

WORLDWIDE INDUSTRIAL CAMERA DIRECTORY

CAMERA MANUFACTURERS

Product	Sensor type	Color/ Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
4D Technology Corp Tucson, AZ, USA; 520-294-5600; www.4dtechnology.com; info@4dtechnology.com								
PolarCam Polarization Cameras	CCD	M	—	—	—	Ethernet, GigE	260	—
ABS Gesellschaft für Automatisierung Bildverarbeitung und Software mbH Jena, Thuringia, Germany; 49-3641-2226-0; www.kameras.abs-jena.de; info@abs-jena.de								
DKGPU	CCD & CMOS versions	C+M	Area array	—	NIR, VIS	Ethernet, HDMI, USB 1.0/2.0, USB3	—	—
UK39395	CMOS	C+M	Area array	4112 × 3000	VIS	USB 1.0/2.0, USB3	17–120	—
DK8075-DVI	CMOS	C	Area array	2048 × 1536	VIS	DVI	60	—
IK1112 SWIR	InGaAs	—	Area array	320 × 256	SWIR	USB 1.0/2.0	110	—
IK1512 SWIR	InGaAs	—	Area array	320 × 256	SWIR	USB 1.0/2.0	110	—
IK1513 SWIR	InGaAs	—	Area array	320 × 256	SWIR	USB 1.0/2.0	110	—
IK1523 SWIR	InGaAs	—	Area array	640 × 512	SWIR	USB 1.0/2.0	30	—
PK52165	CCD	C+M	Area array	2336 × 1752	VIS	PCIe	32	—
HK39078	CMOS	C+M	Area array	2048 × 1536	VIS	DVI, HD-SDI, HDTV	60	—
UK31053	CMOS	C+M	Area array	1280 × 1024	VIS	USB 1.0/2.0, USB3	60	—
ADLINK Technology Inc 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 × 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 × 1200	—	GigE, RS-232, USB 1.0/2.0	60	—
Allied Vision Technologies GmbH Stadtroda, Germany; 49-36428-677-0; www.alliedvision.com; info@alliedvision.com								
Alvium Camera Series	CMOS	C+M	Area array	—	VIS	MIPI CSI-2, USB3	—	—
Mako	—	C+M	Area array	0.3–5 MPixels	NIR, VIS	GigE, USB3	≤550	—
Manta	—	C+M	Area array	0.3–12 MPixels	NIR, VIS	GigE	≤125	—
Prosilica GT	—	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	—
AT - Automation Technology GmbH Bad Oldesloe, Germany; 49-4531-88011-0; www.automationtechnology.de; info@automationtechnology.de								
IRSX Series	IR	M	Area array	336 × 256, 640 × 512	IR, LWIR	Ethernet, GigE	9–200 Hz (windowing)	—
C5-1280-GigE	3D	M	Area array	1280 × 1024	VIS	GigE	288	—
C5-2040-GigE	3D	M	Area array	2048 × 1088	VIS	GigE	90	—
C5-2040-4M-GigE	3D	M	Area array	2048 × 2048	VIS	GigE	90	—
C5-3360-GigE	3D	M	Area array	3060 × 2496	VIS	GigE	52	—
C5-4090-GigE	3D	M	Area array	4096 × 3072	VIS	GigE	32	—
C2-2040HS-GigE	3D	M	Area array	2048 × 1088	VIS	GigE	170	—
ATA-Vision 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	—	—
Avaldata Corp Yongin-si, Gyeonggi-do, South Korea; 82-70-7019-1420; www.aval-global.com; sales@aval-global.com								
ABA-003IR	InGaAs	C+M	—	—	SWIR	Camera Link, GigE	62	—
Basler AG Ahrensburg, Germany; 49-4102-463-500; www.baslerweb.com; sales.europe@baslerweb.com								
Basler ace 2	CMOS	C+M	Area array	1920 × 1200–3840 × 2160	VIS	GigE, USB3	≤160	—
Basler ace classic	CCD & CMOS versions	C+M	Area array	658 × 492–4608 × 3288	NIR, VIS	Camera Link, GigE, USB3	≤340	—

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Basler AG Ahrensburg, Germany; 49-4102-463-500; www.baslerweb.com; sales.europe@baslerweb.com								
Basler ace U	CMOS	C+M	Area array	640 × 480–5472 × 3648	VIS	GigE, USB3	≤751	—
Basler ace L	CMOS	C+M	Area array	4096 × 2160–4096 × 3000	VIS	GigE, USB3	≤42	—
Basler boost	CMOS	C+M	Area array	4096 × 2168–4096 × 3000	VIS	CoaXPress 2.0	≤93	—
Basler blaze	CMOS	M	Area array	640 × 480	NIR	GigE	30	—
Basler dart	CMOS	C+M	Area array	1280 × 960–4208 × 3120	VIS	MIPI, LVDS, USB3	14–60	—
Basler pulse	CMOS	C+M	Area array	1280 × 960–2592 × 1944	VIS	USB3	≤60	—
Basler beat	CMOS	C+M	Area array	4088 × 3070, 4096 × 3072	VIS	Camera Link	62	—
MED ace	CMOS	C+M	Area array	1920 × 1200, 2448/2590 × 2048, 4096 × 2160/3000, 5472 × 3648	VIS	USB3, GigE	≤164	—
Basler pilot	CCD	C+M	Area array	646 × 488–1608 × 1204	VIS	GigE	≤60	—
Basler scout	CCD & CMOS versions	C+M	Area array	658 × 492–1626 × 1236	VIS	GigE	≤70	—
Basler racer	CMOS	M	Line scan	2048 × 1, 4096 × 1, 6144 × 1, 8192 × 1, 12,288 × 1	VIS	Camera Link, GigE	—	≤80 kHz
Baumer Optronic GmbH 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	—	—	Camera Link, 10 GigE, Dual GigE, 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	27–373	—
VeriSens XF vision sensors	CMOS	M	Area array	752 × 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 × 480	—	Digital I/O, Ethernet	>8000	—
Baumer CX.I cameras	CMOS	C+M	Area array	—	—	GigE	—	—
Bodkin Design & Engineering LLC Newton, MA, USA; 617-795-1968; www.bodkindesign.com; info@bodkindesign.com								
VNIR-90 Hyperspectral Imager	CMOS	C	Area array	—	Multispectral	USB 1.0/2.0, USB3	25 cubes/s	—
IRZ-2575 LWIR Optical Zoom Camera	CMOS	C	Area array	—	LWIR	USB 1.0/2.0, USB3	30	—
MWIR-20	CMOS	C	Area array	—	LWIR	USB 1.0/2.0, USB3	≤130 cubes/s	—
Canon Medical Systems USA Inc Tustin, CA, USA; 810-357-5022; www.us.medical.canon/vsd; gpitre@us.medical.canon								
SV-1000	CMOS	C	Line scan	400 × 400	VIS	HDMI, USB3	30	—
JCS-HR5U	CMOS	C	Area array	1920 × 1080	VIS	HDMI, USB3	60	59.94 Hz
IK-HD5UM	CMOS	C+M	Area array	1920 × 1080	VIS	DVI, RS-232, USB3	—	50, 59.94 Hz
Ultra HD IK-4K, 3-Chip Ultra HD 4K Video Camera (2-Piece Remote Head)	CMOS	C	Area array	3840 × 2160, 1920 × 1080	VIS	RS-232	60, 50	—
IK-HD5 3CMOS 1080p HD Video Camera (2-Piece Remote Head)	CMOS	C	Area array	1920 × 1080	NIR, VIS	DVI, RS-232	60, 50	—

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Chromasens GmbH Konstanz, Baden Wurttemberg, Germany; 49-7531-876-0; www.chromasens.de; info@chromasens.de								
allPIXA pro 2048	CCD	C	Line scan	2048 × RGB	VIS	Camera Link, Digital I/O, RS-232	—	92.7 kHz
allPIXA pro 4096	CCD	C	Line scan	4096 × RGB	VIS	Camera Link, Digital I/O, RS-232	—	50.8 kHz
allPIXA pro 7300	CCD	C	Line scan	7300 × RGB	VIS	Camera Link, Digital I/O, RS-232	—	29.7 kHz
allPIXA pro customized	CCD	C	Line scan	1024–7300 × RGB	VIS	Camera Link, Digital I/O, RS-232	—	156 kHz
allPIXA pro 6000	CCD	C	Line scan	6000 × RGB	VIS	Camera Link, Digital I/O, RS-232	—	34.4 kHz
allPIXA Line Scan Cameras	CCD	C	Line scan	3 × 2048, 3 × 4096, 3 × 7300	VIS	Digital I/O, RS-232	—	≤60.7 kHz
3DPIXA - Stereo Line Scan Camera	3D	C	Line scan	—	VIS	Camera Link, Digital I/O, RS-232	—	60 kHz
truePIXA	Multi-spectral	C	Line scan	—	Multispectral, VIS	Camera Link, Digital I/O, RS-232	—	≤30 kHz
allPIXA wave - 15k	CMOS	C+M	Line scan	4 × 15,360	VIS	Digital I/O, RS-232, RS-422/LVDS	—	≤150 kHz
allPIXA wave - 10k	CMOS	C+M	Line scan	4 × 10,240	VIS	Digital I/O, RS-232	—	≤150 kHz
Cognex Natick, MA, USA; 508-650-3000; www.cognex.com; news@cognex.com								
In-Sight 7000 Vision Systems	CMOS	C+M	Area array	800 × 600	VIS	Ethernet	—	—
In-Sight 9912	—	C+M	Area array	4096 × 3000	VIS	Ethernet	14 (M), 8 (C)	—
3D Displacement Sensors	3D	C+M	—	—	—	Ethernet	—	10 kHz
Contrast Inc 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	3–120	255 Mp/s

INDUSTRIAL FOOD GRADE ENCLOSURES for machine vision cameras, lights, sensors, and barcode readers



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- **Sanitary design** for caustic chemical sanitizers, high pressure washdown, and high or low temperature washdown
- IP68 and IP69K rated enclosure models
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- Custom Applications

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Critical Link LLC Syracuse, NY, USA; 315-425-4045; www.criticallink.com; info@criticallink.com								
MityCAM-C50000	CMOS	C+M	Area array	7920 × 6004	VIS	Camera Link, Camera Link Full, Ethernet, GigE, HDMI, USB 1.0/2.0, USB3	30	—
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 × 2160	Multispectral, NIR, VIS	Camera Link, Ethernet, GigE, USB 1.0/2.0	100	—
MityCAM-B1910F	CMOS	C+M	Area array	1920 × 1080	Multispectral, NIR, VIS	Camera Link, Ethernet, GigE, USB 1.0/2.0	100	—
MityCCD-H7031	CCD	M	Area array	1024 × 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 × 506	—	Digital I/O, Ethernet, USB 1.0/2.0	—	—
MityCCD-H9971	CCD	M	Area array	1024 × 252	—	Digital I/O, Ethernet, USB 1.0/2.0	—	—
MityCCD-SU256LSB / SU512LSE	InGaAs	—	Line scan	—	—	Camera Link, Camera Link Full, Digital I/O, Ethernet, GigE, HDMI, USB 1.0/2.0, USB3	20	1250 kHz
The Crowley Co Frederick, MD, USA; 240-215-0224; www.machcamera.com; machcam@thecrowleycompany.com								
MACHCAM 71MP	CMOS	C+M	Area array	71 MPixels	VIS	USB3	3	~400 Mbps
D3 Engineering LLC Rochester, NY, USA; 595-429-1550; www.d3engineering.com; sales@d3engineering.com								
DesignCore D3RCM-OV10640-953 Rugged Camera Module	CMOS	C	Area array	—	VIS	FPD-Link III	60	—
DesignCore D3RCM-IMX390-953 Rugged Camera Module	CMOS	C	Area array	—	VIS	FPD-Link III	60	—
DesignCore D3RCM-OV10640-OV490-913 Rugged Camera Module	CMOS	C	Area array	—	VIS	FPD-Link III	30	—
DesignCore D3RCM-IMX290-953 Rugged Camera Module	CMOS	C	Area array	—	VIS	FPD-Link III	120	—
DesignCore D3CM-IMX390 Camera Module	CMOS	C	Area array	—	VIS	FPD-Link III, GMSL2	60	—
DesignCore D3CM-IMX424 Camera Module	CMOS	C	Area array	—	VIS	FPD-Link III, GMSL2	30	—
DesignCore D3CM-AR0233 Camera Module	CMOS	C	Area array	—	VIS	FPD-Link III, GMSL2	60	—
DesignCore D3CM-IMX224 Camera Module	CMOS	C	Area array	—	VIS	FPD-Link III	120	—
DesignCore D3RCM-OV10635-913 Rugged Camera Module	CMOS	C	Area array	—	VIS	FPD-Link III	30	—
DesignCore D3CM-IMX290 Camera Module	CMOS	C	Area array	—	VIS	FPD-Link III	120	—
China Daheng Group Inc 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	—
Datalogic USA Inc Eugene, OR, USA; 800-227-2633; www.datalogic.com; marketing.na@datalogic.com								
Matrix 220	CMOS	M	Area array	VVGA-1.2 MPixels	VIS	Digital I/O, Ethernet, RS-232	45	—
P Series	CMOS	C+M	—	—	—	Ethernet, RS-232	60-120	—

