXPress	189	—
SP-5000	CMOS	C+M	Area array	2560 x 2048	NIR, VIS	Camera Link, Camera Link Full, CoaXPress, GigE, USB3	≤250	—
GO-5100	CMOS	C+M	Area array	2462 x 2056	NIR, VIS	GigE, USB3	22–74	—
GO-5101	CMOS	C+M	Area array	2464 x 2056	NIR, VIS	Camera Link, Camera Link Extended, GigE	22–35	—
GO-5000	CMOS	C+M	Area array	2560 x 2048	NIR, VIS	Camera Link, Camera Link Extended, GigE, USB3	≤107	—
GO-2400	CMOS	C+M	—	1936 x 1216	NIR, VIS	Camera Link, Camera Link Full, GigE, USB3	48–165	—
GO-2401	CMOS	C+M	Area array	1936 x 1216	VIS	GigE	41	—
GO-5100MP-USB	CMOS	M	Area array	2464 x 2056	VIS	USB3	74	—

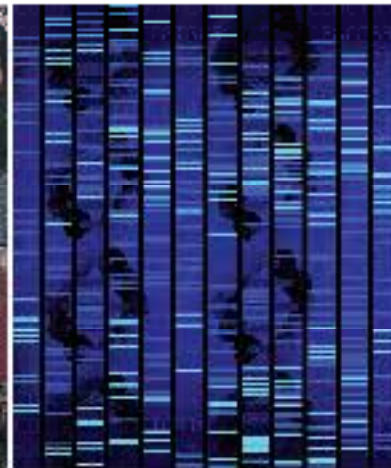
# CAMERA MANUFACTURERS

Product	Sensor type	Color/ Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
<b>JAI</b> San Jose, CA, USA; 408-383-0300; www.jai.com; camerasales.americas@jai.com								
AP-3200T	CMOS	C	Area array	2064 x 1544	VIS	Camera Link, Camera Link Full, GigE, USB3	12-55	—
AP-1600T	CMOS	C	Area array	1456 x 1088	VIS	Camera Link, Camera Link Full, GigE, USB3	24-126	—
AD-130	CCD	C+M	Area array	1296 x 966	Multispectral, NIR, VIS	GigE	31	—
SW-4000T-MCL	CMOS	C	Linescan	3 x 4096	VIS	Camera Link, Camera Link Full	—	67 kHz
SW-4000TL-PMCL	CMOS	C	Linescan	3 x 4096	VIS	Camera Link, Camera Link Full	—	66 kHz
SW-4000M-PMCL	CMOS	M	Linescan	4096	NIR, VIS	Camera Link, Camera Link Full	—	200 kHz
SW-8000M-PMCL	CMOS	M	Linescan	8192	NIR, VIS	Camera Link, Camera Link Full	—	100 kHz
<b>KAYA Instruments</b> Neshar, Israel; 972-72-272-3500; www.kayainstruments.com; info@kayainstruments.com								
JetCam 19	CMOS	C+M	—	—	—	CoaXPress, Fiberoptic, 10 GigE, Proprietary	1920-2400	—
JetCam 160	CMOS	C+M	—	—	—	CoaXPress, Fiberoptic, 10 GigE	≥300 (full), 500 (4K)	—
JetCam 25	CMOS	C+M	—	—	—	CoaXPress, Fiberoptic, 10 GigE	80	—
<b>KEYENCE Corp of America</b> Itasca, IL, USA; 888-539-3623; www.keyence.com/usa; marketing@keyence.com								
CA-HX048C/M	CMOS	C+M	Area array	784 x 596	VIS	Proprietary	≤588	—
CA-HX200C/M	CMOS	C+M	Area array	1600 x 1200	VIS	Proprietary	86.2	—
CA-HX500C/M	CMOS	C+M	Area array	2432 x 2040	VIS	Proprietary	36	—
CA-H2100C/M	CMOS	C+M	Area array	5104 x 4092	VIS	Proprietary	9	—
CV-S035C/M	CCD	C+M	Area array	640 x 480	VIS	Proprietary	62.5	—



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# CAMERA MANUFACTURERS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
<b>KEYENCE Corp of America</b> Itasca, IL, USA; 888-539-3623; www.keyence.com/usa; marketing@keyence.com								
CV-S200C/M	CCD	C+M	Area array	1600 x 1200	VIS	Proprietary	17	—
CA-HL02MX	CMOS	M	Linescan	1 x 2048	VIS	Proprietary	—	41.7 kHz
CA-HL04MX	CMOS	M	Linescan	1 x 4096	VIS	Proprietary	—	41.7 kHz
CA-HL08MX	CMOS	M	Linescan	1 x 8192	VIS	Proprietary	—	22.2 kHz
<b>Kuvio Automation Ltd</b> Tampere, Finland; 358-75-755-4540; www.kuviovision.com; info@kuviovision.com								
KuvioKamera 41XX	CMOS	C+M	Area array	2.1, 5 Mpixels	—	Ethernet	340, 108	—
KuvioKamera 2040	CMOS	C+M	Area array	2.2, 5 Mpixels	—	Ethernet	340, 105	—
<b>Lambert Instruments BV</b> Groningen, Netherlands; 31-50-5018461; www.lambertinstruments.com; info@lambertinstruments.com								
HS540 Series	CMOS	M	Area array	—	VIS	CoaXPress, Ethernet	540	—
HiCAM	I-CMOS	M	Area array	—	NIR, UV, VIS	Ethernet, USB 1.0/2.0	—	—
TRiCAM	I-CCD	M	Area array	—	NIR, UV, VIS	USB 1.0/2.0	15	—
HiCAM Fluo	I-CMOS	M	Area array	—	NIR, UV, VIS	CoaXPress, USB 1.0/2.0	540 (full)	—
<b>Lucid Vision Labs Inc</b> Richmond, BC, Canada; www.thinklucid.com; sales@thinklucid.com								
Phoenix Camera	CMOS	C+M	Area array	—	NIR, VIS	GigE	≥291	—
Triton Camera	CMOS	C+M	Area array	—	NIR, VIS	GigE	≥291	—
<b>LumaSense Technologies Inc</b> Santa Clara, CA, USA; 408-727-1600; www.lumasenseinc.com; info@lumasenseinc.com								
Mikron Thermal Imager MCL640	Microbo-lometer	M	Area array	640 x 480	LWIR, VIS	Ethernet, GigE	60	—
<b>Lumenera</b> Ottawa, ON, Canada; 613-736-4077; www.lumenera.com; info@lumenera.com								
Lumenera Lt29059-NIR	CCD	C+M	—	—	NIR	USB3	6	—
Lumenera Lt1245R	CMOS	C+M	Area array	4112 x 3008	VIS	USB3	30	—
Lumenera Lt945R	CMOS	C+M	Area array	4112 x 2176	VIS	USB3	42	—
Lumenera Lt545R	CMOS	C+M	Area array	2464 x 2056	IR, Multispectral, NIR	USB 1.0/2.0, USB3	75	—
Lumenera Lt345R	CMOS	C+M	Area array	2064 x 1544	IR, Multispectral, NIR, VIS	USB 1.0/2.0, USB3	120	—
Lumenera Lt16059H	CCD	C+M	Area array	4864 x 3232	VIS	USB 1.0/2.0, USB3	11	5 Gbps
Lumenera Lt1265R	CCD	C+M	Area array	4240 x 2832	NIR, VIS	USB3	15	5 Gbps
Lumenera Lt965R	CCD	C+M	Area array	3376 x 2704	NIR, VIS	USB3	19	5 Gbps
Lumenera Lt665R	CCD	C+M	Area array	2752 x 2192	NIR, VIS	USB3	27	5 Gbps
Lumenera Lt365R	CCD	C+M	Area array	1936 x 1456	NIR, VIS	USB3	53	5 Gbps
Lumenera Lt425	CCD	C+M	Area array	2048 x 2048	NIR, VIS	USB3	90	5 Gbps
Lumenera Lt225	CMOS	C+M	Area array	2048 x 1088	NIR, VIS	USB3	170	5 Gbps
Lumenera Lt29059	CCD	C+M	Area array	6576 x 4384	VIS	USB 1.0/2.0, USB3	6	5 Gbps
Lumenera Lg11059	CCD	C+M	Area array	4008 x 2672	VIS	GigE	5	1 Gbps
Lumenera Lm11059	CCD	C+M	Area array	4008 x 2672	VIS	USB 1.0/2.0, USB3	4.3	400 Mbps
<b>MATRIX VISION GmbH</b> Oppenweiler, Germany; 49-7191-9432-0; www.matrix-vision.com; sales@matrix-vision.de								
mvBlueSIRIUS	CCD	C+M	Area array	1024 x 900	—	Digital I/O, GigE	25	—
mvBlueGEMINI	CMOS	C+M	Area array	1280 x 1024	VIS	Digital I/O, Ethernet, RS-232	60	—
mvBlueLYNX-X series	—	C+M	Area array	640 x 480–2448 x 2050	VIS	Digital I/O, Ethernet, RGB, RS-232, USB 1.0/2.0	10–117	—
mvBlueCOUGAR-XD series	—	C+M	Area array	1936 x 1460–4112 x 3008	NIR, VIS	Digital I/O, GigE	7.5–270	—
mvBlueCOUGAR-X series	—	C+M	Area array	640 x 480–4112 x 3008	NIR, UV, VIS	Digital I/O, GigE, RS-232	8.7–436	—
mvBlueFOX3 series	CMOS	C+M	Area array	728 x 544–4112 x 3008	NIR	Digital I/O, USB3	23.2–436	—
mvBlueFOX series	—	C+M	Area array	640 x 480–2592 x 1944	VIS	Digital I/O, USB 1.0/2.0	5.8–100	—
mvBlueFOX-MLC series	CMOS	C+M	Area array	752 x 480–2592 x 1944	VIS	Digital I/O, USB 1.0/2.0	5.8–93	—

## CAMERA MANUFACTURERS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
<b>MATRIX VISION GmbH</b> Oppenweiler, Germany; 49-7191-9432-0; www.matrix-vision.com; sales@matrix-vision.de								
mvBlueFOX-IGC series	CMOS	C+M	Area array	752 x 480–2592 x 1944	VIS	Digital I/O, USB 1.0/2.0	5.8–93	–
mvBlueFOX3 board-level series	CMOS	C+M	Area array	728 x 544–4112 x 3008	NIR, VIS	Digital I/O, USB3	23.2–436	–
<b>Matrox Imaging</b> Dorval, QC, Canada; 800-804-6243; www.matrox.com/imaging; imaging.info@matrox.com								
Iris GTR 300 C	CMOS	C	Area array	640 x 480	VIS	Ethernet, GigE	147	–
Iris GTR 1300	CMOS	M	Area array	1280 x 1024	VIS	Ethernet, GigE	85	–
Iris GTR 1300 C	CMOS	C	Area array	1280 x 1024	VIS	Ethernet, GigE	35	–
Iris GTR 2000	CMOS	M	Area array	1920 x 1200	VIS	Ethernet, GigE	45	–
Iris GTR 2000 C	CMOS	C	Area array	1920 x 1200	VIS	Ethernet, GigE	20	–
Iris GTR 5000	CMOS	M	Area array	2592 x 2048	VIS	Ethernet, GigE	21	–
Iris GTR 5000 C	CMOS	C	Area array	2592 x 2048	VIS	Ethernet, GigE	8.5	–
<b>Mega Speed USA</b> Minnedosa, MB, Canada; 204-867-3767; www.megaspeedusa.com; sales@megaspeedusa.com								
Mega Speed MS110K	CMOS	C+M	Area array	1920 x 1080–64 x 16	VIS	GigE	35–225,000	–
Mega Speed MS35K PRO Cart	CMOS	C+M	Area array	–	VIS	GigE	–	–
Mega Speed X4 PRO	CMOS	C+M	Area array	–	VIS	GigE	≥40,000	–
Mega Speed X9 PRO	CMOS	C+M	Area array	–	VIS	GigE	≥100,000	–
Mega Speed 35K PRO LED	CMOS	C+M	Area array	1280 x 1024	VIS	GigE	≥2000	–
Mega Speed X8 PRO	CMOS	C+M	Area array	1280 x 800	VIS	GigE	4000	–

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[info@matrix-vision.de](mailto:info@matrix-vision.de) · [www.matrix-vision.de](http://www.matrix-vision.de)



# CAMERA MANUFACTURERS

Product	Sensor type	Color/ Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
<b>Mightex Systems</b> Toronto, ON, Canada; 416-840-4991; www.mightex.com; sales@mightex.com								
SME-C050-U	CMOS	C	Area array	2592 x 1944	NIR, VIS	USB 1.0/2.0, USB3	14, 350 (ROI)	5 Gbps
BCE-C050-U	CMOS	C	Area array	2592 x 1944	NIR, VIS	USB 1.0/2.0	6-100	—
BCE-C030-U	CMOS	C	Area array	2048 x 1536	NIR, VIS	USB 1.0/2.0	8-140	—
BCE-B013-U	CMOS	M	Area array	1280 x 1024	NIR, VIS	USB 1.0/2.0	25	—
BCE-CG04-U	CMOS	C	Area array	752 x 480	NIR, VIS	USB 1.0/2.0	60	—
BCE-BG04-U	CMOS	M	Area array	752 x 480	NIR, VIS	USB 1.0/2.0	60	—
CXE-C013-U	CCD	C	Area array	1392 x 1040, 696 x 520, 464 x 344, 348 x 256	NIR, VIS	USB 1.0/2.0	15, 29, 37, 49	—
CXE-B013-U	CCD	M	Area array	1392 x 1040, 696 x 520, 464 x 344, 348 x 256	NIR, VIS	USB 1.0/2.0	15, 29, 37, 49	—
CCE-C013-U	CCD	C	Area array	1392 x 1040, 348 x 256	NIR, VIS	USB 1.0/2.0	15, 49	—
CCE-B013-U	CCD	M	Area array	1392 x 1040, 696 x 520, 464 x 344, 348 x 256	IR, NIR, VIS	USB 1.0/2.0	15, 29, 37, 49	—
<b>Mikrotron GmbH</b> Unterschleissheim, Germany; 49-8972-6342-00; www.mikrotron.de; info@mikrotron.de								
EoSens 25CXP+	CMOS	C+M	Area array	5120 x 5120	VIS	CoaXPress	80	—
EoSens 4CXP	CMOS	C+M	Area array	2336 x 1728	VIS	CoaXPress	563	—
EoSens 3CXP	CMOS	C+M	Area array	1690 x 1710	VIS	CoaXPress	563	—
EoSens CL	CMOS	C+M	Area array	1280 x 1024	VIS	Camera Link, Camera Link Extended-Full, Camera Link Extended, Camera Link Full	506	—
EoSens GE	CMOS	C+M	Area array	1280 x 1024	VIS	GigE	80	—
MotionBLITZ EoSens Cube7	CMOS	C+M	Area array	1696 x 1710	VIS	GigE	523	—
MotionBLITZ EoSens Cube6	CMOS	C+M	Area array	1280 x 1024	VIS	GigE	506	—
MotionBLITZ EoSens mini2	CMOS	C+M	Area array	1696 x 1710	VIS	GigE	523	—
MotionBLITZ LTR portable	CMOS	—	Area array	—	VIS	Camera Link	506	—
MotionBLITZ EoSens mini1	CMOS	C+M	Area array	1280 x 1024	VIS	GigE	506	—
<b>Munro Design &amp; Technologies LLC</b> Webster, NY, USA; 585-503-5180; www.munrodandt.com; jfmunro@munrodandt.com								
Macula 3D	3-D	M	Area array	—	NIR	Proprietary, USB 1.0/2.0, USB3	60	—
<b>Nerian Vision GmbH</b> Stuttgart, Germany; 49-711-2195-9414; www.nerian.com; service@nerian.com								
SceneScan	3-D	M	Area array	—	—	GigE	—	—
Karmin2 3D Stereo Camera	CMOS	M	Area array	—	—	USB3	40	—
Karmin 3D Stereo Camera (High-Res)	CMOS	M	Area array	1600 x 1200	—	USB3	60	—
<b>NET New Electronic Technology GmbH</b> Finning, Germany; 49-8806-9234-0; www.net-gmbh.com; info@net-gmbh.com								
CORSIGHT	CMOS	C+M	Area array	—	NIR, VIS	Ethernet, RS-232, USB 1.0/2.0	—	—
GigEPRO	CMOS	C+M	Area array	10 Mpixels	NIR, VIS	GigE	—	—
HDselect	CMOS	C	Area array	—	VIS	HDMI, LVDS, USB3	60	—
3iCube	CMOS	—	—	0.4-10 Mpixels	NIR, VIS	USB3	—	—
<b>New Imaging Technologies (NIT)</b> Verrières le Buisson, France; 33-1-64-47-88-58; www.new-imaging-technologies.com; info@new-imaging-technologies.com								
WiDy SWIR Cameras	InGaAs	C+M	—	—	SWIR, NIR	Proprietary	—	—
MAGIC Camera series	CMOS	C+M	—	—	VIS	Proprietary	—	—
<b>Numetrix Technologies Inc</b> Sherbrooke, QC, Canada; 819-416-2050 x103; www.numetrix.ca; sales@numetrix.ca								
NX3D Digitizer	3-D	C+M	Area array	1024 x 768	Multispectral, VIS	Digital I/O, GigE, Proprietary, RGB, RS-422/LVDS	12	—
<b>Odos Imaging Ltd</b> Edinburgh, United Kingdom; 44-1316-770-260; www.odos-imaging.com; info@odos-imaging.com								
StarForm-Swift Industrial 3D ToF Camera	3-D	M	Area array	—	NIR	GigE	30	—

## CAMERA MANUFACTURERS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
<b>Optronis GmbH</b> Kehl, Germany; 49-7851-91260; www.optronis.com; info@optronis.com								
CP70-1-M/C-1000	CMOS	C+M	Area array	1.3 Mpixels	—	CoaXPress	1000	—
CP90-25P-M/C-72	CMOS	C+M	Area array	25 Mpixels	—	CoaXPress	72	—
CL600x2	CMOS	C+M	Area array	1280 x 1024	VIS	Camera Link	500	—
CR3000x2	CMOS	C+M	Area array	512 x 512	VIS	GigE	500	—
CR600x2	CMOS	C+M	Area array	1280 x 1024	VIS	GigE	500	—
CP80-4-C/M-500	CMOS	C+M	Area array	2304 x 1720	VIS	CoaXPress	500–87,000	—
CR4000x2	CMOS	C+M	Area array	2304 x 1720	VIS	Ethernet	500–100,000	—
CP80-25-C/M-72	CMOS	C+M	Area array	5120 x 5120	VIS	CoaXPress	72–1688	—
CP80-3-M/C-540	CMOS	C+M	Area array	1696 x 1710	VIS	CoaXPress	540–170,000	—
CP70-12-M/C-167	CMOS	C+M	Area array	4096 x 3072	VIS	CoaXPress	167–10,000	—
<b>Photometrics</b> Tucson, AZ, USA; 520-889-9933; www.photometrics.com; info@photometrics.com								
Prime BSI Scientific CMOS Camera	CMOS	M	Area array	2048 x 2048	NIR, UV, VIS	PCIe, USB3	43.5, 63	—
Prime 95B Scientific CMOS Camera	CMOS	M	Area array	1200 x 1200	NIR, UV, VIS	PCIe, USB3	82	—
Prime sCMOS Camera	CMOS	M	Area array	2048 x 2048	NIR, VIS	PCIe, USB3	100	—
Evolve Delta Camera	EMCCD	M	Area array	512 x 512	NIR, UV, VIS	FireWire	67 (full), 794 (128 x 128)	20 MHz
Evolve 512 Camera	EMCCD	M	Linescan	512 x 512	NIR, VIS	FireWire	33	10 MHz
S477 Camera	CCD	C+M	Linescan	—	NIR, VIS	—	—	—
PM695	CCD	M	Area array	2688 x 2200	NIR, VIS	USB 1.0/2.0	3.3	—