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Emergent Vision Technologies Inc 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	CMOS	C+M	Line scan	8192 × 1	—	10 GigE	—	45–137 kHz
Accel Series LB-8K	CMOS	C+M	Line scan	—	—	25 GigE	—	66–200 kHz
Bolt Series HB-30000 Sony IMX342	CMOS	C+M	Area array	—	—	25 GigE	35.4	—
Entwicklungsbuero Stresing Berlin, Germany; 49-30-685-4506; www.stresing.de; info@stresing.de								
FL3000	CCD & CMOS versions	M	Line scan	—	NIR, UV, VIS	Fiber optic, PCIe	50k	30 MHz
EPiX Inc Buffalo Grove, IL, USA; 847-465-1818; www.epixinc.com; epix@epixinc.com								
SILICON VIDEO 1820CL	CMOS	C	Area array	4608 × 3288	VIS	Camera Link, Camera Link Extended-Full, Camera Link Extended, Camera Link Full, LVDS	24	4360 Mbps
SILICON VIDEO 1C45, 1M45	CMOS	C+M	Area array	1280 × 960	VIS	LVDS, Proprietary	45–1200	1000 MHz
SILICON VIDEO 643	CMOS	C+M	Area array	640 × 480	VIS	LVDS, Proprietary	212	1000 MHz
SWGAC or SWGAM	CMOS	C+M	Area array	752 × 480	VIS	LVDS, Proprietary	60–1338	1000 MHz
SILICON VIDEO 1514	CMOS	C+M	Area array	4912 × 3684	VIS	Camera Link, Camera Link Extended-Full, Camera Link Extended, Camera Link Full	24	—
SILICON VIDEO 035	CMOS	C	Area array	640 × 480	VIS	Analog, NTSC, NTSC/PAL/RS-170, PAL	30	768 kHz
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, Proprieta	30–240	—
SILICON VIDEO 10C6 & 10M6	CMOS	C	Area array	3840 × 2764	VIS	LVDS, Proprietary	7	1000 MHz
SILICON VIDEO 5C10/5M10	CMOS	C+M	Area array	2592 × 1944	VIS	LVDS, Proprietary	10	700 MHz
SILICON VIDEO 9M001	CMOS	M	Area array	1280 × 1024	VIS	LVDS	43	600 kHz
Fastec Imaging Corp San Diego, CA, USA; 858-592-2342; www.fastecimaging.com; sales@fastecimaging.com								
TS5 High-speed Camera	CMOS	C+M	Area array	2560 × 2048	VIS	Digital I/O, Ethernet, GigE, USB 1.0/2.0	253	1325 MHz
Fastec IL5	CMOS	C+M	Area array	2560 × 2048	VIS	Digital I/O, Ethernet, GigE, USB 1.0/2.0	253	1325 MHz
HiSpec 1 High-speed Digital Video Camera	CMOS	C+M	Area array	1280 × 1024	VIS	Ethernet, GigE	506	650 MHz
FJW Optical Systems Inc Palatine, IL, USA; 847-358-2500; www.findscope.com; irsales@findscope.com								
FJW 84499A/85643/85291 Find-R-Scope w/Video Camera	CCD	M	Area array	500 × 582	NIR, VIS	Analog, NTSC, RS-170	30	—
FJW 84499A-5/85643/85291 Find-R-Scope w/Video Camera	CCD	M	Area array	500 × 582	NIR, VIS	Analog, NTSC, RS-170	30	—
FJW 85201 IR Video System	CCD	M	Area array	500 × 582	NIR, VIS	Analog, NTSC, RS-170	30	—
FJW 85201P IR Video System	CCD	M	Area array	510 × 492	NIR, VIS	Analog, PAL	25	—
FJW 85291 Find-R-Scope Eyepiece Camera	CCD	M	Area array	500 × 582	VIS	Analog, NTSC, RS-170	30	—
FJW 85291P Find-R-Scope Eyepiece Camera	CCD	M	Area array	510 × 492	VIS	Analog, PAL	25	—

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FJW Optical Systems Inc Palatine, IL, USA; 847-358-2500; www.findrscope.com; irsales@findrscope.com								
FJW 85300/85643/85291 UV Viewer w/Video Camera	CCD	M	Area array	500 × 582	NIR, UV, VIS	Analog, NTSC, RS-170	30	—
FJW 85300-5/85643/85291 UV Viewer w/Video Camera	CCD	M	Area array	500 × 582	NIR, UV, VIS	Analog, NTSC, RS-170	30	—
FJW 85700 Vidicon Camera	—	M	Area array	525 × 700	SWIR, NIR, VIS	Analog, NTSC/PAL/RS-170	30	—
FJW 85706 Vidicon Camera	—	M	Area array	525 × 700	SWIR, NIR, VIS	Analog, NTSC/PAL/RS-170	30	—
FLIR Integrated Imaging Solutions Richmond, BC, Canada; 604-242-9937; www.flir.com/mv; mv-sales@flir.com								
Firefly DL	CMOS	M	—	0.4 MPixels	—	USB3	—	—
Firefly S	CMOS	C+M	—	0.4–1.6 MPixels	—	USB3	—	—
Blackfly S USB3	CCD & CMOS versions	C+M	—	0.4–20 MPixels	—	USB3	—	—
Blackfly S GigE	CMOS	C+M	Area array	0.4–20 MPixels	VIS	Digital I/O, Ethernet, GigE	—	—
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	—
Bumblebee2	CCD	C+M	Area array	0.3–0.8 MPixels	VIS	Digital I/O, FireWire	20–48	—
Ladybug5+	CCD	C	Area array	30 MPixels	VIS	Digital I/O, USB3	10 (compressed), 5 (uncompressed)	—
FLIR Systems Inc Wilsonville, OR, USA; 877-773-3547; www.flir.com; sales@flir.com								
A310	Microbolometer	M	Area array	320 × 240	LWIR	Ethernet, NTSC/PAL/RS-170, PAL, RS-170	30	30 Hz
A315	Microbolometer	M	Area array	320 × 240	LWIR	GigE	60	60 Hz
A615	Microbolometer	M	Area array	640 × 512	LWIR	GigE	50	50–200 Hz
A65	Microbolometer	M	Area array	640 × 512	LWIR	GigE	30	30 Hz
A8300sc	InSb	M	Area array	1280 × 720	MWIR	CoaxPress, GigE, HD-SDI	60	60 Hz (full), 388 Hz (@1/4 window)
A6750sc InSb	InSb	M	Area array	640 × 512	MWIR	GigE, NTSC	125	125 Hz (full), 4175 Hz (max)
A6260sc	InGaAs	M	Area array	640 × 480	SWIR	GigE, NTSC	125	125 Hz (full), 25,614 Hz (max)
A6600	InSb	M	Area array	640 × 512	MWIR	GigE	60	60–125 Hz (full), 4175 Hz (max)
Hamamatsu Corp 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

CAMERA MANUFACTURERS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
Hamamatsu Corp Bridgewater, NJ, USA; 908-231-0960; www.hamamatsu.com; photonics@hamamatsu.com								
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
Headwall Photonics Inc Bolton, MA, USA; 978-353-4100; www.headwallphotonics.com; marketing@headwallphotonics.com								
Hyperspec MV imaging sensor	CMOS	C+M	Line scan	—	Multispectral, NIR	Ethernet	400 (full)	—
Hikrobot Machine Vision City of Industry, CA, USA; 626-818-5842; www.hikrobotics.com; hikrobot@hikrobotics.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
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	Line scan	—	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
Movidius VPU Platform Smart Camera	CMOS	M	Area array	—	IR, NIR	Digital I/O, GigE, RS-232	40–120	1 Gbps
HinaLea Imaging Emeryville, CA, USA; 808-878-8247; www.hinaleaimaging.com; info@hinalaimaging.com								
HinaLea Imaging Model 4100H	CMOS	C	Area array	—	Hyper-spectral, Multispectral	GigE, USB3	—	—
HinaLea Imaging Model 4200	CMOS	C	Area array	—	Hyper-spectral, Multispectral	GigE, USB3	—	—
4200m	CMOS	C+M	Area array	—	Hyper-spectral, NIR, VIS	—	—	—
Hitachi Kokusai Electric America Ltd Woodbury, NY, USA; 817-379-5013; www.hitachikokusai.com/ivs; phyllis.vela@hitachikokusai.com								
HV-F130GV, HV-F130SCL	CCD	C	Area array	1280 × 960	VIS	Camera Link, GigE, RGB	30	60 Hz
KP-FM(D)500WCL	CMOS	C+M	Area array	2464 × 2056	VIS	Camera Link	45	50, 60 Hz
KP-FM(D)200UB	CMOS	C+M	Area array	1600 × 1200	VIS	USB3	60	50, 60 Hz
KP-F230SCL, KP-F230PCL	CCD	M	Area array	1628 × 1236	VIS	Camera Link	30	—
KP-HD20A, KP-HD20A-S2	CMOS	C	Area array	1920 × 1080	VIS	Analog, HD-SDI	30, 60	50, 60 Hz
KP-F31PCL, KP-FR31PCL	CCD	C+M	Area array	659 × 494	VIS	Camera Link	120	60 Hz
HV-F203GV, HV-F203SCL	CCD	C	Area array	1280 × 960	VIS	Camera Link, GigE	30	60 Hz
HV-F32SCL	CCD	C	Area array	660 × 494	VIS	Camera Link	200	60 Hz
KP-D20A, KP-D20B	CCD	C	Area array	768 × 494	VIS	Analog, S-Video	30	60 Hz
KP-F32WCL, KP-FD32WCL	CCD	C+M	Area array	659 × 494	VIS	Camera Link	200	60 Hz
Hitachi Kokusai Electric Europe GmbH Neu-Isenburg, Germany; 49-6102-8332-0; www.hitachi-keu.com; info@hitachi-keu.com								
HV-F203 Series	CCD	C	Area array	—	VIS	Camera Link, GigE, RGB	30	—
HV-F130 Series	CCD	C	Area array	SXGA	VIS	Camera Link, GigE, RGB	30	—
HV-F32 Series	CCD	C	Area array	VGA	VIS	Camera Link, GigE, RGB	≤200	—
KP-FM(D)200UB	CMOS	C+M	Area array	—	NIR, VIS	Camera Link, USB3	125	—
KP-HD20A-S2	CMOS	C	Area array	1920 × 1080	—	HD-SDI, HDTV	50	—
IDS Imaging Development Systems GmbH Obersulm, Germany; 49-7134-96196-0; www.ids-imaging.com; info@ids-imaging.com								
IDS NXT rio & rome	CMOS	C+M	Area array	1456 × 1088	—	Digital I/O, Ethernet, GigE, RS-232	—	—
Ensenso X camera family	CMOS	M	Area array	1280 × 1024, 2448 × 2048	VIS	Digital I/O, GigE	—	—
Ensenso N camera family	CMOS	M	Area array	752 × 480–1280 × 1024	VIS	Digital I/O, GigE, USB 1.0/2.0	—	—

CAMERA MANUFACTURERS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
IDS Imaging Development Systems GmbH Obersulm, Germany; 49-7134-96196-0; www.ids-imaging.com; info@ids-imaging.com								
GigE uEye CP Rev. 2	CMOS	C+M	Area array	752 × 480–3088 × 2076	NIR, VIS	Digital I/O, GigE	≤205	—
USB 3 uEye CP camera family	CMOS	C+M	Area array	752 × 480–4912 × 3684	NIR, VIS	Digital I/O, USB3	≤575	—
uEye LE USB 3.1 Gen 1	CMOS	C+M	Area array	808 × 608–3088 × 2076	VIS	Digital I/O, USB3	≤135	—
GigE uEye FA camera family	CMOS	C+M	Area array	800 × 600–2448 × 2048	VIS	Digital I/O, GigE	≤205	—
USB 3 uEye LE camera family	CMOS	C+M	Area array	1280 × 1024–4912 × 3684	NIR, VIS	Digital I/O, USB3	≤60	—
GigE uEye SE camera family	CMOS	C+M	Area array	800 × 600–4104 × 3006	NIR, VIS	Digital I/O, GigE	≤205	—
uEye SE USB 3.1 Gen 1	CMOS	C+M	Area array	2456 × 2054–4104 × 3006	VIS	Digital I/O, USB3	—	—
GigE uEye LE camera family	CMOS	C+M	Area array	1280 × 1024–2560 × 1920	NIR, VIS	Digital I/O, GigE	≤50	—
USB 3 uEye ML camera family	CMOS	C+M	Area array	1280 × 1024–2560 × 1920	NIR, VIS	Digital I/O, USB3	≤60	—
USB 2 uEye SE camera family	CMOS	C+M	Area array	752 × 480–3840 × 2748	NIR, VIS	Digital I/O, USB 1.0/2.0	≤87	—
USB 2 uEye LE camera family	CMOS	C+M	Area array	752 × 480–3840 × 2748	NIR, VIS	Digital I/O, USB 1.0/2.0	≤87	—
illunis LLC Minnetonka, MN, USA; 952-975-9203; www.illunis.com; info@illunis.com								
CMV-120	CMOS	C+M	Area array	13272 × 9176	VIS	Camera Link Full	5.49	—
CMV-50	CMOS	C+M	Area array	7920 × 6004	VIS	Camera Link, Fiber optic, GigE, USB3	30	—
RMOD-71	CMOS	C+M	Area array	10,000 × 7096	VIS	Camera Link, USB3	2, 3, 4.2	—
RMOD-71-TEC	CMOS	C+M	Area array	10,000 × 7096	VIS	Camera Link	2, 3, 4.2	—
RMV-47	CCD	C+M	Area array	8856 × 5280	VIS	Camera Link	3.5	—
RMV-29050	CCD	C+M	Area array	6576 × 4384	VIS	Camera Link, GigE, USB3	1, 2, 4	—
RMV-16070	CCD	C+M	Area array	4864 × 3232	VIS	Camera Link, GigE, USB3	2, 4, 8	—
RMV-16050	CCD	C+M	Area array	4896 × 3264	VIS	Camera Link, GigE, USB3	2, 4, 8	—
CLS-16k-55kfps	CMOS	M	Line scan	16,000	VIS	Camera Link Full	—	55 kfps
IMI Technology Co Ltd Gyeonggi-do, South Korea; 82-31-423-9801; www.imi-tech.com; amy@imi-tech.com								
IMx-11FT	CCD	C+M	Area array	640 × 480	VIS	FireWire	86	400 Mbps
IMx-3145FT	CCD	C+M	Area array	1392 × 1040	VIS	FireWire	20	400 Mbps
IMx-5040FT	CCD	C+M	Area array	640 × 480	VIS	FireWire	86	400 Mbps
IMx-4050FT	CCD	C+M	Area array	2448 × 2048	VIS	FireWire	15	800 Mbps
IMx-710G	CCD	C+M	Area array	656 × 488	VIS	GigE	100	1000 Mbps
IMx-711G	CCD	C+M	Area array	656 × 488	VIS	GigE	86	1000 Mbps
IMx-715G	CCD	C+M	Area array	1032 × 776	VIS	GigE	35	1000 Mbps
IMx-750GC	CMOS	C+M	Area array	2588 × 1940	VIS	GigE	14	1000 Mbps
IMC-770GC	CMOS	C	Area array	3660 × 2774	VIS	GigE	7.3	1 Gbps
IMC-7015G2	CCD	C	Area array	1280 × 720	VIS	GigE	30	1 Gbps