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# CAMERA MANUFACTURERS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
<b>Photometrics</b> Tucson, AZ, USA; 520-889-9933; www.photometrics.com; info@photometrics.com								
Iris 9 Scientific CMOS Camera	CMOS	—	—	5056 x 2960	—	PCIe	30	—
CoolSNAP DYNO CCD Camera	CCD	M	Linescan	—	—	USB 1.0/2.0, USB3	14.4 (full), 24.1 (2 x 2)	—
<b>Photoneo</b> Bratislava, Slovakia; 421-948-766-479; www.photoneo.com; sales@photoneo.com								
PhoXi 3D Scanners	CMOS	M	Area array	—	VIS	Ethernet	5	—
PhoXi 3D Camera	CMOS	M	Area array	—	VIS	Ethernet	20	—
<b>Photon Etc</b> Montreal, QC, Canada; 514-385-9555; www.photonetc.com; info@photonetc.com								
Zephir	MCT	M	Area array	—	SWIR	Camera Link	345	—
V-EOS Widefield Hyperspectral Camera	Multi-spectral	C+M	Area array	—	Multispectral, VIS	USB3	3	—
S-EOS Widefield Hyperspectral Camera	Multi-spectral	C+M	Area array	—	Multispectral, SWIR	USB3	15–20	—
RIMA Hyperspectral Imager	Multi-spectral	M	Area array	—	Multispectral, NIR, VIS	USB3	—	—
IMA Hyperspectral Imager	Multi-spectral	M	Area array	—	NIR, VIS	USB3	—	—
<b>Photron USA Inc</b> San Diego, CA, USA; 858-684-3555; www.photron.com; image@photron.com								
FASTCAM Mini UX	CMOS	C+M	Area array	1280 x 1024	VIS	GigE	4000–745,483	—
FASTCAM Mini AX	CMOS	C+M	Area array	1024 x 1024	VIS	GigE	6400–11,182,762	—
FASTCAM Mini WX	CMOS	C+M	Area array	2048 x 2048	VIS	GigE	1080–2,794,154	—
FASTCAM SA-X2	—	C+M	Area array	—	VIS	Dual GigE, GigE	12,500–44,735,144	—
FASTCAM SA-Z	CMOS	C+M	Area array	1024 x 1024	VIS	GigE	20,000–2,100,000	—
FASTCAM Multi	CMOS	C+M	Area array	1280 x 1024	VIS	Ethernet	4800–2,235,938	—
<b>PHYTEC America LLC</b> Bainbridge Island, WA, USA; 206-780-9047; www.phytec.com; info@phytec.com								
FireWire-CAM-111H/112H	CCD	C+M	Area array	1024 x 768	VIS	Digital I/O, FireWire	15	—
VCAM-003-2	CCD	C	Area array	752 x 582	VIS	NTSC/PAL/RS-170, S-Video	25/30	—
VCAM-040-1	CCD	M	Area array	752 x 582	VIS	CCIR	25	—
VCAM-110-2	CCD	C	Area array	752 x 582	VIS	NTSC/PAL/RS-170, S-Video	25/30	—
VM-006	CMOS	M	Area array	1280 x 1204	VIS	Digital I/O, Proprietary	30	—
VM-007/-BW	CMOS	C+M	Area array	756 x 480	VIS	Digital I/O, LVDS, Proprietary	60	—
FireWire-CAM-111H/112H	CCD	C+M	Area array	1024 x 786	VIS	Digital I/O, FireWire	30	—
<b>PHYTEC Messtechnik GmbH</b> Mainz, Germany; 49-6131-9221-0; www.phytec.de; info@phytec.de								
VM-011	CMOS	C+M	Area array	2592 x 1944	IR, VIS	Camera-control unit, Digital I/O, LVDS, Proprietary	—	—
VM-009	CMOS	C	Area array	1280 x 1024	VIS	Camera-control unit, Digital I/O, LVDS, Proprietary	30	—
VM-010	CMOS	C+M	Area array	756 x 480	VIS	Camera-control unit, Digital I/O, LVDS, Proprietary	60	—
VM-050	IR	M	Area array	32 x 32	IR	Digital I/O, Proprietary	8.9	—
<b>Pixelink</b> Ottawa, ON, Canada; 613-247-1211; www.pixelink.com; sales@pixelink.com								
PL-D721 USB 3.0 Camera	CMOS	C+M	Area array	—	NIR, VIS	USB3	150	—
PL-D722 USB 3.0 Camera	CMOS	C+M	Area array	—	NIR, VIS	USB3	87	—
PL-D725 USB 3.0 Camera	CMOS	C+M	Area array	—	NIR, VIS	USB3	70	—
PL-D775 USB 3.0 Camera	CMOS	C	Area array	—	NIR, VIS	USB3	15	—
PL-D726 USB 3.0 Camera	CMOS	M	Area array	—	NIR, VIS	USB3	5.3	—
PL-D729 USB 3.0 Camera	CMOS	M	Area array	—	VIS	USB3	20	—
PL-D7715 USB 3.0 Camera	CMOS	C	Area array	—	VIS	USB3	13	—



## CAMERA MANUFACTURERS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
<b>Princeton Infrared Technologies Inc (PIRT)</b> Monmouth Junction, NJ, USA; 609-917-3380; www.princetonirtech.com; sales@princetonirtech.com								
1280SciCam Scientific Camera	InGaAs Photodiode array	M	Area array	1280 x 1024	IR, Multispectral, SWIR, NIR, VIS	—	90	—
LineCam 12	InGaAs	M	Linescan	1024 x 1	IR, Multispectral, SWIR, NIR, VIS	USB3	—	37, 48 kHz
KURO 2048B sCMOS Cameras	CMOS	M	Area array	2048 x 2048	Hyperspectral, UV, VIS	USB3	47, 23	—
NIRvana Family of NIR/SWIR Cameras	InGaAs	M	Area array	640 x 512	SWIR, NIR	GigE	22–110	2–10 MHz
ProEM-HS:1024BX3 EMCCD Cameras	EMCCD	M	Area array	1024 x 1024	UV, VIS	GigE	25–4800+	—
PIXIS 2048 eXcelon-enhanced deep-depletion CCD cameras	CCD	M	Area array	2048 x 2048	NIR, UV, VIS	USB 1.0/2.0	—	100 kHz, 2 MHz
PIXIS-XO 2048B	CCD	M	—	2048 x 2048	X-ray	USB 1.0/2.0	—	100 kHz, 2 MHz
SOPHIA-XO 2048B-152 X-ray Cameras	CCD	M	—	—	X-ray	USB3	—	400 kHz–16 MHz

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# CAMERA MANUFACTURERS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
<b>Radiant Vision Systems</b> Redmond, WA, USA; 425-844-0152; www.radiantvisionsystems.com; info@radiantvs.com								
ProMetric Y2 Imaging Photometer	CCD	M	Area array	1600 x 1200	IR, VIS	Ethernet, Proprietary, USB 1.0/2.0	—	—
ProMetric I2 Imaging Colorimeters	CCD	C+M	Area array	1600 x 1200	IR, NIR, VIS	Ethernet, Proprietary, USB 1.0/2.0	—	—
ProMetric Y16 Imaging Photometer	CCD	M	Area array	4896 x 3264	IR, NIR, VIS	Ethernet, Proprietary, USB 1.0/2.0	—	—
ProMetric Y29 Imaging Photometer	CCD	M	Area array	6576 x 4384	IR, NIR, VIS	Ethernet, Proprietary, USB 1.0/2.0	—	—
ProMetric I8 Imaging Colorimeters	CCD	C+M	Area array	3296 x 2472	IR, NIR, VIS	Ethernet, Proprietary, USB 1.0/2.0	—	—
ProMetric I16 Imaging Colorimeters	CCD	C+M	Area array	4896 x 3264	IR, NIR, VIS	Ethernet, Proprietary, USB 1.0/2.0	—	—
ProMetric I29 Imaging Colorimeters	CCD	C+M	Area array	6576 x 4384	IR, NIR, VIS	Ethernet, Proprietary, USB 1.0/2.0	—	—
<b>Resonon Inc</b> Bozeman, MT, USA; 406-586-3356; www.resonon.com; inquiry@resonon.com								
Pika L Hyperspectral Imaging Camera (400–1000 nm)	CMOS	C+M	Linescan	—	Multispectral, NIR, VIS	USB3	249	—
Pika XC2 Hyperspectral Imaging Camera (400–1000 nm)	CMOS	C+M	Linescan	—	Multispectral, NIR, VIS	USB3	165	—
Pika NIR-320 Hyperspectral Imaging Camera (900–1700 nm)	InGaAs	C+M	Linescan	—	Multispectral, SWIR, NIR	GigE	520	—
Pika NIR-640 Hyperspectral Imaging Camera (900–1700 nm)	InGaAs	C+M	Linescan	—	Hyperspectral	GigE	196	—
<b>SensoPart Industriesensorik GmbH</b> Gottenheim, Germany; 49-7665-94769-0; http://ky.to/www.sensopart.com; sensopart@kyto.com								
VISOR Allround	CMOS	C+M	Area array	736 x 480, 1280 x 1024	IR, NIR, UV, VIS	Digital I/O, Ethernet, RS-232, RS-422/LVDS	50	—
VISOR Object	CMOS	C+M	Area array	1280 x 1024, 736 x 480, 640 x 480, 320 x 240	NIR, UV, VIS	Digital I/O, Ethernet, RS-232, RS-422/LVDS	50	—
VISOR Code Reader	CMOS	C+M	Area array	1280 x 1024, 736 x 480, 640 x 480, 320 x 240	NIR, UV, VIS	Digital I/O, Ethernet, RS-232, RS-422/LVDS	50	—
VISOR Solar	CMOS	M	Area array	736 x 480	IR, NIR	Digital I/O, Ethernet, RS-232, RS-422/LVDS	50	—
Eyesight vision system	CMOS	C+M	Area array	1280 x 1024, 736 x 480, 640 x 480, 320 x 240	NIR, UV, VIS	Digital I/O, Ethernet, RS-232, RS-422/LVDS	50	—
<b>Sensor Technologies America Inc</b> Carrollton, TX, USA; 972-481-9223; www.sentechamerica.com; sales@sentechamerica.com								
USB3 Vision	CMOS	C+M	Area array	—	—	USB3	—	—
GigE Vision Series	CMOS	C+M	Area array	—	—	GigE	—	—
High Definition Output Series	—	C	Area array	—	—	DVI, HD-SDI	60, 50, 30	—
Camera Link CMOS Series	CMOS	C+M	Area array	—	—	Camera Link	—	—
Mini USB 2.0 Series	CCD	C+M	Area array	—	X-ray	USB 1.0/2.0	—	—
Auto Focus Series	—	C+M	Area array	—	—	DVI, LVDS	60	—
CMOS Camera Link	CMOS	C+M	Area array	2, 4 Mpixels	—	Camera Link	—	—
<b>Sensor to Image GmbH</b> Schongau, Bavaria, Germany; 49-8861-2369-0; www.sensor-to-image.de; email@sensor-to-image.de								
CANCam-BF	CMOS	C+M	Area array	1280 x 1024	VIS	Ethernet, PAL, Proprietary, RS-232	—	48 MHz
CANCam-GigE	CMOS	C+M	Area array	1280 x 1024	VIS	GigE, Proprietary, RS-232	—	48 MHz
<b>SICK Inc</b> Minneapolis, MN, USA; 952-941-6780; www.sickusa.com; info@sick.com								
TriSpector1000	3-D	M	Linescan	—	—	Digital I/O, Ethernet	—	—
Ranger3	3-D	C+M	Linescan	—	—	Camera Link, Ethernet	—	60 kHz
Color Ranger 3D Camera	CMOS	C+M	Area array	1536 x 512	VIS	GigE	11,000	—
Inspector I10	CMOS	M	Area array	—	VIS	Ethernet	100	—
Inspector I20	CMOS	M	Area array	384 x 384	VIS	Ethernet	100	—
Inspector I20-UV	CMOS	M	Area array	384 x 384	UV	Ethernet	100	—
Inspector I40	CMOS	M	Area array	640 x 480	VIS	Ethernet	100	—
IVC-3D 100	3-D	M	Area array	1536 x 512	VIS	Ethernet	5000	—
IVC-3D50	3-D	M	Area array	1536 x 512	VIS	Ethernet	5000	—

## CAMERA MANUFACTURERS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
<b>Sierra-Olympic Technologies Inc</b> Hood River, OR, USA; 541-716-0016; www.sierraolympic.com; chris@sierraolympic.com								
Ventus OGI	IR	M	Area array	640 x 512	MWIR	Analog, Camera Link, GigE, NTSC, PAL, RS-232, RS-422/LVDS	60	—
Vinden 75 LR	VOx	M	Tube	640 x 480	LWIR	Analog, Camera Link, Ethernet, NTSC, PAL, RS-232, RS-422/LVDS	60	60
Vinden LR	VOx	C+M	Area array	640 x 512	LWIR	Analog, Camera Link, Ethernet, NTSC, PAL	—	60, 7.5 Hz
Viento-G	Microbolometer	C+M	Area array	320 x 240, 640 x 480	LWIR	Camera Link, Digital I/O, GigE	—	9–60 Hz
Vayu HD	Microbolometer	C+M	Area array	1920 x 1200	LWIR	Camera Link, Digital I/O, HD-SDI	—	30 Hz
Tenum 640	VOx	C+M	Area array	640 x 512	LWIR	Analog, Camera Link, NTSC, PAL, RGB	60, 9	—
Viento-GT	Microbolometer	C+M	Area array	320 x 240, 640 x 480	LWIR	Camera Link, Digital I/O	—	9–60 Hz
Viento 67-640	VOx	M	Area array	640 x 480	IR, LWIR	NTSC, PAL	9	—
Viento 67-640 30Hz	VOx	M	Area array	640 x 480	IR, LWIR	Camera Link, NTSC, PAL	30	—
CX320 Thermography Camera System	Microbolometer	M	Area array	384 x 288	LWIR	Ethernet	60	—
CX640 Thermography Camera System	Microbolometer	M	Area array	640 x 480	LWIR	Ethernet	60	—
Viento 640 Thermal Camera	VOx	M	Area array	640 x 480	LWIR	—	30	—
Tamarisk 640 Uncooled Thermal Imaging Camera Module	VOx	M	Area array	640 x 480	LWIR	Camera Link	30	—

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# CAMERA MANUFACTURERS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
<b>Sierra-Olympic Technologies Inc</b> Hood River, OR, USA; 541-716-0016; www.sierraolympic.com; chris@sierraolympic.com								
NIT's Wide Dynamic (WiDY) Range Camera 640U-S	InGaAs	M	Area array	640 x 512, 320 x 256	IR, SWIR	USB 1.0/2.0	50	—
NIT's Wide-Dynamic-Range Camera 640M-S	InGaAs	M	Area array	640 x 512, 320 x 256	IR, SWIR	Camera Link	≤50	—
NIT's Wide-Dynamic Range 640A-S	InGaAs	M	Area array	640 x 512	IR, SWIR	Analog, NTSC, PAL	≤50	—
Vinden 105 Core Continuous-Zoom, Thermal Imaging Module	VOx	C+M	Area array	640 x 480	IR, LWIR	Analog, NTSC, PAL	30, 9	—
Vinden 150 Core	VOx	C+M	Area array	640 x 480	IR, LWIR	Analog, NTSC, PAL	30, 9	—
Quantum M1 - VGA Camera Module	InGaAs	M	Area array	640 x 512	SWIR	RS-170	≤85	—
Jenoptik IR-TCM HD XGA 1024 Resolution Radiometric Thermal Camera	Microbolometer	M	Area array	1024 x 768, 2048 x 1536	LWIR	GigE	30	—
<b>Sofradir EC Inc</b> Fairfield, NJ, USA; 973-882-0211; www.sofradir-ec.com; info@sofradir-ec.com								
SNAKE SW & SNAKE SW tecluss detectors and camera cores	IR	C+M	Area array	—	Hyperspectral, IR, SWIR, NIR	Analog, Camera Link, CCIR, Digital I/O, GigE, HDMI, NTSC, PAL, RS-170, USB3	—	25, 30 Hz
MITIE and MITIE PLUS Series of infrared camera cores	IR	C+M	Area array	—	Hyperspectral, IR, LWIR, Multispectral, MWIR	Analog, Camera Link, Camera-control unit, Digital I/O, GigE, HDMI, NTSC, PAL, USB3	—	—
ATOM 640	Microbolometer	C+M	Area array	640 x 480	LWIR	Analog, Camera Link	—	9, 30, 60 Hz
ATOM 1024	Microbolometer	M	Area array	1024 x 768	LWIR	Camera Link, GigE, LVDS	—	30, 60 Hz
<b>Soliton Technologies Pvt Ltd</b> Bangalore, Karnataka, India; 91-80-41208600; www.solitontech.com; sales@solitontech.com								
NUERA Machine Vision Smart Camera	CMOS	C+M	Area array	752 x 480, 1280 x 960	NIR, VIS	Digital I/O, Ethernet, GigE, HDMI, RS-232, USB 1.0/2.0	60	—
<b>Sony Europe, Image Sensing Solutions</b> Weybridge, Surrey, United Kingdom; 44-1932-817-494; www.image-sensing-solutions.eu; matthew.swinney@eu.sony.com								
XCG-CP510	CMOS	M	Area array	2448 x 2048	VIS	GigE	23	—
XCU-CG160	CMOS	C+M	Area array	1456 x 1088	VIS	USB3	100	—
XCL-CG510	CMOS	C+M	Area array	2448 x 2048	VIS	Camera Link, Camera Link Extended-Full, Camera Link Extended, Camera Link Full	35	—
XCG-CG160	CMOS	C+M	Area array	1456 x 1088	VIS	GigE	70	—
FCB-ER8550	CMOS	C	Area array	—	VIS	—	≤60	—
FCB-ER8300	CMOS	C	Area array	3840 x 2160	VIS	HDTV, LVDS	30	—
XCG-C130/C	CCD	C+M	Area array	1280 x 960	VIS	GigE	31 (PoE compatible)	—
XCG-CG240/C	CMOS	C+M	Area array	1936 x 1216	VIS	GigE	40 (8 bit)	—
XCG-CG510/C	CMOS	C+M	Area array	2464 x 2048	VIS	GigE	23 (8 bit)	—
XCL-SG510/C	CMOS	C+M	Area array	5.1 Mpixels	VIS	Camera Link	154	—
FCB-EV7520A	CMOS	C	Area array	1920 x 1080	VIS	—	60	—
XCL-SG1240	CMOS	C+M	Area array	4112 x 3008	VIS	Camera Link, Camera Link Extended-Full, Camera Link Extended	20	—
FCB-ER8350	CMOS	C	Area array	—	VIS	—	≤60	—
FCB-ES8230	CMOS	C	Area array	—	VIS	—	30	—
<b>Sony Visual Imaging Products</b> San Jose, CA, USA; 408-352-4445; www.sony.com/videocameras; sony.cameras@am.sony.com								
FCB-ER8550	CMOS	C	Area array	—	VIS	HDMI, LVDS	≤60	—
FCB-ER8530	CMOS	C	Area array	—	VIS	HDMI	≤60	—
FCB-ES8230	CMOS	C	Area array	—	VIS	HDMI	≤60	—
FCB-EV7520A	CMOS	C	Area array	—	VIS	LVDS	≤60	—
XC-505	CCD	C	Area array	768 x 494	VIS	NTSC/PAL/RS-170	30	—
XCG-CG240/C	CMOS	C+M	Area array	—	—	GigE	40 (8 bit)	—
XCG-CG510/C	CMOS	C+M	Area array	—	—	GigE	23 (8 bit)	—

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## CAMERA MANUFACTURERS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
<b>Sumix</b> Oceanside, CA, USA; 877-233-3385; www.sumix.com; info-team@sumix.com								
Hummingbird USB 3.0 color industrial camera (SMX-15M5C)	CMOS	C	Area array	2592 x 1944	VIS	USB3	200	4000 Mbps
Hummingbird USB 3.0 monochrome industrial camera (SMX-15M5M)	CMOS	M	Area array	2592 x 1944	VIS	USB3	200	4000 Mbps
<b>SVS-Vistek GmbH</b> Seefeld, Germany; 49-8152-9985-0; www.svs-vistek.com; info@svs-vistek.com								
ECO Series	CCD	C+M	Area array	0.3-12 Mpixels	VIS	GigE	10-155	—
EVO Tracer	CCD	C+M	Area array	—	VIS	GigE	21.8-147	—
EXO Tracer	CMOS	C+M	Area array	—	—	GigE	9	—
hr120	CMOS	M	—	—	—	Camera Link, Camera Link Full, CoaXPress	9.3	—
<b>Tattile Srl</b> Mairano, (BS), Italy; 39-030-970-00; www.tattile.com; infoindustrial@tattile.com								
S50 SMART CAMERA	CMOS	C+M	Area array	640 x 480	—	Digital I/O, Ethernet, RS-232	120	—
S100 SMART CAMERA	CMOS	C+M	Area array	640 x 480	—	Digital I/O, Ethernet, RS-232	250	—
S12MP SMART CAMERA	CMOS	M	Area array	—	VIS	GigE	330	—
S200 SMART CAMERA	CMOS	C+M	Area array	2048 x 2048	—	Digital I/O, Ethernet, RS-232, RS-422/LVDS	180	—
TAG-5	CMOS	C+M	Area array	640 x 480	—	GigE	250	—
TAG-7	CCD	M	Linescan	2048 x 1	—	Camera Link	—	10 kHz
<b>Teledyne DALSA</b> Waterloo, ON, Canada; 519-886-6000; www.teledynedalsa.com; tdi_sales.americas@teledyne.com								
Genie Nano-5G	CMOS	C+M	Area array	2048 x 1536, 2464 x 2056, 4112 x 2176, 4112 x 3008	VIS	5 GigE	190, 141, 88, 64	—
Genie Nano Polarization Camera	CMOS	C+M	Area array	2464 x 2056	VIS	GigE	34	—
Piranha4 Polarization Camera	CMOS	M	Linescan	2048 x 4	VIS	Camera Link	—	70 kHz
Falcon4 86M	CMOS	C+M	Area array	10,720 x 8064	NIR, VIS	Camera Link HS	16	—
Genie Nano CL Series	CMOS	C+M	Area array	2464 x 2056, 4112 x 2176, 4112 x 3012, 4096 x 4096, 5120 x 5120	NIR, VIS	Camera Link, Camera Link Full	141, 88, 64, 45, 30	—
Linea Color Series	CMOS	C	Linescan	2048 x 2, 4096 x 2, 8192 x 2	VIS	Camera Link, GigE	—	48 kHz
Calibr GX Series	Microbolometer	M	—	320 x 240, 640 x 480	LWIR	GigE	30, 60	—
Genie Nano-1G Series	CMOS	C+M	Area array	672 x 512, 728 x 544, 832 x 632, 1280 x 1024, 1456 x 1088, 1936 x 1216, 2064 x 1544, 2464 x 2056, 2592 x 2048, 4112 x 2176, 4112 x 3008, 4096 x 4096, 5120 x 5120	NIR, VIS	GigE	862, 310, 566, 213, 150, 116, 140, 80, 51, 60, 40, 30, 20	—
Piranha XL XDR	CMOS	M	TDI	16,352 x 12	VIS	Camera Link HS	—	125 kHz
Linea Series	CMOS	M	Linescan	2048 x 1, 4096 x 1, 8192 x 1, 16,384 x 1	VIS	Camera Link, Camera Link HS, GigE	—	80
BOA XA Series	CMOS	M	Area array	1664 x 1216, 1920 x 1440, 2560 x 2048	VIS	Ethernet, RS-232	40, 60, 80	—

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Teledyne DALSA Waterloo, ON, Canada; 519-886-6000; www.teledynedalsa.com; tdi_sales.americas@teledyne.com								
BOA Series	CCD	C+M	Area array	640 x 480, 1024 x 768, 1280 x 960, 1600 x 1200	VIS	Ethernet, RS-232	60, 25, 20, 15	—
Piranha4 Series	CMOS	M	Linescan	2048 x 2, 4096 x 2, 8192 x 2	VIS	Camera Link	—	200/100, 100/70 kHz
Piranha4 Color Series	CMOS	C	Linescan	2048 x 3, 4096 x 3, 8192 x 3	VIS	Camera Link, Camera Link Full	—	70 kHz
Piranha4 Multispectral	CMOS	C	Linescan	2048 x 4	NIR, VIS	Camera Link, Camera Link Full	—	70 kHz
Piranha HS	CCD	M	TDI	4096 x 48, 4096 x 96, 6000 x 256, 8192 x 96, 12,000 x 256	VIS	Camera Link, Camera Link Full, Camera Link HS	—	36, 68, 142, 110, 90 kHz
Piranha HS NIR	CCD	M	TDI	8192 x 256	NIR, VIS	Camera Link, Camera Link Full	—	34 kHz
Piranha ES Series	CCD	M	TDI	4096 x 16, 4096 x 32, 8192 x 32, 12,000 x 64	VIS	Camera Link, Camera Link Full	—	110, 68, 34-68, 90 kHz