CAMERA MANUFACTURERS

Product	Sensor type	Color/ Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
IMPERX Boca Raton, FL, USA; 561-989-0006; www.imperx.com; sales@imperx.com								
IP67 9 Meg CMOS C4010 Cheetah Camera	CMOS	C+M	Area array	—	NIR	GigE	6.6–13.2	—
IP67 3 Meg CMOS C2010 Cheetah Camera	CMOS	C+M	Area array	—	NIR	GigE	18–36	—
IP67 5 Meg CMOS C2410 Cheetah Camera	CMOS	C+M	Area array	—	NIR	GigE	11–22	—
IP67 7.1 Meg CMOS C3210 Cheetah Camera	CMOS	C+M	Area array	—	NIR	GigE	8–16	—
IP67 12 Meg CMOS C4110 Cheetah Camera	CMOS	C+M	Area array	—	NIR	GigE	4.8–9.6	—
25 Meg CMOS C5180 Cheetah Camera	CMOS	C+M	Area array	—	NIR	Camera Link, CoaXPress, 10 GigE, GigE, USB3	2.2–44	—
2 Meg SDI CMOS C1920 Cheetah Camera	CMOS	C+M	Area array	—	NIR	HD-SDI	23.98–60	—
5 Meg CMOS C2420YZ Cheetah Camera with Polarization Filters	CMOS	C+M	Area array	—	NIR	Camera Link	67–97	—
InfracTech GmbH Infrarotsensorik und Messtechnik Dresden, Germany; 49-351-871-8630; www.infrac.de; thermo@infrac.de								
Cooled high-end infrared camera ImagerR 9300	FPA	—	Area array	1280 × 1024	MWIR	Camera Link, Digital I/O, 10 GigE, GigE, HDMI, RS-232	—	106–3200 Hz
Infrared camera ImagerR 8300 hp series	FPA	—	Area array	640 × 512, 1280 × 1024	MWIR	Camera Link, 10 GigE, GigE, HDMI	—	355–5000 Hz
VarioCAM HD uncooled infrared camera	FPA	—	Area array	640 × 480, 1024 × 768, 1280 × 960, 2048 × 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 × 480, 1024 × 768, 1280 × 960, 2048 × 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 × 480	IR, LWIR	Analog, DVI, GigE, RS-232	—	50, 60 Hz
High-end cameras ImagerR 8300/9300 Z	InSb	—	Area array	640 × 512, 1280 × 1024	MWIR	GigE, RS-232, USB 1.0/2.0	—	≤100 Hz
Cooled long-wave infrared camera series ImagerR	FPA	—	Area array	640 × 512	LWIR	10 GigE, GigE, RS-232, USB 1.0/2.0	—	105,000 Hz
Full HD infrared camera ImagerR 10300	InSb	—	Area array	1920 × 1536	LWIR	10 GigE, GigE, HDMI	—	113–400 Hz
ImagerR 9400 hp	InSb	—	Area array	2560 × 2048	LWIR	Camera Link, 10 GigE, GigE, HDMI	—	622 Hz
IO Industries Inc London, ON, Canada; 519-663-9570; www.ioindustries.com; sales@ioindustries.com								
Flare 48MP	CMOS	C+M	Area array	7920 × 6004	VIS	CoaXPress	30	—
Victorem 120B68	CMOS	C+M	Area array	4112 × 3008	VIS	CoaXPress	68	—
Victorem 4KSDI-Mini	CMOS	C	Area array	4096 × 2160	VIS	HD-SDI	60	—
Flare 12MP	CMOS	C+M	Area array	4096 × 3072	NIR, VIS	Camera Link, CoaXPress	125 (CL), 180 (CX)	—
Victorem 205R26	CMOS	C+M	Area array	5496 × 3672	VIS	CoaXPress	26	—
Victorem 51B163	CMOS	C+M	Area array	2464 × 2056	VIS	CoaXPress	163	—
Victorem 4B523	CMOS	C+M	Area array	728 × 544	VIS	CoaXPress	523	—
Victorem 2KSDI-Mini	CMOS	C	Area array	2048 × 1080	VIS	HD-SDI	60	—
Victorem 262G41	CMOS	C+M	Area array	5120 × 5120	VIS	CoaXPress	41	—
Victorem 89B93-CX	CMOS	C+M	Area array	5496 × 3672	VIS	CoaXPress	26	—
ISVI Corp Gunpo-si, Gyeonggi-do, South Korea; 82-31-427-3245; www.isvi-corp.com; sales@isvi-corp.com								
IC-M12S-CXP	CMOS	M	Area array	4096 × 3072	NIR, VIS	CoaXPress	181	6.25 Gbps
IC-X25S-CXP	CMOS	C+M	Area array	5120 × 5120	NIR, VIS	CoaXPress	72	6.25 Gbps
IC-M29S-CL	CCD	M	Area array	6576 × 4384	VIS	Camera Link	4.5	80 MHz
IC-X25N-CL	CMOS	C+M	Area array	5056 × 5056	NIR, VIS	Camera Link	30	80 MHz

CAMERA MANUFACTURERS

Product	Sensor type	Color/ Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
ix Cameras Ltd Woburn, MA, USA; 339-645-0778; www.ix-cameras.com; michael.quzor@ix-cameras.com								
i-SPEED 726	CMOS	C+M	Area array	2048 × 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 × 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 × 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 × 1600	NIR, VIS	Ethernet, GigE, Proprietary	600–204,100	1.54 Gp/s
i-SPEED 713	CMOS	C+M	Area array	2048 × 1536	NIR, UV, VIS	Ethernet, GigE, HD-SDI, Proprietary, USB3	5000–500,000	13 Gp/s
i-SPEED 508	CMOS	C+M	Area array	1920 × 1080	NIR, UV, VIS	Ethernet, GigE, HDMI, HD-SDI, Proprietary, USB3	100–500,000	8 GPx/s
i-SPEED 510	CMOS	C+M	Area array	1920 × 1080	NIR, UV, VIS	Ethernet, GigE, HDMI, HD-SDI, Proprietary, USB3	≤500,000	10 GPx/s
i-SPEED 513	CMOS	C+M	Area array	1920 × 1080	NIR, UV, VIS	Ethernet, GigE, HDMI, HD-SDI, Proprietary, USB3	≤500,000	13 GPx/s
JADAK, a Novanta Co North Syracuse, NY, USA; 315-701-0678; www.jadaktech.com; info@jadaktech.com								
Allegro LW-AL-CMV2000	CMOS	C+M	Area array	2048 × 1024	NIR, VIS	GigE, USB3	300	—
Allegro LW-AL-CMV4000	CMOS	C+M	Area array	2048 × 2048	NIR, VIS	GigE, USB3	150	—
Allegro LW-AL-CMV12000	CMOS	C+M	Area array	4096 × 3072	NIR, VIS	GigE, USB3	50	—
Allegro LW-AL-IMX172	CMOS	C+M	Area array	4000 × 3000	VIS	GigE, USB3	35	—
Allegro LW-AL-IMX178	CMOS	C+M	Area array	3094 × 2080	VIS	GigE, USB3	60	—
Allegro LW-AL-IMX249	CMOS	C+M	Area array	1920 × 1200	VIS	GigE, USB3	30	—
Allegro LW-AL-IMX250	CMOS	C+M	Area array	2448 × 2048	VIS	GigE, USB3	144	—
Allegro LW-AL-IMX253	CMOS	C+M	Area array	4096 × 3000	VIS	GigE, USB3	64	—
Allegro LW-AL-IMX255	CMOS	C+M	Area array	4096 × 2160	VIS	GigE, USB3	89	—
JAI San Jose, CA, USA; 408-383-0300; www.jai.com; camerasales.americas@jai.com								
SP-20000	CMOS	C+M	Area array	5120 × 3840	VIS	Camera Link, Camera Link Full, CoaXPress, USB3	30	—
SP-12400/SP-12401	CMOS	C+M	Area array	4112 × 3008	NIR, VIS	Camera Link, Camera Link Full, GigE, USB3	9–64	—
SP-12000-CXP4	CMOS	C+M	Area array	4096 × 3072	NIR, VIS	CoaXPress	189	—
SP-5000	CMOS	C+M	Area array	2560 × 2048	NIR, VIS	Camera Link, Camera Link Full, CoaXPress, GigE, USB3	≤250	—
GO-5100	CMOS	C+M	Area array	2462 × 2056	NIR, VIS	GigE, USB3	22–74	—
GO-5101	CMOS	C+M	Area array	2464 × 2056	NIR, VIS	Camera Link, Camera Link Extended, GigE	22–35	—
GO-5000	CMOS	C+M	Area array	2560 × 2048	NIR, VIS	Camera Link, Camera Link Extended, GigE, USB3	≤107	—
GO-2400	CMOS	C+M	—	1936 × 1216	NIR, VIS	Camera Link, Camera Link Full, GigE, USB3	48–165	—
GO-2401	CMOS	C+M	Area array	1936 × 1216	VIS	GigE	41	—
GO-5100MP-USB	CMOS	M	Area array	2464 × 2056	VIS	USB3	74	—
AP-3200T	CMOS	C	Area array	2064 × 1544	VIS	Camera Link, Camera Link Full, GigE, USB3	12–55	—
AP-1600T	CMOS	C	Area array	1456 × 1088	VIS	Camera Link, Camera Link Full, GigE, USB3	24–126	—
AD-130	CCD	C+M	Area array	1296 × 966	Multispectral, NIR, VIS	GigE	31	—
SW-4000T-MCL	CMOS	C	Line scan	3 × 4096	VIS	Camera Link, Camera Link Full	—	67 kHz
SW-4000TL-PMCL	CMOS	C	Line scan	3 × 4096	VIS	Camera Link, Camera Link Full	—	66 kHz
SW-4000M-PMCL	CMOS	M	Line scan	4096	NIR, VIS	Camera Link, Camera Link Full	—	200 kHz
SW-8000M-PMCL	CMOS	M	Line scan	8192	NIR, VIS	Camera Link, Camera Link Full	—	100 kHz
SW-4000T-10GE	CMOS	C	Line scan	4096	VIS	10 GigE, 5 GigE, GigE	—	97 kHz
SW-4000Q-10GE	CMOS	C+M	Line scan	4096	NIR, VIS	10 GigE, 5 GigE, GigE	—	72 kHz

Industrial 3D Camera

LIPSedge™ AE400



The Smartest and Toughest RealSense™ Camera

Features

- Active stereo 3D depth camera powered by Intel® RealSense™ Technology
- Support GigaE with PoE that allows faster data and higher power over distance than USB
- Featuring Rockchip RK3399 as the core with customized edge processing capability
- Ruggedized enclosure with IP67 classification designed for stringent industrial environment
- Built-in 6-axis IMU for additional applications
- 100% compatibility with RealSense™ SDK ensures seamless migration of existing applications
- Support of strong LIPS® middleware portfolio

LIPSedge™ AE400 is well-suited for the following applications

Vision Guided Robotics (VGR)



3D Reconstruction



Pick and Place



3D Inspection



Path Planning

Workplace Safety / Access Control



Facial Recognition



Robotic Arm
Collision Avoidance

Agriculture & Livestock Farming



Growth and Activity
Analysis of Livestock



Plant Phenotyping &
Green House Automation

3D Measurement & Inspection



Object Dimensioning



Packing Completeness



www.lips-hci.com
info@lips-hci.com
+886-2-87916998



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CAMERA MANUFACTURERS

Product	Sensor type	Color/ Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
KAYA Instruments Neshar, Israel; 972-72-272-3500; www.kayainstruments.com; info@kayainstruments.com								
JetCam 19	CMOS	C+M	—	—	—	Camera Link HS, CoaXPress, Fiber optic, 10 GigE, Proprietary	1920–2400	—
JetCam 160	CMOS	C+M	—	—	—	CoaXPress, Fiber optic, 10 GigE	≥300 (full), 500 (4K)	—
JetCam 25	CMOS	C+M	—	—	—	CoaXPress, Fiber optic, 10 GigE	80	—
Iron 250 CoaXPress 12G Camera	CMOS	C+M	—	—	—	Camera Link HS, CoaXPress, Fiber optic, 10 GigE, HD-SDI	163.4	—
Iron 255 CoaXPress 12G Camera	CMOS	C+M	—	—	—	Camera Link HS, CoaXPress, 10 GigE	93	—
Iron 253 CLHS/10 GiGE Camera	CMOS	C+M	—	—	—	Camera Link HS, CoaXPress, Fiber optic, 10 GigE, HD-SDI	68	—
Iron 305 CoaXPress 12G Camera	CMOS	C+M	—	—	—	Camera Link HS, CoaXPress, Fiber optic, 10 GigE, HD-SDI	63.7	—
Iron 252 CoaXPress 12G Camera	CMOS	C+M	—	—	—	Camera Link HS, CoaXPress, Fiber optic, 10 GigE	216.2	—
KEYENCE Corp of America Itasca, IL, USA; 888-539-3623; www.keyence.com/usa; marketing@keyence.com								
CA-H048CX/MX	CMOS	C+M	Area array	784 × 596	VIS	Proprietary	≤588	—
CA-H200CX/MX	CMOS	C+M	Area array	1600 × 1200	VIS	Proprietary	86.2	—
CA-H500CX/MX	CMOS	C+M	Area array	2432 × 2040	VIS	Proprietary	36	—
CA-035C/M	CMOS	C+M	Area array	640 × 480, 512 × 480	VIS	Proprietary	—	—
CA-H2100C/M	CMOS	C+M	Area array	5104 × 4092	VIS	Proprietary	9	—
CA-HS035C/M	CCD	C+M	Area array	640 × 480	VIS	Proprietary	62.5	—
CA-HS200C/M	CCD	C+M	Area array	1600 × 1200	VIS	Proprietary	17	—
CA-HL02MX	CMOS	M	Line scan	1 × 2048	VIS	Proprietary	—	41.7 kHz
CA-HL04MX	CMOS	M	Line scan	1 × 4096	VIS	Proprietary	—	41.7 kHz
CA-HL08MX	CMOS	M	Line scan	1 × 8192	VIS	Proprietary	—	22.2 kHz
Lambert Instruments BV 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)	—
LIPS Corp Taipei, Taiwan; 886-2-8791-6998; www.lips-hci.com; info@lips-hci.com								
LIPSege AE400	3D	C	Area array	—	IR, VIS	Ethernet, GigE	30	—
LUCID Vision Labs Inc Richmond, BC, Canada; www.thinklucid.com; sales@thinklucid.com								
Helios ToF 3D camera	Time of Flight	M	Area array	640 × 480	—	GigE	30	—
Atlas 5GBASE-T camera 5 MP to 31.4 MP	CMOS	C+M	Area array	≤6464 × 4852	NIR	Ethernet, 5 GigE	≤173	—
Helios Embedded ToF Module	3D	M	Area array	640 × 480	—	GigE	30	—
Phoenix Camera	CMOS	C+M	Area array	—	NIR, VIS	GigE	≤291	—
Triton Camera	CMOS	C+M	Area array	—	NIR, VIS	GigE	≤291	—
Triton Polarization	CMOS	C+M	Area array	2448 × 2048	—	GigE	24	—
Phoenix Polarization Camera	CMOS	C+M	Area array	2448 × 2048	—	GigE	24	—
MATRIX VISION GmbH Oppenweiler, Germany; 49-7191-9432-0; www.matrix-vision.com; sales@matrix-vision.de								
mvBlueGEMINI	CMOS	C+M	Area array	1280 × 1024	VIS	Digital I/O, Ethernet, RS-232	60	—
mvBlueLYNX-X series	—	C+M	Area array	640 × 480–2448 × 2050	VIS	Digital I/O, Ethernet, RGB, RS-232, USB 1.0/2.0	10–117	—
mvBlueCOUGAR-XD series	—	C+M	Area array	1456 × 1088–6480 × 4856	NIR, VIS	Digital I/O, GigE	7.5–149.9	—
mvBlueCOUGAR-X series	—	C+M	Area array	728 × 544–5544 × 3692	NIR, UV, VIS	Digital I/O, GigE, RS-232	5.8–299.8	—