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<b>Teledyne DALSA</b> Waterloo, ON, Canada; 519-886-6000; www.teledynedalsa.com; tdi_sales.americas@teledyne.com								
Falcon2 4M, 8M, 12M	CMOS	C+M	Area array	2048 x 2048, 2432 x 1728, 2816 x 2816, 3328 x 2502, 4096 x 3072	VIS	Camera Link Full	168, 90, 58	—
Genie TS series	CMOS	C+M	Area array	2048 x 1080, 2048 x 2048, 3520 x 2200, 4096 x 3072	VIS	GigE	70, 37, 19, 12	—
Piranha XL Color	CMOS	C	TDI	8192 x 12, 16,352 x 12	VIS	Camera Link HS	—	70 kHz
BOA Spot Series	CMOS	C+M	Area array	640 x 480, 1280 x 960	VIS	Digital I/O, Ethernet, RS-232	45, 30	—
Linea ML	CMOS	M	Linescan	16,384 x 4	NIR, VIS	Camera Link HS	—	300 kHz
Linea ML Multispectral	CMOS	C	Linescan	8192 x 4	NIR, VIS	Camera Link, Camera Link HS	—	75 kHz
BOA Spot Series	CMOS	C+M	Area array	640 x 480, 1280 x 960	VIS	Digital I/O, Ethernet, RS-232	45, 30	—
<b>Teledyne e2v</b> Milpitas, CA, USA; 949-212-3223; www.e2v.com; imaging@teledyne-e2v.com								
UNiiQA+ high-speed	CMOS	C+M	Linescan	1 x 4000, 1 x 2000, 1 x 1000	NIR, VIS	Camera Link	—	100 kHz
UNiiQA+ essential	CMOS	C+M	Linescan	1 x 4000, 1 x 2000, 1 x 1000	NIR, VIS	Camera Link	—	80, 100 kHz
UNiiQA+ high-resolution	CMOS	M	Linescan	16,000 x 1	NIR, VIS	Camera Link	—	50 kHz
ELiIXA+ 16k/8k	CMOS	C+M	Linescan	4 x 16,000, 2 x 8000	NIR, VIS	Camera Link, CoaXPress	—	140, 100 kHz
ELiIXA+ 8k/4k	CMOS	C+M	Linescan	4 x 8000, 2 x 4000	NIR, VIS	Camera Link	—	50, 100 kHz
ELiIXA+ high-speed	CMOS	M	Linescan	4 x 16,000, 4 x 11,000	NIR, VIS	Camera Link, CoaXPress	—	200 kHz
ELiIXA+ 8k dual line	CMOS	M	Linescan	8192 x 2	NIR, VIS	Camera Link	—	100 kHz
OctoPlus OCT	CMOS	M	Linescan	2048 x 1	NIR	Camera Link, USB3	—	20, 80, 130, 250 kHz
UNiiQA+ NBASE-T	CMOS	C+M	Linescan	2048, 4096	NIR, VIS	GigE	—	100, 140 kHz
ELiIXA+ NBASE-T	CMOS	C+M	Linescan	2048 x 4, 4096 x 4	NIR, VIS	GigE	—	100, 140 kHz
<b>TeraSense</b> San Jose, CA, USA; 408-600-1459; www.terasense.com; info@terasense.com								
TeraFAST-256-HS high speed linear THz imaging camera	InGaAs	M	Linescan	—	—	Analog, USB 1.0/2.0	—	5 kHz
<b>Thermo Scientific - CIDTEC</b> Liverpool, NY, USA; 315-451-9410; www.thermofisher.com/cidtec; tony.chapman@thermofisher.com								
CID8710D	CID	M	Area array	—	NIR, UV, VIS	Analog	—	—
SpectraCAM XDR	CID	M	Area array	—	UV, VIS	GigE	—	2 MHz
SpectraCAM84	CID	M	Area array	1024 x 1024	UV, X-ray, VIS	Ethernet	—	—
CID8825D	CID	C	Area array	730 x 512	VIS	USB 1.0/2.0	30	—
CID8725D	CID	M	Area array	—	UV, VIS	Analog, USB 1.0/2.0	30	—
<b>Thorlabs Inc</b> Newton, NJ, USA; 973-579-7227; www.thorlabs.com; sales@thorlabs.com								
Quantalux	CMOS	M	Area array	—	—	USB3	50	—

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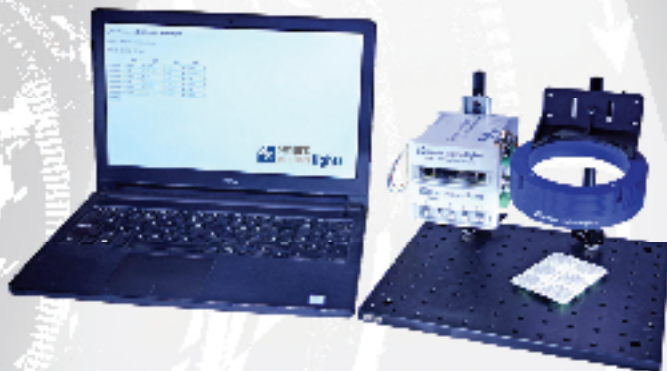


## CAMERA MANUFACTURERS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
<b>Tordivel AS</b> Oslo, Norway; 47-23-15-87-00; www.scorpionvision.com; sales@tordivel.no								
Scorpion 3D Stinger for Robot Vision	CCD & CMOS versions	C+M	Area array	—	IR, UV, VIS	GigE, RS-232	—	—
Scorpion 2D Stinger Camera	—	C+M	Area array	—	IR, VIS	Digital I/O, Ethernet, GigE, RS-232	1-100	—
Scorpion 3D Venom Camera	—	C+M	—	—	IR, NIR	Ethernet, GigE	1-100	—
Scorpion Stinger Compact Camera	—	C+M	—	—	IR, NIR, VIS	Ethernet, GigE	≤250	—
<b>Toshiba Imaging Systems Div</b> Irvine, CA, USA; 810-357-5022; www.toshibacameras.com; gary.pitre@toshiba.com								
Ultra HD IK-4K, 3-Chip Ultra HD 4K Video Camera (2-Piece Remote Head)	CMOS	C	Area array	3840 x 2160, 1920 x 1080	VIS	RS-232	60, 50	—
IK-HD5 3CMOS 1080p HD Video Camera w/Enhanced IR Imaging Capabilities (2-Piece Remote Head)	CMOS	C	Area array	1920 x 1080	NIR, VIS	DVI, RS-232	60, 50	—
IK-HD3 3-CMOS High Def 1080p Remote Head Color Video Camera	CMOS	C	Area array	1920 x 1080	VIS	DVI, RS-232	60, 50	—
IK-HR3H - Ultra-Compact 1-Chip CMOS HD Video Camera	CMOS	C	Area array	1920 x 1080	VIS	DVI, RS-232	60, 50	—
IK-TF5P2 1-Piece, 3CCD Progressive Scan High Definition, POCL Video Camera	CCD	C	Area array	659 x 494	VIS	Camera Link	60-250	—
IK-TF7P2 1-Piece, 3CCD with high resolution	CCD	C	Area array	1024 x 768	VIS	—	30-90	—

# LED LIGHT MANAGER

Addressing the lighting control needs of multi-light machine vision solutions



- Photometric Stereo
- Multi-wavelength
- Multispectral
- Multi-light
- Multi-zone
- And More

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The LLM can drive multiple lights of virtually any type or up to four individual zones or channels within an integrated photometric or multispectral ring light solution. Each program can contain up to six sequences with up to four lights set to continuous on, off, any intensity level in between, and even OverDrive™ strobe mode.

# CAMERA MANUFACTURERS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
<b>Toshiba Teli Corp</b> Tokyo, Japan; 81-42-589-8771; www.toshiba-teli.co.jp/en; teli-global@toshiba-teli.co.jp								
BU Series (CCD Models)	CCD	C+M	Area array	0.3–1.3 Mpixels	—	USB3	125, 40, 30	—
BU series (CMOS Models)	CMOS	C+M	Area array	2–12 Mpixels	—	USB3	170, 165, 120, 90, 75, 30	—
DU series (CMOS Models)	CMOS	C+M	Area array	6.5 Mpixels	—	USB3	55	—
BG series Gig-E(PoE) Cameras	—	C+M	Area array	0.3–2 Mpixels	—	Ethernet	125, 40, 30, 20	—
BG series Gig-E(PoE) CS mount Cameras	CMOS	C+M	Area array	2 Mpixels	—	Ethernet	50	—
CSCV125BC3	CCD	M	Area array	648 x 494	VIS	Camera Link	125	—
CSCV125CC3	CCD	C	Area array	648 x 494	—	Camera Link	125	—
CSCS60BM18	CMOS	M	Area array	1280 x 1024	—	Camera Link	60	—
Smart Photo Sensor SPS-02	CMOS	M	Area array	144 x 176	—	USB 1.0/2.0	—	—
<b>Unibrain Inc</b> San Ramon, CA, USA; 925-866-3000; www.unibrain.com; sosis@unibrain.com								
Fire-i 780	CCD	C+M	Area array	—	NIR, VIS	FireWire	30	800 Mbps
Fire-i 785	CCD	C+M	Area array	—	IR, NIR, VIS	FireWire	30	800 Mbps
Fire-i 980	CCD	C+M	Area array	—	IR, NIR, VIS	FireWire	15	800 Mbps
<b>Viewbits</b> San Diego, CA, USA; 858-613-1818; www.viewbits.com; pat@imageops.com								
GNAT 1080p 60	CMOS	C	—	1920 x 1080	—	HD-SDI, NTSC, PAL	60	—
GNAT II 1080p 60	CMOS	C	—	—	—	HDMI, HD-SDI, NTSC, PAL	59.94, 60, 50	1.485–2.97 Gbps
Verio HD II	CMOS	C+M	—	1080 x 1920	—	Analog, Camera-control unit, DVI, HD-SDI, NTSC, PAL	60, 59.94, 50, 30, 25	—
Uroria	CMOS	C	Area array	2048 x 1536	VIS	USB 1.0/2.0	12–94	—
Aleus-200C	CMOS	C	—	1600 x 1200	—	USB 1.0/2.0	15	—
<b>Vieworks Co Ltd</b> Anyang-si, Gyeonggi-do, South Korea; 82-70-4910-9812; www.vieworks.com; sales@vieworks.com								
VA Series	CCD	C+M	Area array	1024 x 1024–8856 x 5280	VIS	Camera Link, GigE	125	—
VC Series	CMOS	C+M	Area array	2048 x 1088–10,000 x 7096	VIS	Camera Link, CoaXPress	337.6	—
VH Series	CCD	C+M	Area array	640 x 480–4872 x 3248	VIS	Camera Link, GigE	264	—
VN Series	—	C+M	Area array	15,360 x 15,360–23,760 x 18,012	VIS	Camera Link, CoaXPress	72	—
VP Series	—	C+M	Area array	6576 x 4384–10,000 x 7096	VIS	Camera Link	5	—
VNP Series	CCD	C+M	Area array	6576 x 4384–26,568 x 15,840	VIS	Camera Link, CoaXPress	10	—
VX Series	CCD	C+M	Area array	5120 x 5120–6576 x 4384	VIS	Camera Link, GigE	4.7	—
VT Series - M42	—	M	TDI	3200 x 32–6560 x 256	VIS	Camera Link, CoaXPress	—	250 KHz
VT Series - M72	—	M	TDI	4096 x 64–17,824 x 256	VIS	Camera Link, CoaXPress	—	250 KHz
VT Series - M95	—	M	TDI	16,384 x 256–23,360 x 256	VIS	CoaXPress	—	140 KHz
VT Series (Color) - M42	—	C	TDI	2180 x 80	VIS	Camera Link, CoaXPress, GigE	—	140 KHz