CAMERA MANUFACTURERS

Product	Sensor type	Color/ Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
MATRIX VISION GmbH Oppenweiler, Germany; 49-7191-9432-0; www.matrix-vision.com; sales@matrix-vision.de								
mvBlueFOX3 series	CMOS	C+M	Area array	728 × 544–5544 × 3692	NIR	Digital I/O, USB3	18.5–436.9	—
mvBlueFOX series	—	C+M	Area array	640 × 480–2592 × 1944	VIS	Digital I/O, USB 1.0/2.0	5.8–100	—
mvBlueFOX-MLC series	CMOS	C+M	Area array	752 × 480–2592 × 1944	VIS	Digital I/O, USB 1.0/2.0	5.8–93	—
mvBlueFOX-IGC series	CMOS	C+M	Area array	752 × 480–2592 × 1944	VIS	Digital I/O, USB 1.0/2.0	5.8–93	—
mvBlueFOX3 board-level series	CMOS	C+M	Area array	728 × 544–5544 × 3692	NIR, VIS	Digital I/O, USB3	18.5–436.9	—
mvBlueFOX3-3M series	CCD & CMOS versions	C+M	Area array	3096 × 2080	—	Digital I/O, USB 1.0/2.0, USB3	59	—
Matrox Imaging Dorval, QC, Canada; 800-804-6243; www.matrox.com/imaging; imaging.info@matrox.com								
Iris GTR 300 C	CMOS	C	Area array	640 × 480	VIS	Ethernet, GigE	147	—
Iris GTR 1300	CMOS	M	Area array	1280 × 1024	VIS	Ethernet, GigE	85	—
Iris GTR 1300 C	CMOS	C	Area array	1280 × 1024	VIS	Ethernet, GigE	35	—
Iris GTR 2000	CMOS	M	Area array	1920 × 1200	VIS	Ethernet, GigE	45	—
Iris GTR 2000 C	CMOS	C	Area array	1920 × 1200	VIS	Ethernet, GigE	20	—
Iris GTR 5000	CMOS	M	Area array	2592 × 2048	VIS	Ethernet, GigE	21	—
Iris GTR 5000 C	CMOS	C	Area array	2592 × 2048	VIS	Ethernet, GigE	8.5	—
Mega Speed Corp Minnedosa, MB, Canada; 204-867-3767; www.megaspeedusa.com; sales@megaspeedusa.com								
Mega Speed MS110K	CMOS	C+M	Area array	1920 × 1080–64 × 16	VIS	GigE	35–225,000	—
Mega Speed X4 PRO	CMOS	C+M	Area array	—	VIS	GigE	≥40,000	—
Mega Speed MS35K PRO Cart	CMOS	C+M	Area array	—	VIS	GigE	—	—
Mega Speed X9 PRO	CMOS	C+M	Area array	—	VIS	GigE	≥100,000	—
Mega Speed 35K PRO LED	CMOS	C+M	Area array	1280 × 1024	VIS	GigE	≥2000	—
Mega Speed X8 PRO	CMOS	C+M	Area array	1280 × 800	VIS	GigE	4000	—
Mightex Systems Toronto, ON, Canada; 416-840-4991; www.mightex.com; sales@mightex.com								
SME-C050-U	CMOS	C	Area array	2592 × 1944	NIR, VIS	USB 1.0/2.0, USB3	14, 350 (ROI)	5 Gbps
BCE-C050-U	CMOS	C	Area array	2592 × 1944	NIR, VIS	USB 1.0/2.0	6–100	—
BCE-C030-U	CMOS	C	Area array	2048 × 1536	NIR, VIS	USB 1.0/2.0	8–140	—
BCE-B013-U	CMOS	M	Area array	1280 × 1024	NIR, VIS	USB 1.0/2.0	25	—
BCE-CG04-U	CMOS	C	Area array	752 × 480	NIR, VIS	USB 1.0/2.0	60	—
BCE-BG04-U	CMOS	M	Area array	752 × 480	NIR, VIS	USB 1.0/2.0	60	—
CXE-C013-U	CCD	C	Area array	1392 × 1040, 696 × 520, 464 × 344, 348 × 256	NIR, VIS	USB 1.0/2.0	15, 29, 37, 49	—
CXE-B013-U	CCD	M	Area array	1392 × 1040, 696 × 520, 464 × 344, 348 × 256	NIR, VIS	USB 1.0/2.0	15, 29, 37, 49	—
CCE-C013-U	CCD	C	Area array	1392 × 1040, 348 × 256	NIR, VIS	USB 1.0/2.0	15, 49	—
CCE-B013-U	CCD	M	Area array	1392 × 1040, 696 × 520, 464 × 344, 348 × 256	IR, NIR, VIS	USB 1.0/2.0	15, 29, 37, 49	—
Mikrotron GmbH Unterschleissheim, Germany; 49-8972-6342-00; www.mikrotron.de; info@mikrotron.de								
EoSens 25XP+	CMOS	C+M	Area array	5120 × 5120	VIS	CoaXPress	80	—
EoSens 4CXP	CMOS	C+M	Area array	2336 × 1728	VIS	CoaXPress	563	—
EoSens 3CXP	CMOS	C+M	Area array	1690 × 1710	VIS	CoaXPress	563	—

CAMERA MANUFACTURERS

Product	Sensor type	Color/ Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
Mikrotron GmbH Unterschleissheim, Germany; 49-8972-6342-00; www.mikrotron.de; info@mikrotron.de								
EoSens CL	CMOS	C+M	Area array	1280 × 1024	VIS	Camera Link, Camera Link Extended-Full, Camera Link Extended, Camera Link Full	506	—
EoSens GE	CMOS	C+M	Area array	1280 × 1024	VIS	GigE	80	—
MotionBLITZ EoSens Cube7	CMOS	C+M	Area array	1696 × 1710	VIS	GigE	523	—
MotionBLITZ LTR portable	CMOS	—	Area array	—	VIS	Camera Link	506	—
MotionBLITZ EoSens mini1	CMOS	C+M	Area array	1280 × 1024	VIS	GigE	506	—
Mitsubishi Electric Cypress, CA, USA; 513-748-3338; www.mitsubishielectric.com/bu/contact_image/index.html; lou.fetch@meus.mea.com								
KD-AX Series	CMOS	C	Line scan	7296 × 3, 14,592 × 3, 21,888 × 3	—	Camera Link	—	11–22 kHz
KD-MX Series	CMOS	M	Line scan	7296 × 3, 14,592 × 3, 21,888 × 3	—	Camera Link	—	11–22 kHz
KD-CX Series	CMOS	C+M	Line scan	8640 × 3, 13,824 × 3, 19,008 × 3	—	CoaXPress	—	50 kHz
KD-DXL Series	CMOS	C+M	Line scan	25,056 × 3, 29,376 × 3, 39,744 × 3	—	Camera Link, Camera Link Full	—	20–53 kHz
KD-CXL Series	CMOS	C+M	Line scan	25,056 × 3, 29,376 × 3, 39,744 × 3	—	CoaXPress	—	37–45 kHz
KD-SX Series	CMOS	M	Line scan	2736 × 1	—	GigE	—	6 kHz
Munro Design & Technologies LLC Webster, NY, USA; 585-503-5180; www.munrodandt.com; jfmunro@munrodandt.com								
Trilogy 3D	3D	M	Area array	—	NIR, VIS	Proprietary, USB3	60	—
NET New Electronic Technology GmbH 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	—	—
NET USA Inc Highland, IN, USA; 219-934-9042; www.net-usa-inc.com; info@net-usa-inc.com								
CORSIGHT - all-in-one smart vision system	CCD & CMOS versions	C+M	Area array	—	Multi-spectral, NIR, VIS	Ethernet, RS-232, USB 1.0/2.0	—	—
GigEPRO - Gigabit Ethernet Cameras	CMOS	C+M	Area array	—	IR, Multi-spectral, NIR, VIS	GigE	—	—
3iCube - USB3 Vision cameras	CMOS	C+M	Area array	—	NIR, VIS	USB3	—	—
Nüvü Cameras Inc Montreal, QC, Canada; 514-733-8666; www.nuvucameras.com; info@nuvucameras.com								
HNü EMCCD camera	EMCCD	M	Area array	128 × 128, 512 × 512, 1024 × 1024	Multi-spectral, NIR, VIS	Camera Link, GigE	694, 63, 16.7	320 Mbps
EM N2 EMCCD camera	EMCCD	M	Area array	—	Multi-spectral, NIR, VIS	Camera Link	—	320 Mbps
Odos Imaging Edinburgh, United Kingdom; 44-1313-165-100; www.odos-imaging.com; info@odos-imaging.com								
StarForm-Swift Industrial 3D ToF Camera	3D	M	Area array	—	NIR	GigE	30	—
Omron Automation Americas Hoffman Estates, IL, USA; 847-803-7900; www.omron247.com; omroninfo@omron.com								
Vision HAWK Smart Camera	CMOS	C+M	Area array	752 × 480, 1280 × 960, 2048 × 1088	VIS	Ethernet, RS-232	≤60	—
Vision MINI Smart Camera	CMOS	C+M	Area array	1280 × 1024, 2048 × 1536, 752 × 480	VIS	Ethernet, RS-232, USB 1.0/2.0	≤60	—

CAMERA MANUFACTURERS

Product	Sensor type	Color/ Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
Omron Automation Americas Hoffman Estates, IL, USA; 847-803-7900; www.omron247.com; omroninfo@omron.com								
Visionscape GigE Machine Vision System	—	C+M	Area array	752 × 480, 748 × 476, 656 × 494, 656 × 490, 1032 × 776, 1392 × 1040, 1624 × 1236, 2448 × 2050	VIS	GigE	≤90	—
QX Hawk Industrial Imager	—	M	Area array	752 × 480, 1280 × 960	VIS	Ethernet, RS-232, RS-422/LVDS	≤60	—
Vision MINI Xi Smart Camera	CMOS	C+M	Area array	752 × 480, 1280 × 1024, 2048 × 1530	VIS	Ethernet, RS-232	≤60	—
Opto Engineering Mantova, (MN), Italy; 39-0376-699-111; www.opto-e.com; contact@opto-engineering.com								
COE HR AS Series	CCD & CMOS versions	C+M	Area array	—	VIS	Camera Link, Camera Link Full, Digital I/O, USB3	2-27.3	—
COE HR LS Series	CMOS	M	Line scan	—	VIS	Camera Link, Camera Link Full	—	55-77 kHz
OZRAY Co Ltd Gwangmyeong-si, South Korea; 82-2-863-3137; http://eng.nipself.com; sales@nip.co.kr								
POLLUX PX05M23MGE	CMOS	M	Area array	—	VIS	GigE	23.5	—
POLLUX PXe16M47MCL	CMOS	C+M	Area array	4096 × 4096	VIS	Camera Link	47	—
POLLUX PX50M17MCL	CMOS	M	Area array	7920 × 6004	VIS	Camera Link Full	17	—
PAMINA PA320F30N	InGaAs	M	Area array	640 × 480	SWIR	Analog, Camera Link	100	—
DENEb DE384F30IP	IR	M	Area array	384 × 256	LWIR	Ethernet, NTSC	60	—

HIGH-SPEED CAMERAS FOR SLOW MOTION ANALYSIS

Photron offers a wide range of cameras with powerful features:

- Megapixel resolution to 21,000fps
- Reduced resolution to 2.1Mfps
- Unparalleled light sensitivity to ISO 64,000
- Minimum exposure to 159ns
- Internal memory to 128GB
- Fast download to PC or SSD
- Extremely rugged design
- Standard 2-year warranty

Typical Applications Include:

- Material Testing & Digital Image Correlation (DIC)
- Fluidics and Particle Image Velocimetry (PIV)
- Combustion
- Ballistics & Explosives Testing
- Onboard and Offboard Vehicle Safety Testing
- Welding and Electrical Testing
- Biomechanics and Life Sciences
- Microscopy



Photron

www.photron.com image@photron.com P: 1.800.585.2129

CAMERA MANUFACTURERS

Product	Sensor type	Color/ Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
Phase One Industrial Copenhagen, Denmark; 45-36-46-0111; https://industrial.phaseone.com ; industrial@phaseone.com								
iXM-100	CMOS	C+M	—	—	—	10 GigE, USB3	3.3	—
iXM-MV150F	CMOS	C+M	Area array	—	—	10 GigE, USB3	2.5	—
Photoneo Bratislava, Slovakia; 421-948-766-479; www.photoneo.com ; sales@photoneo.com								
PhoXi 3D Scanners	CMOS	M	Area array	—	VIS	Ethernet	5	—
MotionCam-3D	CMOS	M	Area array	—	VIS	Ethernet	20	—
Bin Picking Studio	CMOS	M	Area array	—	VIS	Ethernet	—	—
Photonfocus AG Lachen, Switzerland; 41-55-451-00-00; www.photonfocus.com ; sales@photonfocus.com								
MV0-D2592-001-144-G2	CMOS	C+M	Area array	2592 × 2048	NIR, VIS	Camera Link, Digital I/O, GigE, RS-422/LVDS, USB3	21	—
MV-D1024E-3D01-160-CL-12	3D	M	Area array	1024 × 1024	NIR, VIS	Camera Link, Digital I/O	3100	—
MV1-D2048x1088-3D03-760-G2	3D	M	Area array	2048 × 1088	NIR, VIS	Digital I/O, GigE, RS-422/LVDS	10,200	—
MV1-D1280-L01-3D05-1280-G2	CMOS	M	Area array	1280 × 1024	NIR, VIS	Digital I/O, GigE, RS-422/LVDS	43,700	—
DR1-D2048x1088-192-G2	CMOS	C+M	Area array	2048 × 1088	NIR, VIS	Digital I/O, GigE, RS-422/LVDS	85	—
QR1-D2048x1088-384-G2	CMOS	C+M	Area array	2048 × 1088	NIR, VIS	Digital I/O, GigE, RS-422/LVDS	169	—
MV1-D2048x1088-HS01-96-G2	CMOS	M	Area array	2048 × 1088	Multi-spectral, NIR, VIS	Digital I/O, GigE, RS-422/LVDS	42	—
MV1-D2048x1088-HS02-96-G2	CMOS	C+M	—	2048 × 1088	Multi-spectral, NIR, VIS	Digital I/O, GigE, RS-422/LVDS	42	—
MV1-D2048x1088-HS03-96-G2	CMOS	C+M	Area array	2048 × 1088	Multi-spectral, VIS	Digital I/O, GigE, RS-422/LVDS	42	—
DR1-D1312-200-G2-8	CMOS	M	Area array	1312 × 1082	NIR, VIS	Digital I/O, GigE, RS-422/LVDS	135	—
Photron USA Inc San Diego, CA, USA; 858-684-3555; www.photron.com ; image@photron.com								
FASTCAM Mini AX	CMOS	C+M	Area array	1024 × 1024	VIS	GigE	6400–11,182,762	—
FASTCAM Mini UX	CMOS	C+M	Area array	1280 × 1024	VIS	GigE	4000–745,483	—
FASTCAM Mini WX	CMOS	C+M	Area array	2048 × 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 × 1024	VIS	GigE	20,000–2,100,000	—
FASTCAM Multi	CMOS	C+M	Area array	1280 × 1024	VIS	Ethernet	4800–2,235,938	—
PHYTEC America LLC Bainbridge Island, WA, USA; 206-780-9047; www.phytec.com ; info@phytec.com								
FireWire-CAM-111H/112H	CCD	C+M	Area array	1024 × 768	VIS	Digital I/O, FireWire	15	—
VCAM-003-2	CCD	C	Area array	752 × 582	VIS	NTSC/PAL/RS-170, S-Video	25/30	—
VCAM-040-1	CCD	M	Area array	752 × 582	VIS	CCIR	25	—
VCAM-110-2	CCD	C	Area array	752 × 582	VIS	NTSC/PAL/RS-170, S-Video	25/30	—
VM-006	CMOS	M	Area array	1280 × 1204	VIS	Digital I/O, Proprietary	30	—
VM-007/-BW	CMOS	C+M	Area array	756 × 480	VIS	Digital I/O, LVDS, Proprietary	60	—
FireWire-CAM-111H/112H	CCD	C+M	Area array	1024 × 786	VIS	Digital I/O, FireWire	30	—
PHYTEC Messtechnik GmbH Mainz, Germany; 49-6131-9221-0; www.phytec.de ; info@phytec.de								
VM-011	CMOS	C+M	Area array	2592 × 1944	IR, VIS	Camera-control unit, Digital I/O, LVDS, Proprietary	—	—
VM-009	CMOS	C	Area array	1280 × 1024	VIS	Camera-control unit, Digital I/O, LVDS, Proprietary	30	—
VM-010	CMOS	C+M	Area array	756 × 480	VIS	Camera-control unit, Digital I/O, LVDS, Proprietary	60	—
VM-050	IR	M	Area array	32 × 32	IR	Digital I/O, Proprietary	8.9	—

CAMERA MANUFACTURERS

Product	Sensor type	Color/ Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
Pixelink 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	—
Princeton Infrared Technologies Inc (PIRT) Monmouth Junction, NJ, USA; 609-917-3380; www.princetonirtech.com; sales@princetonirtech.com								
1280SciCam Scientific Camera	InGaAs Photodiode array	M	Area array	1280 × 1024	IR, Multi-spectral, SWIR, NIR, VIS	Camera Link	93	—
LineCam 12	InGaAs	M	Line scan	1024 × 1	IR, Multi-spectral, SWIR, NIR, VIS	USB3 and Camera Link	—	<20k-48k lines/s
MVCam	InGaAs	M	Area array	1280 × 1024	IR, Multi-spectral, SWIR, NIR, VIS	Camera Link	93	—
Radiant Vision Systems Redmond, WA, USA; 425-844-0152; www.radiantvisionsystems.com; info@radiantvs.com								
ProMetric Y2 Imaging Photometer	CCD	M	Area array	1600 × 1200	IR, VIS	Ethernet, Proprietary, USB 1.0/2.0	—	—
ProMetric I2 Imaging Colorimeter	CCD	C+M	Area array	1600 × 1200	IR, NIR, VIS	Ethernet, Proprietary, USB 1.0/2.0	—	—
ProMetric Y16 Imaging Photometer	CCD	M	Area array	4896 × 3264	IR, NIR, VIS	Ethernet, Proprietary, USB 1.0/2.0	—	—
ProMetric Y29 Imaging Photometer	CCD	M	Area array	6576 × 4384	IR, NIR, VIS	Ethernet, Proprietary, USB 1.0/2.0	—	—
ProMetric I8 Imaging Colorimeter	CCD	C+M	Area array	3296 × 2472	IR, NIR, VIS	Ethernet, Proprietary, USB 1.0/2.0	—	—
ProMetric I16 Imaging Colorimeter	CCD	C+M	Area array	4896 × 3264	IR, NIR, VIS	Ethernet, Proprietary, USB 1.0/2.0	—	—
ProMetric I29 Imaging Colorimeter	CCD	C+M	Area array	6576 × 4384	IR, NIR, VIS	Ethernet, Proprietary, USB 1.0/2.0	—	—
ProMetric Y43 Imaging Photometer	CCD	M	Area array	8040 × 5360	IR, NIR, VIS	Ethernet, Proprietary, USB 1.0/2.0	—	—
Raptor Photonics Ltd Larnae, Co Antrim, United Kingdom; 44-282-827-0141; www.raptorphotonics.com; sales@raptorphotonics.com								
Falcon III	EMCCD	M	Area array	1000 × 1000	UV, X-ray, VIS	Camera Link	32	30 Hz
Ninox 1280	InGaAs	M	Area array	1280 × 1024	Hyperspectral, SWIR, NIR, VIS	Camera Link	60	10-60 Hz
Eagle	CCD	M	Area array	2048 × 2048, 1024 × 1024, 2048 × 512	NIR, UV, X-ray, VIS	Camera Link	—	7 Hz
OWL SW1.7 CL-640	InGaAs Photodiode array	M	Area array	—	SWIR, VIS	Analog, Camera Link	—	120 Hz
Ninox Ultra 640 SWIR	InGaAs	M	Area array	640 × 512	SWIR, NIR, VIS	Camera Link	—	300 Hz
Recognition Robotics Wixom, MI, USA; 440-781-0619; www.recognitionrobotics.com; info@recognitionrobotics.com								
Robeye	CCD	C	—	—	VIS	GigE	—	—
Lucana	CCD	M	—	—	VIS	GigE, USB 1.0/2.0	—	—
Lucana Aero	CCD	C+M	—	—	VIS	GigE, USB3	—	—
Schaefer-Kirchhoff GmbH Hamburg, Germany; 49-40-853997-0; www.sukhamburg.com; info@sukhamburg.de								
SK2048U3HW	CMOS	M	Line scan	—	—	USB3	—	4.56 kHz
SK7456U3TO	CCD	M	Line scan	—	—	USB3	—	5.2 kHz
SK22368U3TOC-LA	CCD	C	Line scan	—	—	USB3	—	5.13 kHz
SK6288U3KOC	CCD	C	Line scan	—	—	USB3	—	9.28 kHz
SK1024U3PD	CCD	M	Line scan	—	—	USB3	—	52.6 kHz
SK2048U3PD	CCD	M	Line scan	—	—	USB3	—	27.78 kHz
SK4096U3FD-L	CCD	M	Line scan	—	—	USB3	—	27.78 kHz

CAMERA MANUFACTURERS

Product	Sensor type	Color/ Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
Schaefer-Kirchhoff GmbH Hamburg, Germany; 49-40-853997-0; www.sukhamburg.com; info@sukhamburg.de								
SK5150U3JR	CCD	M	—	—	—	USB3	—	7.56 kHz
SK8160U3KO-LB	CCD	M	Line scan	—	—	USB3	—	11.9 kHz
SK12240U3KOC-LB	CCD	C	Line scan	—	—	USB3	—	7.2 kHz
SICK Inc Minneapolis, MN, USA; 952-941-6780; www.sickusa.com; info@sick.com								
TriSpector1000	3D	M	Line scan	—	—	Digital I/O, Ethernet	—	—
Ranger3	3D	C+M	Line scan	—	—	Camera Link, Ethernet	—	60 kHz
Color Ranger 3D Camera	CMOS	C+M	Area array	1536 × 512	VIS	GigE	11,000	—
Inspector I10	CMOS	M	Area array	—	VIS	Ethernet	100	—
Inspector I20	CMOS	M	Area array	384 × 384	VIS	Ethernet	100	—
Inspector I20-UV	CMOS	M	Area array	384 × 384	UV	Ethernet	100	—
Inspector I40	CMOS	M	Area array	640 × 480	VIS	Ethernet	100	—
IVC-3D 100	3D	M	Area array	1536 × 512	VIS	Ethernet	5000	—
IVC-3D50	3D	M	Area array	1536 × 512	VIS	Ethernet	5000	—
Sony Europe, Image Sensing Solutions 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 × 2048	VIS	GigE	23	—
XCU-CG160	CMOS	C+M	Area array	1456 × 1088	VIS	USB3	100	—
XCL-CG510	CMOS	C+M	Area array	2448 × 2048	VIS	Camera Link, Camera Link Extended-Full, Camera Link Extended, Camera Link Full	35	—
XCG-CG160	CMOS	C+M	Area array	1456 × 1088	VIS	GigE	70	—
FCB-ER8550	CMOS	C	Area array	—	VIS	—	≤60	—
FCB-ER8300	CMOS	C	Area array	3840 × 2160	VIS	HDTV, LVDS	30	—
XCG-CG240	CMOS	C+M	Area array	1936 × 1216	VIS	GigE	40 (8 bit)	—
XCG-CG510	CMOS	C+M	Area array	2464 × 2048	VIS	GigE	23 (8 bit)	—
XCL-SG510	CMOS	C+M	Area array	5.1 MPixels	VIS	Camera Link	154	—
FCB-EV7520	CMOS	C	Area array	1920 × 1080	VIS	—	60	—
XCL-SG1240	CMOS	C+M	Area array	4112 × 3008	VIS	Camera Link, Camera Link Extended-Full, Camera Link Extended	20	—
FCB-ER8530	CMOS	C	Area array	—	VIS	—	≤60	—
FCB-ES8230	CMOS	C	Area array	—	VIS	—	30	—
FCB-EV7520A	CMOS	C	Area array	1920 × 1080	VIS	—	60	—
FCB-EV7100	CMOS	C	Area array	—	VIS	—	60	—
Sony Visual Imaging Products 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 × 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)	—
SPECIM Spectral Imaging Ltd Oulu, Finland; 358-10-4244-400; www.specim.fi; info@specim.fi								
Specim FX10	CMOS	M	Line scan	—	Hyperspectral, NIR, VIS	Camera Link, GigE	—	—
Specim FX17	InGaAs	M	Line scan	—	Hyperspectral, NIR	Camera Link, GigE	670 (full), 15,000 (4 bands)	—
Specim FX50	InSb	—	Line scan	—	Hyperspectral, MWIR	GigE	380	—
SVS-Vistek GmbH 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	—

CAMERA MANUFACTURERS

Product	Sensor type	Color/ Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
SVS-Vistek GmbH Seefeld, Germany; 49-8152-9985-0; www.svs-vistek.com; info@svs-vistek.com								
EXO Tracer	CMOS	C+M	Area array	—	—	GigE	9	—
hr120	CMOS	M	—	—	—	Camera Link, Camera Link Full, CoaXPress	9.3	—
Tattile Srl Mairano, (BS), Italy; 39-030-970-00; www.tattile.com; infoindustrial@tattile.com								
S50 SMART CAMERA	CMOS	C+M	Area array	640 × 480	—	Digital I/O, Ethernet, RS-232	120	—
S100 SMART CAMERA	CMOS	C+M	Area array	640 × 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 × 2048	—	Digital I/O, Ethernet, RS-232, RS-422/LVDS	180	—
TAG-5	CMOS	C+M	Area array	640 × 480	—	GigE	250	—
TAG-7	CCD	M	Line scan	2048 × 1	—	Camera Link	—	10 kHz
Teledyne DALSA Waterloo, ON, Canada; 519-886-6000; www.teledynedalsa.com; tdi_sales.americas@teledyne.com								
Genie Nano-5G	CMOS	C+M	Area array	2064 × 1544, 2464 × 2056, 4112 × 2176, 4112 × 3008	VIS	5 GigE	190, 141, 88, 64	—
Genie Nano Polarization Camera	CMOS	C+M	Area array	2464 × 2056	VIS	GigE	34	—
Falcon4 86M	CMOS	C+M	Area array	10,720 × 8064	NIR, VIS	Camera Link HS	16	—
Genie Nano CL Series	CMOS	C+M	Area array	2464 × 2056, 4112 × 2176, 4112 × 3012, 4096 × 4096, 5120 × 5120	NIR, VIS	Camera Link, Camera Link Full	141, 88, 64, 45, 30	—

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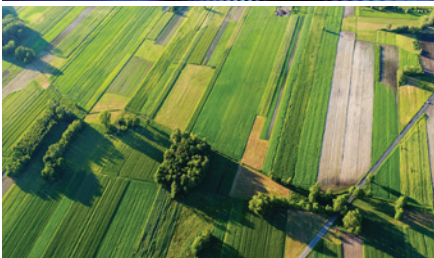
(218) 828-3157 | intercon@nortechsys.com | www.intercon-1.com