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\*In machine-vision lenses that are compatible with a 1/1.2" imager and 5-Mega-Pixel resolution (survey by Tarron, effective as of May, 2017)

1/1.2"	8mm	F/2.4	(Model M112FM08)	<b>NEW</b>
1/1.2"	12mm	F/2.0	(Model M112FM12)	
1/1.2"	16mm	F/2.0	(Model M112FM16)	
1/1.2"	25mm	F/1.8	(Model M112FM25)	
1/1.2"	35mm	F/2.1	(Model M112FM35)	<b>NEW</b>
1/1.2"	50mm	F/2.8	(Model M112FM50)	<b>NEW</b>
1/1.2"	75mm	F/3.5	(Model M112FM75)	<b>NEW</b>

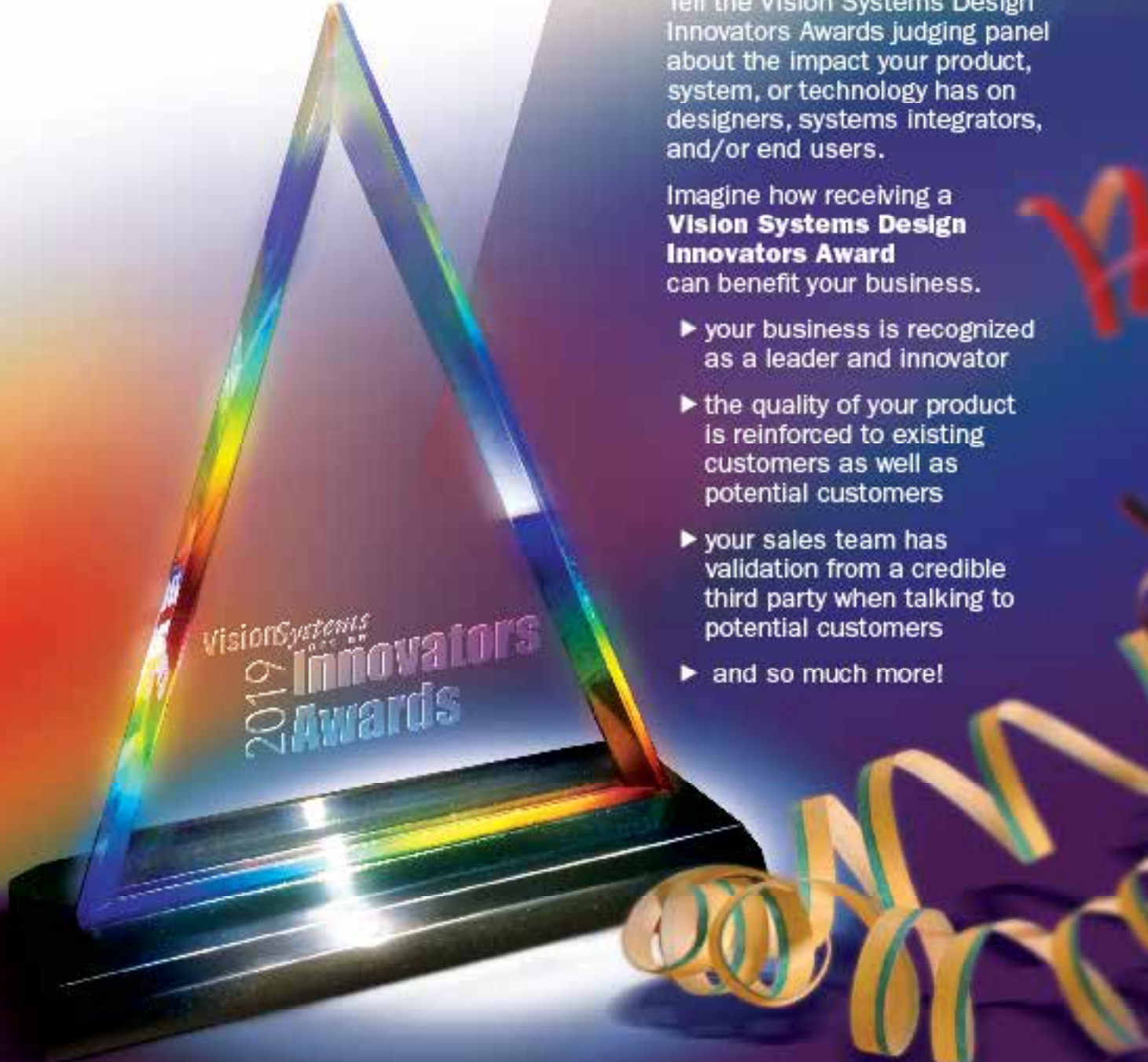
Compatible with  
MX174/MX240 (1/1.2" 2.4-Mega-Pixel), MX25/MX204 (2/3" 5-Mega-Pixel)

# CAMERA MANUFACTURERS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
<b>Vision &amp; Control GmbH</b> Suhl, Thuringia, Germany; 49-3681-7974-0; www.vision-control.com; sales@vision-control.com								
pictor Txxxx - series	CMOS	M	Area array	720 x 480	IR, VIS	Digital I/O, Ethernet, RS-232, USB 1.0/2.0	40	—
pictor M1606E	CCD	M	Area array	640 x 480	VIS	Ethernet, RS-232	63	—
pictor M1617E	CCD	M	Area array	1024 x 768	VIS	Ethernet, RS-232	20	—
pictor M1817E	CCD	M	Area array	1024 x 768	VIS	Ethernet, RS-232	20	—
pictor M1821E	CCD	M	Area array	1600 x 1200	VIS	Ethernet, RS-232	10	—
pictor M1856E	CCD	M	Area array	640 x 480	VIS	Ethernet, RS-232	242	—
pictor N	CMOS	C	—	1600 x 1200	VIS	Digital I/O, Ethernet, RS-232	—	—
<b>Vision Research</b> Wayne, NJ, USA; 973-696-4500; www.phantomhighspeed.com; phantom@ametek.com								
Phantom Ultrahigh-Speed Cameras	CMOS	C+M	—	1280 x 800, 128 x 16	VIS	Digital I/O, Ethernet	12,600, ≤1,000,000	—
PhantomVEO Family	CMOS	C+M	—	—	VIS	Digital I/O, Ethernet, HD-SDI	800– 1,000,000	—
Phantom Miro Family	CMOS	C+M	—	1280 x 800	VIS	Digital I/O, Ethernet	3000	—
Phantom Flex4k	CMOS	C+M	—	4096 x 2304, 1280 x 720	VIS	Digital I/O, Ethernet, HD-SDI	938, ≤2932	—
Phantom Miro C-Series	CMOS	C+M	—	—	VIS	Digital I/O, Ethernet	800–67,140	—
Phantom Miro N-Series	CMOS	C+M	—	—	VIS	CoaXPRESS, Digital I/O, Ethernet	30–9020	—
Phantom v711	CMOS	C+M	—	1280 x 800, 1280 x 720	VIS	Digital I/O, Ethernet	7530 (full), 1,400,000 (fast)	—
<b>VRmagic Imaging GmbH</b> Mannheim, Germany; 49-621-400416-20; www.vrmagic-imaging.com; info@vrmagic-imaging.com								
LineScan 3D Sensor Product Family	3-D	M	Linescan	—	VIS	GigE	—	—
D3 OEM Multi-Sensor Camera Platform	CMOS	C+M	Area array	—	Multispectral, NIR, VIS	Digital I/O, DVI, Ethernet, GigE, NTSC, PAL, RS-232, RS-422/LVDS, S-Video, USB 1.0/2.0	16–69 (full)	—
D3 Embedded Camera Platform	CMOS	C+M	Area array	—	Multispectral, VIS	Digital I/O, DVI, Ethernet, GigE, NTSC, PAL, RS-232, RS-422/LVDS, S-Video, USB 1.0/2.0	69–340 (full)	—
RIC10 Camera Family	CMOS	C+M	Area array	—	Multispectral, VIS	Ethernet	170–340 (full)	10 Gbps
<b>XIMEA</b> Münster, NRW, Germany; 49-251-202-408-0; www.ximea.com; info@ximea.com								
USB 3.1 cameras with Sony CMOS	CMOS	C+M	Area array	1936 x 1216, 2064 x 1544, 2464 x 2056, 4112 x 2176, 4112 x 3008	NIR, VIS	Digital I/O, USB3	165, 122, 76, 43, 31	5 Gbps
Hyperspectral USB3 camera	Multi-spectral	C+M	Linescan	2048 x 8 2048 x 5 512 x 272 409 x 217	Hyperspectral, NIR, VIS	USB3	170 hypercubes	5 Gbps
48 and 20 Mpix high resolution PCIe cameras	CMOS	C+M	Area array	7920 x 6004 5120 x 3840	VIS	Digital I/O, Fiberoptic, PCIe	30	20 Gbps
12 Mpix Fast speed high resolution cameras	CMOS	C+M	Area array	4096 x 3072	NIR, VIS	Digital I/O, Fiberoptic, PCIe	333	64 Gbps
High speed cameras with up to 3500 Fps	CMOS	C+M	Area array	1280 x 864	VIS	Digital I/O, Fiberoptic, PCIe, Proprietary	3500+	64 Gbps
Scientific sCMOS cameras	CMOS	C+M	Area array	2048 x 2048 5056 x 2968	NIR, VIS	PCIe, Proprietary, USB3	82	20 Gbps
USB 3.1 cameras with CMOS	CMOS	C+M	Area array	648 x 488 1280 x 1024 2048 x 1088 2048 x 2048	NIR, VIS	Digital I/O, USB3	500, 210, 170, 90	5 Gbps
Micro 5Mpix camera - USB 2.0 CMOS	CMOS	C+M	Area array	2592 x 1944	VIS	Digital I/O, USB 1.0/2.0	5	480 Mbps
X-RAY cameras based on sCMOS	CMOS	M	Area array	5056 x 2968	X-ray	USB3	17	—
Board level cameras from VGA to 16 Mpix	CCD	C+M	Area array	4872 x 3248	NIR, VIS	Digital I/O, Fiberoptic, FireWire, PCIe, Proprietary, USB 1.0/2.0, USB3	≥500	5 Gbps

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## CAMERA MANUFACTURERS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
<b>XIMEA</b> Münster, NRW, Germany; 49-251-202-408-0; www.ximea.com; info@ximea.com								
Multiple camera platform	CMOS	C+M	Area array	1936 x 1216, 2064 x 1544, 2464 x 2056, 4112 x 2176, 4112 x 3008	NIR, VIS	PCIe, Proprietary, USB3	340	—
Scientific grade Sony CCD with USB3	CCD	C+M	Area array	1940 x 1460, 2758 x 2208, 3380 x 2704, 4242 x 2830	NIR, VIS	Digital I/O, USB3	57, 28, 20, 15	5 Gbps
X-RAY cooled cameras - High resolution	CCD	C+M	Area array	4008 x 2672, 4904 x 3280	X-ray	Digital I/O, FireWire	2	98 MBps
Embedded vision cameras	CMOS	C+M	Area array	1936 x 1216, 2064 x 1544, 2464 x 2056, 4112 x 2176, 4112 x 3008	Multispectral, NIR, VIS	Digital I/O, PCIe, Proprietary, USB3	166, 218, 165, 95, 69	20 Gbps
Cooled cameras with USB3 and CCD	CMOS	C+M	Area array	2048 x 2048, 3296 x 2472, 4864 x 3232, 6576 x 4384	NIR, VIS	Digital I/O, USB3	28, 17, 8, 4	5 Gbps
Peltier Cooled Scientific Grade CCD	CCD	C+M	Area array	4904 x 3280	NIR, X-ray, VIS	Digital I/O, FireWire	1.5	98 MBps
Thunderbolt enabled industrial cameras	CCD	C+M	Area array	1920 x 1200, 5120 x 3840	NIR, VIS	Digital I/O, Fiberoptic, PCIe, Proprietary	165, 30	20 Gbps
Micro 18 Mpix camera - USB 3.0 CMOS	CMOS	C	Area array	4912 x 3680	VIS	USB3	20	—
High speed cameras with HD at 2500 Fps	CMOS	C+M	Area array	1920 x 1080	VIS	Digital I/O, Fiberoptic, PCIe, Proprietary	2500+	64 Gbps
NIR camera models from 1 to 12 Mpix	CMOS	M	Area array	1280 x 1024, 2048 x 1088, 2048 x 2048, 4096 x 3072	NIR, VIS	PCIe, USB3	333	—
<b>XpectralTEK</b> Celeiros, Braga, Portugal; www.xpectraltek.com; info@xpectraltek.com								
XpeCAM X01	Multi-spectral	M	Area array	5 Mpixels	IR, Multispectral, NIR, UV, VIS	USB3	15	—

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# WORLDWIDE INDUSTRIAL CAMERA DIRECTORY

## CAMERA DISTRIBUTORS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
<b>1stVision Inc</b> Andover, MA, USA; 978-474-0044; www.1stvision.com; info@1stvision.com								
Allied Vision Goldeye SWIR Series	InGaAs	M	Area array	320 x 256, 640 x 480	SWIR	Digital I/O, Ethernet, GigE	344	106 MB/s
Allied Vision Mako Series	CMOS	C+M	Area array	VGA-5 Mpixels	NIR, VIS	Digital I/O, Ethernet, GigE, USB3	≥1000	110 MB/s
IDS Imaging RE/FA IP65/67 GigE Series	CCD & CMOS versions	C+M	Area array	—	NIR, VIS	GigE	205	110 MB/s
Allied Vision Manta Series	CCD & CMOS versions	C+M	Area array	—	NIR, VIS	Digital I/O, Ethernet, GigE	≥1000	110 MB/s
Teledyne Dalsa Linea Line Scan Series	CMOS	C+M	Linescan	2048 x 1-16,384 x 1	NIR, VIS	Camera Link, Camera Link Full, Camera Link HS, Digital I/O, GigE	—	≥80 kHz
Teledyne Dalsa Genie Nano Series	CMOS	C+M	Area array	VGA-25 Mpixels	NIR, VIS	Digital I/O, GigE	≥1000	110 MB/s
IDS Imaging LE/ML Series	CMOS	C+M	Area array	—	NIR, VIS	Digital I/O, GigE, USB 1.0/2.0, USB3	≥1000	400 MB/s
IDS Imaging uEye CP Series	CMOS	C+M	Area array	VGA-18 Mpixels	NIR, VIS	Digital I/O, USB3	≥1000	400 MB/s
Teledyne Dalsa Nano 5GigE Series	CMOS	C+M	Area array	—	NIR, VIS	5 GigE	190	985 MB/s
Teledyne Dalsa Calibir LWIR Camera Series	Microbolometer	M	Area array	—	LWIR	Analog, Digital I/O, GigE, RS-170	50	16 MB/s
Teledyne Dalsa Genie Nano XL Series	CMOS	C+M	Area array	—	NIR, VIS	GigE	7.1	225 MB/s
JAI Spark Series	CMOS	C+M	Area array	—	NIR, VIS	Camera Link, Camera Link Full, GigE	253	590 MB/s
JAI GO Series	CMOS	C+M	—	—	NIR, VIS	Camera Link Full	107	535 MB/s
Allied Vision Prosilica GT Series	CCD & CMOS versions	C+M	Area array	—	NIR, VIS	GigE	57	110 MB/s
Allied Vision Bonito Pro CoaXPress Series	CMOS	C+M	Area array	—	NIR, VIS	CoaXPress	142.6	2.3 GB/s
<b>A&amp;B Software</b> New London, CT, USA; 860-823-8301; www.ab-soft.com; sales@ab-soft.com								
Amazon GigE Vision series	CCD	C+M	Area array	—	VIS	Ethernet, GigE	—	—
Prosilica GC series	CCD	C+M	Area array	—	VIS	GigE	—	—
Prosilica GE series	CCD	C+M	Area array	—	VIS	GigE	—	—
Prosilica GX series	CCD	C+M	Area array	—	VIS	GigE	—	—
Prosilica GT series	CCD	C+M	Area array	—	VIS	GigE	—	—
Manta GigE series	CCD	C+M	Area array	—	—	GigE	—	—
Pearl 1394 series	CCD	C+M	Area array	—	VIS	FireWire	—	—
Nile 1394 series	CCD	C+M	Area array	—	VIS	FireWire	—	—
Guppy 1394 series	CMOS	C+M	Area array	—	—	FireWire	—	—
Pike 1394b series	CCD	C+M	Area array	—	VIS	FireWire	—	—
<b>ATO Automation</b> Los Angeles, CA, USA; 800-585-1519; www.ato.com; sales@ato.com								
GigE Vision Industrial Camera	CMOS	C+M	Linescan	—	Hyperspectral, IR, LWIR, Multispectral, MWIR, SWIR, NIR, X-ray, VIS	GigE	—	—
<b>FRAMOS</b> Taufkirchen/Munich, Germany; 49-89-710667-0; www.framos.com; info@framos.com								
Tattile S200 Smart Camera HYP	CMOS	M	Linescan	—	Hyperspectral	GigE	180	—

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## CAMERA DISTRIBUTORS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
<b>Image Labs International</b> Belgrade, MT, USA; 406-585-7225; www.imagelabs.com; sharla@imagelabs.com								
AVT	CCD	C+M	Area array	—	VIS	FireWire	—	—
Basler area scan	CCD	C+M	Area array	—	VIS	Camera Link, FireWire	—	—
Basler linescan	CCD	C+M	Linescan	—	VIS	Camera Link, GigE, LVDS	—	—
Teledyne DALSA area scan	CCD	C+M	Area array	—	VIS	Camera Link, GigE	—	—
Teledyne DALSA linescan	CCD	C+M	Linescan	—	VIS	Camera Link, GigE	—	—
Hitachi	CCD	C+M	Area array	—	VIS	Analog, Camera Link, FireWire, NTSC/PAL/RS-170	—	—
JAI/Pulnix	CCD	C+M	Area array	—	VIS	Analog, Camera Link, GigE, LVDS	—	—
Lumenera	CCD	C+M	Area array	—	VIS	FireWire, GigE, USB 1.0/2.0	—	—
Prosilica	CCD	C+M	Area array	—	VIS	FireWire, GigE	—	—
Toshiba Teli	CCD	C+M	Area array	—	VIS	Analog, FireWire, NTSC/PAL/RS-170	—	—
<b>Image Ops</b> San Diego, CA, USA; 858-613-1818; www.imageops.com; pat@imageops.com								
GNAT II 1080p 60	CMOS	C	—	—	—	HDMI, HD-SDI, NTSC, PAL	60	—
Swirl I and Swirl II SWIR Cameras	CCD	—	—	320 x 256	SWIR	Camera Link, GigE	228 (max)	6.25 MHz
Supremia Imaging Camera	CCD	C	—	8032 x 5360	—	Camera Link	4, 5.5 (max)	—
GNAT 1080p 60	CMOS	C	—	1920 x 1080	—	HD-SDI, PAL	60	—
Mikrotron EoSens CL	CMOS	C+M	Area array	1280 x 1024	VIS	Camera Link	500	—
Verio HD II	CMOS	C	—	1920 x 1080	IR	DVI, HD-SDI, NTSC, PAL	60	—
Mega Speed HHC X3 High Speed Portable Camera	—	C+M	—	800 x 600	—	GigE	1000	—
Sentech Cameras - STC-MCA-5MUSB3 and STC-MBA5MUSB3	CCD	C+M	—	2592 x 1944	—	USB3	123	—
Mikrotron EoSens MC1362	CMOS	M	Area array	1280 x 1024	VIS	Camera Link	506	—
<b>Infrared Cameras Inc</b> Beaumont, TX, USA; 409-203-5302; www.infraredcameras.com; garys@infraredcamerasinc.com								
ICI 9640 P-Series	VOx	C+M	Area array	—	IR, LWIR	NTSC, PAL, USB 1.0/2.0	—	9, 30 Hz
ICI 8640 P-Series	VOx	C+M	Area array	—	IR, LWIR	NTSC, PAL, USB 1.0/2.0	—	9, 30 Hz
ICI IR-Pad 640 Industrial	VOx	C+M	Area array	—	IR, LWIR	NTSC, PAL, USB 1.0/2.0	—	9, 30 Hz
ICI FM320 P-Series	FPA	C+M	Area array	—	IR, LWIR	Ethernet, NTSC, PAL, S-Video	—	50, 60 Hz
ICI FM640 P-Series	FPA	C+M	Area array	—	IR, LWIR	Ethernet, NTSC, PAL, S-Video	—	9, 30 Hz
ICI Gas DetectIR VOC	FPA	C+M	Area array	—	IR, MWIR	S-Video, USB 1.0/2.0	—	50, 60 Hz
ICI Duracam X P-Series	FPA	C+M	Area array	—	IR, LWIR	NTSC, PAL, S-Video, USB 1.0/2.0	—	50, 60 Hz
ICI SWIR 320 P-Series	InGaAs	C+M	Area array	—	IR, SWIR, NIR	USB 1.0/2.0	≤60	—
ICI SWIR 640 P-Series	InGaAs	C+M	Area array	—	IR, SWIR, NIR	USB 1.0/2.0	—	30 Hz
ICI T-Cam 80 Lineman	FPA	C+M	Area array	—	IR, LWIR	NTSC, PAL, USB 1.0/2.0	—	50, 60 Hz
<b>MaxxVision GmbH</b> Stuttgart, Baden-Württemberg, Germany; 49-711-997-996-3; www.maxxvision.com; info@maxxvision.com								
HIKVISION GigE Vision Cameras	CMOS	C+M	Area array	VGA–29 Mpixels	NIR, VIS	Digital I/O, GigE	7–300	60 Hz
3D Vision Sensor	CMOS	C+M	Area array	2593 x 1944	VIS	GigE, LVDS	2000	—
CameraLink Camera Sony XCL Series	CCD	C+M	Area array	2448 x 2050	VIS	Camera Link, Digital I/O	60	—
GigE-Vision Camera Sony XCG Series	CCD	C+M	Area array	2448 x 2050	NIR, VIS	Digital I/O, GigE	90	—
High Definition Zoom Cameras Sony FCB-HD Series	CMOS	C	Area array	1920 x 1080	NIR, VIS	Analog, Digital I/O, HDTV, NTSC/PAL/RS-170, RS-232, S-Video	30	—
HIKVISION USB3 Vision Cameras	—	C+M	Area array	VGA–5 Mpixels	VIS	USB3	30–814	60 Hz
PTZ Camera Sony SRG Series	CMOS	C	Area array	1920 x 1080	VIS	DVI, Ethernet, HDMI, HD-SDI, PAL, RS-232, RS-422/LVDS, S-Video, USB3	60	—