CAMERA MANUFACTURERS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
Teledyne DALSA Waterloo, ON, Canada; 519-886-6000; www.teledynedalsa.com; tdi_sales.americas@teledyne.com								
Genie Nano CXP	CMOS	M	Area array	4096 × 4096, 5120 × 5120	NIR, VIS	CoaXPress	80, 120	—
Calibir 640 Series	Micro-bolometer	M	—	640 × 480	LWIR	GigE	30, 60	—
Calibir DXM640 Series	Micro-bolometer	M	—	640 × 480	LWIR	GigE	30	—
Linea Series	CMOS	M	Line scan	2048 × 1, 4096 × 1, 8192 × 1, 16,384 × 1	VIS	Camera Link, Camera Link HS, GigE	—	80
Genie Nano-1G Series	CMOS	C+M	Area array	672 × 512, 728 × 544, 832 × 632, 1280 × 1024, 1456 × 1088, 1936 × 1216, 2064 × 1544, 2464 × 2056, 2592 × 2048, 4112 × 2176, 4112 × 3008, 4096 × 4096, 5120 × 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 × 12	VIS	Camera Link HS	—	125 kHz
Linea Color Series	CMOS	C	Line scan	2048 × 2, 4096 × 2, 8192 × 2	VIS	Camera Link, GigE	—	48 kHz
BOA2 XA Series	CMOS	M	Area array	1664 × 1216, 1920 × 1440, 2560 × 2048	VIS	Digital I/O, Ethernet, RS-232	80, 60, 40	—
BOA Series	CCD	C+M	Area array	640 × 480, 1024 × 768, 1280 × 960, 1600 × 1200	VIS	Ethernet, RS-232	60, 25, 20, 15	—
Piranha4 Series	CMOS	M	Line scan	2048 × 2, 4096 × 2, 8192 × 2	VIS	Camera Link	—	200/100, 100/70 kHz
Piranha4 Color Series	CMOS	C	Line scan	2048 × 3, 4096 × 3, 8192 × 3	VIS	Camera Link, Camera Link Full	—	70 kHz x 3
Piranha4 Multispectral	CMOS	C	Line scan	2048 × 4	NIR, VIS	Camera Link, Camera Link Full	—	70 kHz x 4
Piranha HS	CCD	M	TDI	4096 × 48, 4096 × 96, 6000 × 256, 8192 × 96, 12,000 × 256	VIS	Camera Link, Camera Link Full, Camera Link HS	—	36, 68, 142, 110, 90 kHz
Piranha HS NIR	CCD	M	TDI	8192 × 256	NIR, VIS	Camera Link, Camera Link Full	—	34 kHz
Piranha ES Series	CCD	M	TDI	4096 × 16, 4096 × 32, 8192 × 32, 12,000 × 64	VIS	Camera Link, Camera Link Full	—	110, 68, 34–68, 90 kHz
Falcon2 8M, 12M	CMOS	C+M	Area array	2048 × 2048, 2816 × 2816, 3328 × 2502, 4096 × 3072	VIS	Camera Link Full	168, 90, 58	—
Piranha XL Color	CMOS	C	TDI	8192 × 12, 16,352 × 12	VIS	Camera Link HS	—	70 kHz
BOA Spot Series	CMOS	C+M	Area array	640 × 480, 1280 × 960	VIS	Digital I/O, Ethernet, RS-232	45, 30	—
Linea ML	CMOS	M	Line scan/ TDI	8192 × 4, 16,384 × 4	NIR, VIS	Camera Link HS	—	300 kHz
Linea ML Color	CMOS	C	Line scan	8192 × 3, 16,384 × 3	VIS	Camera Link HS	—	100 kHz x 3
Linea ML Multispectral	CMOS	C	Line scan	8192 × 4	NIR, VIS	Camera Link HS	—	75 kHz x 4

CAMERA MANUFACTURERS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
Teledyne DALSA Waterloo, ON, Canada; 519-886-6000; www.teledynedalsa.com; tdi_sales.americas@teledyne.com								
Linea HS	CMOS	M	TDI	8192 × 192, 16,384 × 192, 32,768 × 64	NIR, VIS	Camera Link HS	—	300 kHz
Linea HS Multifield	CMOS	C	TDI	16,384 × 192	NIR, VIS	Camera Link HS	—	100 kHz x 3
BOA Spot Series	CMOS	C+M	Area array	640 × 480, 1280 × 960	VIS	Digital I/O, Ethernet, RS-232	45, 30	—
Teledyne Digital Imaging US Inc Billerica, MA, USA; 978-670-2002; www.teledynedalsa.com; tdi_sales.americas@teledyne.com								
BOA Smart Camera	CCD	C+M	Area array	640 × 480, 1024 × 768, 1280 × 960, 1600 × 1200	VIS	Digital I/O, Ethernet, RS-232	60, 22, 22, 15	—
Falcon 2M304M15	CCD	M	Area array	1600 × 1200, 1920 × 1080, 2048 × 2048	VIS	Camera Link	34, 16	—
Falcon 4M30/4M60	CMOS	C+M	Area array	2352 × 1728	VIS	Camera Link	31, 62	—
Piranha Color	CCD	C	—	2048 × 3, 4096 × 3	VIS	Camera Link	—	22/12 kHz
Piranha ES	CCD	M	TDI	4096 × 32, 4096 × 16, 8192 × 32	VIS	Camera Link	—	68, 110, 68 kHz
Piranha HS	CCD	M	TDI	2048 × 64, 4096 × 64, 4096 × 96, 4096 × 48, 8192 × 96	VIS	Camera Link	—	52, 36, 68, 110, 68 kHz



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Product	Sensor type	Color/ Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
Teledyne e2v Milpitas, CA, USA; 949-212-3223; www.e2v.com; imaging@teledyne-e2v.com								
UNiiQA+ high-speed	CMOS	C+M	Line scan	1 × 4000, 1 × 2000, 1 × 1000	NIR, VIS	Camera Link	—	100 kHz
UNiiQA+ essential	CMOS	C+M	Line scan	1 × 4000, 1 × 2000, 1 × 1000	NIR, VIS	Camera Link	—	80, 100 kHz
UNiiQA+ high-resolution	CMOS	M	Line scan	16,000 × 1	NIR, VIS	Camera Link	—	50 kHz
ELiixA+ 16k/8k	CMOS	C+M	Line scan	4 × 16,000, 2 × 8000	NIR, VIS	Camera Link, CoaXPress	—	140, 100 kHz
ELiixA+ 8k/4k	CMOS	C+M	Line scan	4 × 8000, 2 × 4000	NIR, VIS	Camera Link	—	50, 100 kHz
ELiixA+ high-speed	CMOS	M	Line scan	4 × 16,000, 4 × 11,000	NIR, VIS	Camera Link, CoaXPress	—	200 kHz
ELiixA+ 8k dual line	CMOS	M	Line scan	8192 × 2	NIR, VIS	Camera Link	—	100 kHz
OctoPlus OCT	CMOS	M	Line scan	2048 × 1	NIR	Camera Link, USB3	—	20, 80, 130, 250 kHz
UNiiQA+ NBASE-T	CMOS	C+M	Line scan	2048, 4096	NIR, VIS	GigE	—	100, 140 kHz
ELiixA+ NBASE-T	CMOS	C+M	Line scan	2048 × 4, 4096 × 4	NIR, VIS	GigE	—	100, 140 kHz
Teledyne Lumenera Ottawa, ON, Canada; 613-736-4077; www.teledynelumenera.com; info@lumenera.com								
Teledyne Lumenera Lt29059-NIR	CCD	C+M	—	—	NIR	USB3	6	—
Teledyne Lumenera Lt1245R	CMOS	C+M	Area array	4112 × 3008	VIS	USB3	30	—
Teledyne Lumenera Lt945R	CMOS	C+M	Area array	4112 × 2176	VIS	USB3	42	—
Teledyne Lumenera Lt545R	CMOS	C+M	Area array	2464 × 2056	IR, Multi-spectral, NIR	USB 1.0/2.0, USB3	75	—
Teledyne Lumenera Lt345R	CMOS	C+M	Area array	2064 × 1544	IR, Multi-spectral, NIR, VIS	USB 1.0/2.0, USB3	120	—
Teledyne Lumenera Lt16059H	CCD	C+M	Area array	4864 × 3232	VIS	USB 1.0/2.0, USB3	11	5 Gbps
Teledyne Lumenera Lt1265R	CCD	C+M	Area array	4240 × 2832	NIR, VIS	USB3	15	5 Gbps
Teledyne Lumenera Lt965R	CCD	C+M	Area array	3376 × 2704	NIR, VIS	USB3	19	5 Gbps
Teledyne Lumenera Lt665R	CCD	C+M	Area array	2752 × 2192	NIR, VIS	USB3	27	5 Gbps
Teledyne Lumenera Lt365R	CCD	C+M	Area array	1936 × 1456	NIR, VIS	USB3	53	5 Gbps
Teledyne Lumenera Lt425	CCD	C+M	Area array	2048 × 2048	NIR, VIS	USB3	90	5 Gbps
Teledyne Lumenera Lt225	CMOS	C+M	Area array	2048 × 1088	NIR, VIS	USB3	170	5 Gbps
Teledyne Lumenera Lt29059	CCD	C+M	Area array	6576 × 4384	VIS	USB 1.0/2.0, USB3	6	5 Gbps
Teledyne Lumenera Lg11059	CCD	C+M	Area array	4008 × 2672	VIS	GigE	5	1 Gbps
Teledyne Lumenera Lm11059	CCD	C+M	Area array	4008 × 2672	VIS	USB 1.0/2.0, USB3	4.3	400 Mbps
Teledyne Photometrics Tucson, AZ, USA; 520-889-9933; www.photometrics.com; info@photometrics.com								
Prime BSI Scientific CMOS Camera	CMOS	M	Area array	2048 × 2048	NIR, UV, VIS	PCIe, USB3	43.5, 63	—
Prime 95B Scientific CMOS Camera	CMOS	M	Area array	1200 × 1200	NIR, UV, VIS	PCIe, USB3	82	—
Prime sCMOS Camera	CMOS	M	Area array	2048 × 2048	NIR, VIS	PCIe, USB3	100	—
Evolve Delta Camera	EMCCD	M	Area array	512 × 512	NIR, UV, VIS	FireWire	67 (full), 794 (128 × 128)	20 MHz
Evolve 512 Camera	EMCCD	M	Line scan	512 × 512	NIR, VIS	FireWire	33	10 MHz
S477 Camera	CCD	C+M	Line scan	—	NIR, VIS	—	—	—
PM695	CCD	M	Area array	2688 × 2200	NIR, VIS	USB 1.0/2.0	3.3	—
Iris 9 Scientific CMOS Camera	CMOS	—	—	5056 × 2960	—	PCIe	30	—
CoolSNAP DYNO CCD Camera	CCD	M	Line scan	—	—	USB 1.0/2.0, USB3	14.4 (full), 24.1 (2 × 2)	—

CAMERA MANUFACTURERS

Product	Sensor type	Color/ Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
TeraSense San Jose, CA, USA; 408-414-7414; www.terasense.com; dmitry.romanyuk@tera-sense.com								
TeraFAST-256-HS high speed linear THz imaging camera	InGaAs	M	Line scan	—	—	Analog, USB 1.0/2.0	5000	5 kHz
The Imaging Source LLC Charlotte, NC, USA; 704-370-0110; www.theimaging-source.com; info@theimaging-source.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 × 3.45 μm	NIR, VIS	USB3	≤38	—
DFM 37UX252-ML	CMOS	C+M	Area array	3.45 × 3.45 μm	NIR, VIS	USB3	≤119	—
DFM 25GX236-ML	CMOS	C+M	Area array	2.8 × 2.8 μm	NIR, VIS	GigE	≤36	—
DMK Z30GP031	CMOS	C+M	Area array	2.2 × 2.2 μm	NIR, VIS	GigE	≤15	—
DFK 72AUC02-F	CMOS	C+M	Area array	2.2 × 2.2 μm	NIR, VIS	USB 1.0/2.0	≤6	—
DMM 22BUC03-ML	CMOS	C+M	Area array	6 × 6 μm	NIR, VIS	USB 1.0/2.0	≤76	—
Thermoteknix Systems Ltd Cambridge, United Kingdom; 44-1223-204-000; www.thermoteknix.com; sales@thermoteknix.com								
MicroCAM 3 Thermal Imaging Module	Micro-bolometer	M	Area array	384 × 288, 640 × 480	LWIR	Analog, Camera Link, GigE	30, 60	—
ClipIR Small Clip On Thermal Imager for Fused Night Vision	Micro-bolometer	M	Area array	384 × 288	IR, LWIR	Analog	—	50 Hz
TiCAM 90 Thermal Imaging Monocular	Micro-bolometer	M	Area array	384 × 288, 640 × 480	IR	Analog	30, 50	—
TiCAM 600 Thermal Imaging Monocular	Micro-bolometer	M	Area array	384 × 288, 640 × 480	IR, LWIR	Analog	—	30, 50 Hz
FuseIR Fused Night vision device	IR	M	Area array	—	IR, LWIR	Analog	—	60 Hz
TiCAM 750 Handheld Thermal Imaging Binoculars	Micro-bolometer	M	Area array	384 × 288, 640 × 480	IR, LWIR	Analog, NTSC, PAL	—	50, 60 Hz
TiCAM 1000 Laser Range Finder Target Locator	Micro-bolometer	C+M	Area array	640 × 480	IR, LWIR	Analog, Camera Link	60	—
MicroCAM irGO	Micro-bolometer	M	Area array	384 × 288, 640 × 480	LWIR	Analog	30, 60	—
Tichawa Vision GmbH Friedberg, Germany; 49-82145-5553-0; www.tichawa-vision.com; info@tichawa.de								
G_VTCIS_1040_XXXX_RGB_3.0	CMOS	C+M	Line scan	49,152 × 1	Multispectral, NIR, UV, VIS	Camera Link, Camera Link Extended-Full, Camera Link Extended, Camera Link Full, CoaXPress, Ethernet, GigE	10,000	85 MHz
G_VTCIS_1560_1200_3WHC_3.0	CMOS	C+M	Line scan	73,782 × 1	Multispectral, NIR, UV, VIS	Camera Link, Camera Link Extended-Full, Camera Link Extended, Camera Link Full, CoaXPress, Digital I/O, GigE	30,550	85 MHz
G_VTCMV_0560_0600_2RGB_3.0	CMOS	C+M	Line scan	13,230 × 1	Multispectral, NIR, UV, VIS	Camera Link, Camera Link Extended-Full, Camera Link Extended, Camera Link Full, CoaXPress, Ethernet, GigE	18,182	85 MHz
G_MXCIS_4160_0600_K3_2AM_2.0	CMOS	M	Line scan	98,304 × 1	NIR, VIS	Camera Link, Camera Link Extended-Full, Camera Link Extended, Camera Link Full, CoaXPress, Ethernet, GigE	10,000	85 MHz
G_VDCIS_1200_0500_2AM_3.0	CMOS	C+M	Line scan	23,040 × 1	NIR, UV, VIS	Camera Link, Camera Link Extended-Full, Camera Link Extended, Camera Link Full, CoaXPress, Ethernet, GigE	30,181	85 MHz
G_VDCIS_1200_1000_2RGB_3.0	CMOS	C+M	Line scan	46,080 × 1	NIR, UV, VIS	Camera Link, Camera Link Extended-Full, Camera Link Extended, Camera Link Full, CoaXPress, Ethernet, GigE	7568	85 MHz
G_MXCIS_2340_0400_K3_2UV_2.0	CMOS	C+M	Line scan	36,864 × 1	NIR, UV, VIS	Camera Link, Camera Link Extended-Full, Camera Link Extended, Camera Link Full, Ethernet, GigE	20,000	85 MHz
G_VTCIS_1040_1200_IR_3.0	CMOS	C+M	Line scan	49,152 × 1	Multispectral, NIR, UV, VIS	Camera Link, Camera Link Extended-Full, Camera Link Extended, Camera Link Full, CoaXPress, Ethernet, GigE	30,550	85 MHz
G_VDCIS_1500_0250_RGB_2.0	CMOS	C+M	Line scan	14,763 × 1	NIR, UV, VIS	Camera Link, Camera Link Extended-Full, Camera Link Extended, Camera Link Full, CoaXPress, Ethernet, GigE	23,000	85 MHz
G_TBCIS_0130_0600_DIA29_AM_1.0	CMOS	M	Line scan	—	UV, VIS	Camera Link, GigE	—	—