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# CAMERA DISTRIBUTORS

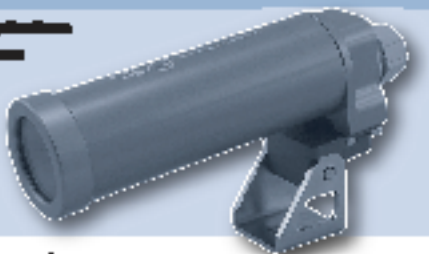
Product	Sensor type	Color/ Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
<b>Phase 1 Technology Corp</b> Deer Park, NY, USA; 800-683-0068; www.phase1vision.com; info@phase1tech.com								
Baumer HXG20	CMOS	C+M	Area array	—	NIR, X-ray	GigE	337	—
Sony XCL-5000	CCD	M	—	—	—	Camera Link	15	—
Sony FCB-EH3150	CMOS	C	Area array	—	VIS	Analog, LVDS	60	—
Baumer XF-200	CMOS	M	Area array	—	NIR, VIS	GigE	100	—
Flir A35f19mm	CCD	M	Area array	—	IR	GigE	7.5	—
JAI SP-20000C-PMCL	CMOS	C+M	Area array	—	X-ray	Camera Link	30	—
<b>RAUSCHER GmbH</b> Olching, Germany; 49-8142-44841-0; www.rauscher.de; info@rauscher.de								
Matrox Iris GTR smart camera	CMOS	C+M	Area array	VGA-5 Mpixels	NIR, VIS	GigE	—	—
Basler ace	CCD & CMOS versions	C+M	Area array	VGA-14 Mpixels	NIR, VIS	Camera Link, Ethernet, GigE, USB3	340	—
e2v UNiQA+	CMOS	C+M	Linescan	—	VIS	GigE	—	≤140 kHz
e2v ELiXA+ Multi-Line CMOS	CMOS	C+M	Linescan	16,384 x 4	NIR, VIS	Camera Link	—	100 kHz
e2v ELiXA RGB + Mono/NIR	CCD	C+M	Linescan	—	NIR, VIS	—	—	18 kHz
Adimec Sapphire 25 Megapixel	CMOS	C+M	Area array	25 Mpixels	VIS	Camera Link, CoaXPress	80	—
e2v AViVA 2 EM1 / EM2 / EM4 series	CCD	M	Linescan	512 x 1, 1024 x 1, 2048 x 1, 4096 x 1	VIS	Camera Link, GigE	—	160 MHz
Basler Time-of-Flight (ToF)	3-D	M	Area array	640 x 480	NIR	GigE	20	—
Basler dart board level cameras	CMOS	C+M	Area array	—	VIS	RS-422/LVDS, USB 1.0/2.0, USB3	—	—
Adimec Norite 5 Megapixel - Single CXP	CMOS	M	Area array	—	NIR, VIS	CoaXPress	105	—



## 24C Camera Enclosure IP65

### Product Features

- Designed for robotic applications
- Tool-less access to camera for adjustment
- Lightweight Design
- IP65
- Multiple barrel lengths available
- Comes with optional Pin & BNC Street



The 24C series camera enclosure was developed specifically for today's 28mm x 4mm cross-section miniature inline cameras. It will also accommodate lenses up to 58mm in diameter. It is especially useful for robot applications, and is small & light enough to be mounted on the arm or end effector.

The enclosure provides tool-less access to the camera & lens, and is available with a standard F3021 drillable cord grip. Options include glass or acrylic windows, air cooling, and an air curtain option that blows a film of air over the outside of the viewing window. This is effective in keeping dust, water, and oil mist off the window. The enclosure comes standard aluminum construction with a clear hard coat anodized finish.

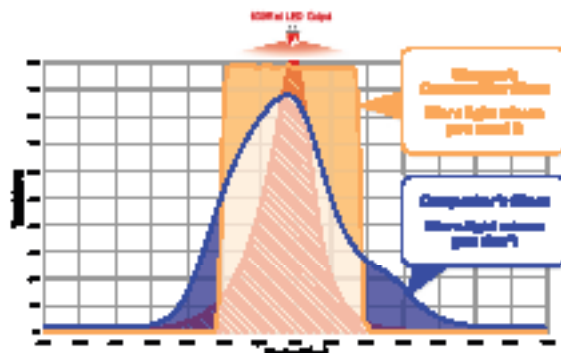


See this and other models at [www.apgvision.com](http://www.apgvision.com)

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# CAMERA DISTRIBUTORS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
<b>Saber1 Technologies LLC</b> Lowell, MA, USA; 978-244-0490; www.saber1.com; info@saber1.com								
Adimec QUARTZ Series Q-12A180	CMOS	C+M	—	—	—	CoaXPress	187	—
Adimec SAPPHIRE Series S-25A80	CMOS	M	Linescan	—	—	CoaXPress	80	—
Hikvision GigE Area Scan MV-CA003-20GC	CMOS	C	—	—	—	Ethernet, GigE	172, 300	—
Imperx Bobcat CameraLink CLB-B0610	CCD	C+M	—	—	—	Camera Link, CoaXPress, Ethernet, GigE	109, 136	40–50 MHz
Imperx Cheetah C5180	CMOS	C+M	—	—	—	Camera Link Full, GigE, USB3	32	—
Sony CameraLink PoCL XCLS900	CCD	C	—	2448 x 2048	—	Camera Link Full	18	84 MHz
The Imaging Source Board 400 DMM 21AF04-ML	CCD	M	—	—	IR	FireWire	60	—
<b>Systematic Vision Corp</b> Ashland, MA, USA; 508-532-1116; www.systematicvision.com; info@systematicvision.com								
MV0-D2048x1088-C01-HS02-160-G2	Multi-spectral	C+M	Area array	2048 x 1088, 409 x 217	Hyperspectral	GigE	50	80 MHz
MV0-D1984-001-3D06-576-G2	CMOS	M	Area array	1984 x 1264	VIS	GigE	6610	72 MHz
HR-12000-S	CMOS	C+M	Area array	4096 x 3000	VIS	10 GigE	80	—
HB-50000	CMOS	C+M	Area array	7920 x 6004	VIS	10 GigE	30	—
SP-5000-CXP4	CMOS	C+M	Area array	2560 x 2048	VIS	CoaXPress	253	—
SP-20000-CXP2	CMOS	C+M	Area array	5120 x 3840	VIS	CoaXPress	30	—
EoSens 25CXP+	CMOS	C+M	Area array	5120 x 5120	VIS	CoaXPress	80	—
MSC-RGBN-1-A	CMOS	C+M	Area array	2048 x 2048	Multispectral	USB3	90	—
MV1-D1024E series	CMOS	M	Area array	1024 x 1024	VIS	Camera Link, GigE	150	160 MHz
<b>Uniforce Sales and Engineering</b> Newark, CA, USA; 510-657-4000; www.uniforcesales.com; info@uniforcesales.com								
Imperx Bobcat 2.0 Gige, PoE, CXP, HD-SDI Cameras	—	C+M	Area array	6576 x 4384	—	Camera Link, CoaXPress, GigE, HD-SDI	≤259	—
Mikrotron EoSens 3CXP	CMOS	C+M	Area array	—	—	CoaXPress	560	—
Teledyne DALSA Genie Nano	CMOS	C+M	Area array	1920 x 1200	—	GigE	≤84	—
Flare 2KSDI Camera	CMOS	C+M	Area array	2048 x 1088	NIR	HD-SDI	60 (1080p)	—
Flare 2M360-CL	CMOS	C+M	Area array	2048 x 1024	NIR	Camera Link	340	—
Imperx GEV-B1920C-TC000	CCD	C+M	Area array	1920 x 1080	—	Camera Link, CoaXPress, GigE, HD-SDI	≤41	—
<b>Vision Systems Technology LLC</b> Vista, CA, USA; 858-449-1562; www.visionsystech.com; sales@visionsystech.com								
Vieworks 155 MP CoaXPress Camera	CMOS	C+M	Area array	16384 x 9440	NIR, VIS	CoaXPress	15	3.5 GB/s
Vieworks VT High Sensitivity TDI Line Scan CoaXPress Cameras	CMOS	M	TDI	23,360 x 256, 17,824 x 256, 16,384 x 256, 12,480 x 256, 8912 x 128, 6560 x 256, 6240 x 128, 4640 x 256, 4096 x 64, 4096 x 128, 3200 x 128	NIR, VIS	Camera Link, CoaXPress	—	2.34 GB/s
Vieworks VC-90 MX Camera	CMOS	C+M	Area array	12560 x 7080	NIR, VIS	CoaXPress	26	3.5 GB/s
Indigo 43 MP sCMOS 10 FPS Global Shutter CL Camera	CMOS	M	Area array	8, 10, 12	NIR, VIS	Camera Link, Camera Link Extended-Full	10	645 MP/s
Emergent 50MP 10GigE 23 FPS Global Shutter CMOS Camera	CMOS	C+M	Area array	7920 x 6004	NIR, VIS	10 GigE	23	1750 MB/s
Vieworks 12 MP 330 FPS CoaXpress CMOS Digital Vision Camera	CMOS	C+M	Area array	4096 x 3072	NIR, VIS	CoaXPress	330	4152 MP/s
Vieworks 71 MP 4.2 FPS Camera-link CMOS Digital Vision Camera	CMOS	C+M	Area array	8, 10, 12	NIR, VIS	Camera Link	4.2	447 MP/s
Teledyne Dalsa Genie Nano & Falcon4 Cameras	CCD & CMOS versions	C+M	Area array	—	VIS	Camera Link, CoaXPress, GigE	—	—
Vieworks VC-50MX Camera (50 MP)	CMOS	C+M	Area array	7920 x 6004	NIR	CoaXPress	≥30.9	—
Vieworks VN-200MX Camera (200 MP)	CMOS	C+M	Area array	7920 x 6004	VIS	CoaXPress	30	—