CAMERA MANUFACTURERS

Product	Sensor type	Color/ Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
Tordivel AS 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	—
Toshiba Teli Corp 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 × 494	VIS	Camera Link	125	—
CSCV125CC3	CCD	C	Area array	648 × 494	—	Camera Link	125	—
CSCS60BM18	CMOS	M	Area array	1280 × 1024	—	Camera Link	60	—
Smart Photo Sensor SPS-02	CMOS	M	Area array	144 × 176	—	USB 1.0/2.0	—	—
Unibrain Inc San Ramon, CA, USA; 925-866-3000; www.unibrain.com; sosis@unibrain.com								
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
UTC Aerospace Systems (Sensors Unlimited Products) Princeton, NJ, USA; 609-333-8200; www.sensorsinc.com; sui_sales@utas.utc.com								
1280JS	InGaAs	M	Area array	—	SWIR	Camera Link	30	—
1280JSX	InGaAs	M	Area array	1280 × 1024	SWIR	Camera Link	30	—
1280JSX	InGaAs	M	Area array	1280 × 1024	SWIR	Camera Link	60	—
640CSX	InGaAs	M	Area array	640 × 512	SWIR	Camera Link	30	—
640HS VGA	InGaAs	M	Area array	640 × 512	SWIR	Camera Link, NTSC	30	—
640HSX	InGaAs	M	Area array	640 × 512	SWIR	—	30	—
320HX	InGaAs	M	Area array	320 × 240 × 40	SWIR, NIR	Analog, Camera Link	60	—
320KTS	InGaAs	C+M	Area array	320 × 256	SWIR, VIS	Camera Link	60	—
2048R	InGaAs	M	Line scan	—	SWIR	Analog, Camera Link	—	—
Vieworks Co Ltd Anyang-si, Gyeonggi-do, South Korea; 82-70-4910-9812; www.vieworks.com; vision@vieworks.com								
VA Series	CCD	C+M	Area array	1024 × 1024–8856 × 5280	VIS	Camera Link, GigE	125	—
VC Series	CMOS	C+M	Area array	2048 × 1088–14,192 × 10,640	VIS	Camera Link, CoaXPress	337.6	—
VH Series	CCD	C+M	Area array	640 × 480–4872 × 3248	VIS	Camera Link, GigE	264	—
VN Series	CCD & CMOS versions	C+M	Area array	15,360 × 15,360–23,760 × 18,012	VIS	Camera Link, CoaXPress	72	—
VP Series	CCD & CMOS versions	C+M	Area array	6576 × 4384–14,192 × 10,640	VIS	Camera Link	30	—
VNP Series	CCD & CMOS versions	C+M	Area array	6576 × 4384–23,760 × 18,102	VIS	Camera Link, CoaXPress	30	—
VX Series	CCD & CMOS versions	C+M	Area array	5120 × 5120–6576 × 4384	VIS	Camera Link, GigE	4.7	—
VT Series - M42	—	M	TDI	3200 × 32–6560 × 256	VIS	Camera Link, CoaXPress	—	250 kHz

CAMERA MANUFACTURERS

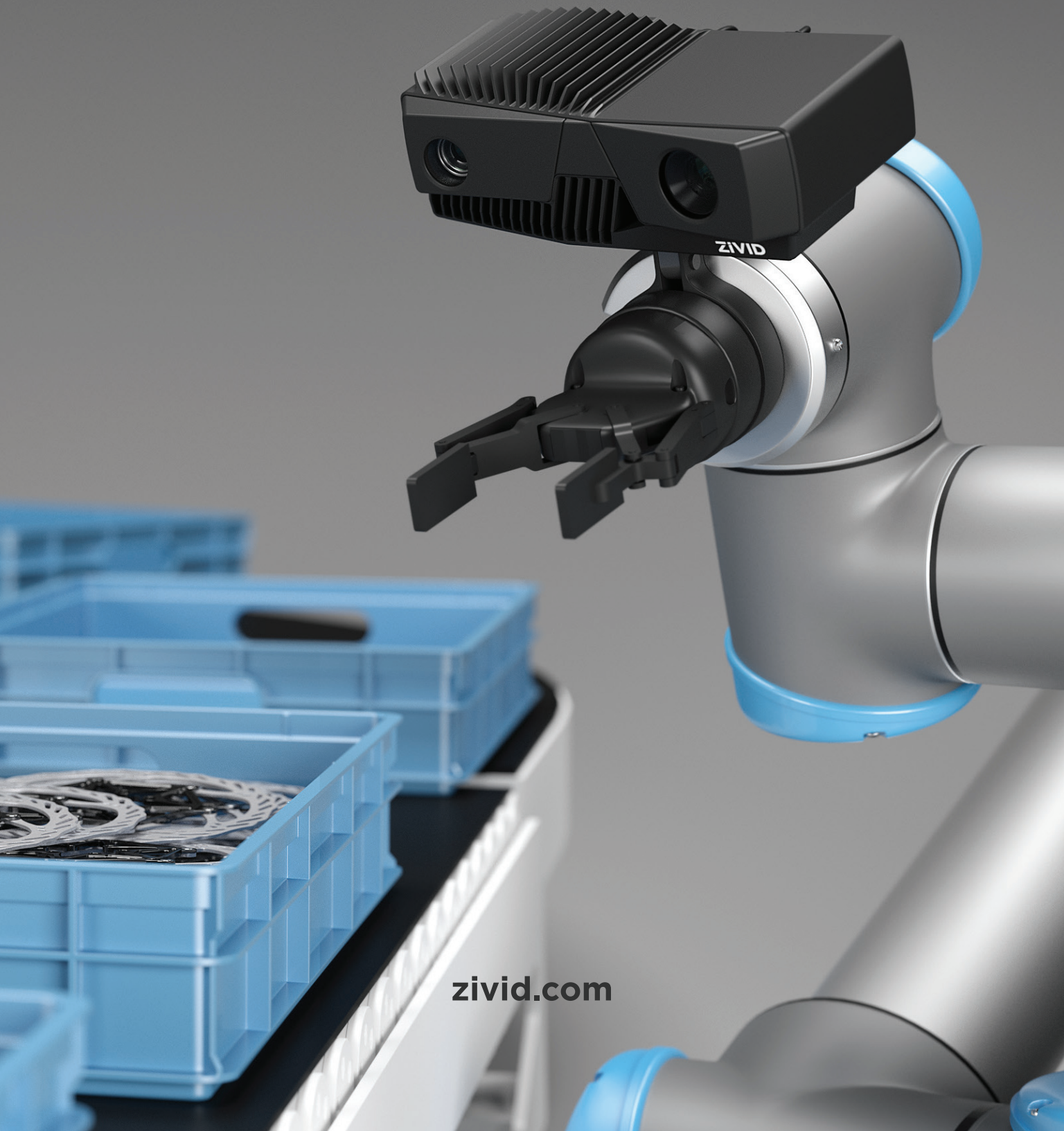
Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
Vieworks Co Ltd Anyang-si, Gyeonggi-do, South Korea; 82-70-4910-9812; www.vieworks.com; vision@vieworks.com								
VT Series - M72	—	M	TDI	4096 × 64–17,824 × 256	VIS	Camera Link, CoaXPress	—	250 kHz
VT Series - M95	—	M	TDI	16,384 × 256–23,360 × 256	VIS	CoaXPress	—	140 kHz
VS Series	CMOS	M	Area array	2048 × 1150	—	USB3	79.4	—
VQ Series	CMOS	M	—	728 × 544–5472 × 3648	—	GigE	291	—
VTC Series	—	C	TDI	—	—	Camera Link, CoaXPress, GigE	—	140 kHz
Vision & Control GmbH Suhl, Thuringia, Germany; 49-3681-7974-0; www.vision-control.com; sales@vision-control.com								
pictor M1606E	CCD	M	Area array	640 × 480	VIS	Ethernet, RS-232	63	—
pictor M1617E	CCD	M	Area array	1024 × 768	VIS	Ethernet, RS-232	20	—
pictor M1817E	CCD	M	Area array	1024 × 768	VIS	Ethernet, RS-232	20	—
pictor M1821E	CCD	M	Area array	1600 × 1200	VIS	Ethernet, RS-232	10	—
pictor M1856E	CCD	M	Area array	640 × 480	VIS	Ethernet, RS-232	242	—
pictor N	CMOS	C	—	1600 × 1200	VIS	Digital I/O, Ethernet, RS-232	—	—
Vision Components GmbH Ettlingen, Germany; 603-598-2588; www.vision-components.com; info@vision-components.com								
MIPI Camera Module	CMOS	C+M	Area array	≤4072 × 3046	NIR	MIPI CSI-2	≤530	—
VCsBC Nano Z 00xx	CMOS	C+M	Area array	1600 × 1200	NIR, VIS	Digital I/O, Ethernet, GigE, RS-232	60–230	—
VCsBC nano Z-RH 0010 Embedded OEM Vision System	CMOS	C+M	Area array	736 × 480	NIR	Ethernet, RS-232	134	—
VC nano Z-LED Series	CMOS	C+M	Area array	≤1920 × 1200	NIR, VIS	Digital I/O, Ethernet, RS-422/LVDS	≤174	—
VC pro Z Series SoC based Smart Camera family	CMOS	C+M	Area array	≤1920 × 1200	NIR, VIS	Digital I/O, Ethernet, RS-232	≤174	—
VC nano 3D-Z Embedded Laser Triangulation Scanner	CMOS	M	Line scan	1440 × 1080	NIR	Digital I/O, Ethernet, GigE, RS-232	—	2 MHz
VC nano Z 0252 Embedded Vision System	CMOS	C+M	Area array	2048 × 1536	NIR	Ethernet, RS-232	88	—
VCsBC nano Z-RH-2 0015	CMOS	C+M	Area array	≤1920 × 1200	NIR	Digital I/O, Ethernet, GigE, RS-232	≤174	—
Vision Research Wayne, NJ, USA; 973-696-4500; www.phantomhighspeed.com; phantom@ametek.com								
Phantom Ultrahigh-Speed Cameras	CMOS	C+M	—	1280 × 800, 128 × 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 × 800	VIS	Digital I/O, Ethernet	3000	—
Phantom 4K and Media Production	CMOS	C+M	—	4096 × 2304, 1280 × 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	—
S990	CMOS	C+M	—	—	—	CoaXPress	1000+	—
Phantom S200/210	CMOS	C+M	—	—	—	CoaXPress	7000	—
VRmagic Imaging GmbH Mannheim, Germany; 49-621-400416-20; www.vrmagic-imaging.com; info@vrmagic-imaging.com								
LineScan 3D Sensor Product Family	3D	M	Line scan	—	VIS	GigE	—	—
RIC10 Camera Family	CMOS	C+M	Area array	—	VIS	Ethernet, 10 GigE, 5 GigE	170–340 (full)	10 Gbps
XIMEA 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 × 1216, 2064 × 1544, 2464 × 2056, 4112 × 2176, 4112 × 3008	NIR, VIS	Digital I/O, USB3	165, 122, 76, 43, 31	5 Gbps
Hyperspectral USB3 camera	Multi-spectral	C+M	Line scan	2048 × 8, 2048 × 5, 512 × 272, 409 × 217	Hyper-spectral, NIR, VIS	USB3	170 hypercubes	5 Gbps
48 and 20 Mpix high resolution PCIe cameras	CMOS	C+M	Area array	7920 × 6004, 5120 × 3840	VIS	Digital I/O, Fiber optic, PCIe	30	20 Gbps

CAMERA MANUFACTURERS

Product	Sensor type	Color/ Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
XIMEA Münster, NRW, Germany; 49-251-202-408-0; www.ximea.com; info@ximea.com								
12 Mpix Fast speed high resolution cameras	CMOS	C+M	Area array	4096 × 3072	NIR, VIS	Digital I/O, Fiber optic, PCIe	333	64 Gbps
High speed cameras with up to 3500 Fps	CMOS	C+M	Area array	1280 × 864	VIS	Digital I/O, Fiber optic, PCIe, Proprietary	3500+	64 Gbps
Scientific sCMOS cameras	CMOS	C+M	Area array	2048 × 2048, 5056 × 2968	NIR, VIS	PCIe, Proprietary, USB3	82	20 Gbps
USB 3.1 cameras with CMOS	CMOS	C+M	Area array	648 × 488, 1280 × 1024, 2048 × 1088, 2048 × 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 × 1944	VIS	Digital I/O, USB 1.0/2.0	5	480 Mbps
X-RAY cameras based on sCMOS	CMOS	M	Area array	5056 × 2968	X-ray	USB3	17	—
Multiple camera platform	CMOS	C+M	Area array	1936 × 1216, 2064 × 1544, 2464 × 2056, 4112 × 2176, 4112 × 3008	NIR, VIS	PCIe, Proprietary, USB3	340	—
Cooled cameras with USB3 and CCD	CMOS	C+M	Area array	2048 × 2048, 3296 × 2472, 4864 × 3232, 6576 × 4384	NIR, VIS	Digital I/O, USB3	28, 17, 8, 4	5 Gbps
X-RAY cooled cameras - High resolution	CCD	C+M	Area array	4008 × 2672, 4904 × 3280	X-ray	Digital I/O, FireWire	2	98 MBps
Scientific grade Sony CCD with USB3	CCD	C+M	Area array	1940 × 1460, 2758 × 2208, 3380 × 2704, 4242 × 2830	NIR, VIS	Digital I/O, USB3	57, 28, 20, 15	5 Gbps
Embedded vision cameras	CMOS	C+M	Area array	1936 × 1216, 2064 × 1544, 2464 × 2056, 4112 × 2176, 4112 × 3008	Multi-spectral, NIR, VIS	Digital I/O, PCIe, Proprietary, USB3	166, 218, 165, 95, 69	20 Gbps
Board level cameras from VGA to 16 Mpix	CCD	C+M	Area array	4872 × 3248	NIR, VIS	Digital I/O, Fiber optic, FireWire, PCIe, Proprietary, USB 1.0/2.0, USB3	≥500	5 Gbps
Peltier Cooled Scientific Grade CCD	CCD	C+M	Area array	4904 × 3280	NIR, X-ray, VIS	Digital I/O, FireWire	1.5	98 MBps
Thunderbolt enabled industrial cameras	CCD	C+M	Area array	1920 × 1200, 5120 × 3840	NIR, VIS	Digital I/O, Fiber optic, PCIe, Proprietary	165, 30	20 Gbps
Micro 18 Mpix camera - USB 3.0 CMOS	CMOS	C	Area array	4912 × 3680	VIS	USB3	20	—
High speed cameras with HD at 2500 Fps	CMOS	C+M	Area array	1920 × 1080	VIS	Digital I/O, Fiber optic, PCIe, Proprietary	2500+	64 Gbps
NIR camera models from 1 to 12 Mpix	CMOS	M	Area array	1280 × 1024, 2048 × 1088, 2048 × 2048, 4096 × 3072	NIR, VIS	PCIe, USB3	333	—
XpctralTEK Celeiros, Braga, Portugal; www.xpctraltek.com; info@xpctraltek.com								
XpeCAM X01	Multi-spectral	M	Area array	5 MPixels	IR, Multi-spectral, NIR, UV, VIS	USB3	15	—
Zivid Oslo, Norway; 47-21022472; www.zivid.com; info@zivid.com								
Zivid One Plus	3D	C+M	Area array	1920 × 1200	VIS	USB3	—	13 Hz (full)

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zivid.com

WORLDWIDE INDUSTRIAL CAMERA DIRECTORY

CAMERA DISTRIBUTORS

Product	Sensor type	Color/ Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
1stVision Inc Andover, MA, USA; 978-474-0044; www.1stvision.com; info@1stvision.com								
Allied Vision Goldeye SWIR Series	InGaAs	M	Area array	320 × 256, 640 × 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 Development Systems RE/FA IP65/67 GigE Series	—	C+M	Area array	—	NIR, VIS	GigE	205	110 MB/s
Allied Vision Manta Series	—	C+M	Area array	—	NIR, VIS	Digital I/O, Ethernet, GigE	≥1000	110 MB/s
Teledyne DALSA Linea Line Scan Series	CMOS	C+M	Line scan	2048 × 1-16, 384 × 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 Development Systems 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 Development Systems 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 Callbir 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	—	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
A&B Software New London, CT, USA; 860-823-8301; www.ab-soft.com; sales@ab-soft.com								
GigESim 3.1	—	C+M	Area array	—	—	10 GigE, 5 GigE, GigE	5000	—
Prosilica GX series	CCD	C+M	Area array	—	VIS	GigE	—	—
Prosilica GC series	CCD	C+M	Area array	—	VIS	GigE	—	—
Amazon GigE Vision series	CCD	C+M	Area array	—	VIS	Ethernet, GigE	—	—
Manta GigE series	CCD	C+M	Area array	—	—	GigE	—	—
Adept Turnkey Pty Ltd Osborne Park, WA, Australia; 61-8-9242-5411; www.adept.net.au; adept@adept.net.au								
Area Scan Cameras	—	C+M	Area array	—	IR, LWIR, Multispectral, SWIR, NIR, UV, VIS	Analog, Camera Link, CoaXPress, CCIR, Ethernet, Fiber optic, FireWire, GigE, HD-SDI, PAL, PCIe, RGB, S-Video, USB 1.0/2.0, USB3	—	—
Line Scan Cameras	—	C+M	Line scan	—	IR, Multispectral, SWIR, NIR, UV, VIS	Camera Link, CoaXPress, Ethernet, GigE, RGB, USB3	—	—
High Speed Cameras	CMOS	C+M	Area array	—	IR, NIR, VIS	Ethernet, GigE	≤5,000,000	—
3D Cameras	3D	C+M	Area array	—	VIS	Ethernet, GigE	—	≥5000 Hz
Hyperspectral Cameras and Systems	Multispectral	—	Area array	—	IR, LWIR, Multispectral, MWIR, SWIR, NIR, UV, VIS	Ethernet, GigE	—	—
ATO Automation Los Angeles, CA, USA; 800-585-1519; www.ato.com; sales@ato.com								
GigE Vision Industrial Camera	CMOS	C+M	Line scan	—	Hyperspectral, IR, LWIR, Multispectral, MWIR, SWIR, NIR, X-ray, VIS	GigE	—	—

CAMERA DISTRIBUTORS

Product	Sensor type	Color/ Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
Bock Optronics Inc Toronto, ON, Canada; 416-674-2804; www.bockoptronics.ca; sales@bockoptronics.ca								
Bock Optronics	CCD	C+M	Area array	—	NIR, VIS	Analog, DVI, Ethernet, HDMI, HD-SDI, NTSC/PAL/RS-170	—	—
Basler	CCD & CMOS versions	C+M	Area array	—	NIR, VIS	Camera Link, CoaXPress, GigE, MIPI CSI-2, USB3	—	—
Mikrotron	CMOS	C+M	Area array	—	NIR, VIS	Camera Link, CoaXPress, Fiber optic, GigE	—	—
Vieworks	CCD & CMOS versions	C+M	Area array	—	VIS	Camera Link, CoaXPress, GigE, USB3	—	—
Tattile	CCD & CMOS versions	C+M	Area array	—	SWIR, NIR, VIS	Camera Link, GigE	—	—
Baumer Optronic	CCD & CMOS versions	C+M	Area array	—	NIR, VIS	Camera Link, 10 GigE, GigE, USB3	—	—
Emitted Energy Sterling Heights, MI, USA; 855-752-3347; www.emittedenergy.com; sales@emittedenergy.com								
FLIR A35	Microbolometer	M	Area array	320 × 256	IR, LWIR	Ethernet, GigE	60	60 Hz
FLIR A315	Microbolometer	M	Area array	320 × 240	IR, LWIR	Ethernet, GigE	60	60 Hz
FLIR A615	Microbolometer	M	Area array	640 × 480, 640 × 240, 640 × 120	IR, LWIR	GigE, USB 1.0/2.0	—	50–200 Hz
FLIR A310	Microbolometer	M	Area array	320 × 240	IR, LWIR	Analog, Digital I/O, Ethernet, GigE, NTSC, PAL, Proprietary, RS-170	30	—
FLIR A65	Microbolometer	M	Area array	640 × 512	IR, LWIR	Ethernet, GigE	30	30 Hz
FLIR Ax8	Microbolometer	M	Area array	—	IR, LWIR, Multispectral	Digital I/O, Proprietary	9	9 Hz
FLIR A6650	InSb	M	Area array	640 × 512	IR, MWIR	Analog, GigE	—	0.0015–60 Hz
FRAMOS Taufkirchen/Munich, Germany; 49-89-710667-0; www.framos.com; info@framos.com								
Tattile S200 Smart Camera HYP	CMOS	M	Line scan	—	Hyperspectral	GigE	180	—
Image Ops 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 × 256	SWIR	Camera Link, GigE	228 (max)	6.25 MHz
Supremia Imaging Camera	CCD	C	—	8032 × 5360	—	Camera Link	4. 5.5 (max)	—
GNAT 1080p 60	CMOS	C	—	1920 × 1080	—	HD-SDI, PAL	60	—
Mikrotron EoSens CL	CMOS	C+M	Area array	1280 × 1024	VIS	Camera Link	500	—
Verio HD II	CMOS	C	—	1920 × 1080	IR	DVI, HD-SDI, NTSC, PAL	60	—
Mega Speed HHC X3 High Speed Portable Camera	—	C+M	—	800 × 600	—	GigE	1000	—
Sentech Cameras - STC-MCA-5MUSB3 and STC-MBA5MUSB3	CCD	C+M	—	2592 × 1944	—	USB3	123	—
Mikrotron EoSens MC1362	CMOS	M	Area array	1280 × 1024	VIS	Camera Link	506	—
Macnica Americas Inc Solana Beach, CA, USA; 858-771-0846; www.macnica.com/americas; info.mai@macnica.com								
Leopard Embedded Cameras	CCD & CMOS versions	C+M	Area array	—	VIS	FPD-Link III, HDMI, HDTV, LVDS, MIPI CSI-2, USB 1.0/2.0, USB3	—	—
Pembroke Instruments LLC San Francisco, CA, USA; 415-860-4217; www.pembrokeinstruments.com/swir-cameras; sales@pembrokeinstruments.com								
GigE SWIR InGaAs Cameras	InGaAs	M	Area array	640 × 512, 320 × 256	SWIR	Analog, Camera Link, GigE, USB3	≤250	—
Phase 1 Technology Corp 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	—

CAMERA DISTRIBUTORS

Product	Sensor type	Color/Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
Phase 1 Technology Corp Deer Park, NY, USA; 800-683-0068; www.phase1vision.com; info@phase1tech.com								
Flir A35f19mm	CCD	M	Area array	—	IR	GigE	7.5	—
JAI SP-20000C-PMCL	CMOS	C+M	Area array	—	X-ray	Camera Link	30	—
Quantum Design UK and Ireland Ltd Leatherhead, United Kingdom; 44-1372-378-822; www.qd-uki.co.uk; info@qd-uki.co.uk								
Cheetah-640	InGaAs	M	Area array	640 × 512	NIR	Camera Link, GigE	1730	—
Gobi-384	Microbolometer	M	Area array	384 × 288	LWIR	Camera Link, Ethernet	50	—
XEVA 1.7 320	InGaAs	M	Area array	320 × 256	NIR	Analog, Camera Link, USB 1.0/2.0	350	—
XEVA 1.7 640	InGaAs	M	Area array	640 × 512	NIR	Analog, Camera Link, USB 1.0/2.0	90	—
XEVA 2.5 320	MCT	M	Area array	320 × 256	SWIR	Camera Link, USB 1.0/2.0	100	—
XEVA LIN	InGaAs	M	Line scan	512 × 1	NIR	Analog, Camera Link, USB 1.0/2.0	10,000	—
XEVA VIS 320	InGaAs	M	Area array	320 × 256	VIS	Analog, Camera Link, USB 1.0/2.0	350	—
XMID 320	InSb	M	Area array	320 × 256	MWIR	Camera Link, USB 1.0/2.0	350	—
XMID 640	InSb	M	Area array	640 × 512	MWIR	Camera Link, USB 1.0/2.0	90	—
XS 1.7 320	InGaAs	M	Area array	320 × 256	NIR	Analog, USB 1.0/2.0	100	—
Saber1 Technologies LLC Lowell, MA, USA; 978-244-0490; www.saber1.com; info@saber1.com								
The Imaging Source DFK 33UX183	CMOS	C	—	—	—	USB3	18	—
Hikvision UAV-CZD1202-N	CMOS	C	—	—	—	NTSC, PAL	—	—
Imperx C5180	CMOS	C+M	—	—	NIR	10 GigE	21.7–40.7	32–360 MHz
Toshiba BU040M	CCD & CMOS versions	M	—	—	—	USB3	436	—
Ximea CB013MG-LX-X8G3-EF	CMOS	M	—	—	—	PCIe	3675	—
Toshiba Teli BG BG030	CCD & CMOS versions	M	Line scan	—	—	GigE	125	—
Imperx Cheetah Camera Link CLF-C4080	CMOS	C+M	—	—	—	Camera Link	67 (CL), 29 (U3V)	—
Adimec QUARTZ Series Q-12A180	CMOS	C+M	—	—	—	CoaXPress	187	—
KAYA Instruments JetCam 19	CMOS	C+M	—	—	—	Camera Link HS, CoaXPress, Fiber optic,	1920–2400	—
Systematic Vision Corp Ashland, MA, USA; 508-532-1116; www.systematicvision.com; info@systematicvision.com								
MV0-D2048x1088-C01-HS02-160-G2	Multispectral	C+M	Area array	2048 × 1088, 409 × 217	Hyperspectral	GigE	50	80 MHz
MV0-D1984-Q01-3D06-576-G2	CMOS	M	Area array	1984 × 1264	VIS	GigE	6610	72 MHz
HR-12000-S	CMOS	C+M	Area array	4096 × 3000	VIS	10 GigE	80	—
HB-50000	CMOS	C+M	Area array	7920 × 6004	VIS	10 GigE	30	—
SP-5000-CXP4	CMOS	C+M	Area array	2560 × 2048	VIS	CoaXPress	253	—
SP-20000-CXP2	CMOS	C+M	Area array	5120 × 3840	VIS	CoaXPress	30	—
EoSens 25CXP+	CMOS	C+M	Area array	5120 × 5120	VIS	CoaXPress	80	—
MSC-RGBN-1-A	CMOS	C+M	Area array	2048 × 2048	Multispectral	USB3	90	—
MV1-D1024E series	CMOS	M	Area array	1024 × 1024	VIS	Camera Link, GigE	150	160 MHz
Bonito Pro X-2620	CMOS	C+M	Area array	5120 × 5120	NIR, VIS	CoaXPress	79.7	—
Vision Systems Technology LLC Vista, CA, USA; 858-449-1562; www.visionsystech.com; sales@visionsystech.com								
Vieworks 155 MP CoaXPress Camera	CMOS	C+M	Area array	16384 × 9440	NIR, VIS	CoaXPress	15	3.5 GB/s
Vieworks VT High Sensitivity TDI Line Scan CoaXPress Cameras	CMOS	M	TDI	23,360 × 256, 17,824 × 256, 16,384 × 256, 12,480 × 256, 8912 × 128, 6560 × 256, 6240 × 128, 4640 × 256, 4096 × 64, 4096 × 128, 3200 × 128	NIR, VIS	Camera Link, CoaXPress	—	2.34 GB/s

CAMERA DISTRIBUTORS

Product	Sensor type	Color/ Mono	Scan type	Image format	Spectrum digitized	Interface	Frame/s	Data rate
Vision Systems Technology LLC Vista, CA, USA; 858-449-1562; www.visionsystech.com; sales@visionsystech.com								
Vieworks VC-90 MX Camera	CMOS	C+M	Area array	12560 × 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 × 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 × 3072	NIR, VIS	CoaXPress	330	4152 MP/s
Vieworks 71 MP 4.2 FPS Cameralink 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 × 6004	NIR	CoaXPress	≥30.9	—
Vieworks VN-200MX Camera (200 MP)	CMOS	C+M	Area array	7920 × 6004	VIS	CoaXPress	30	—

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