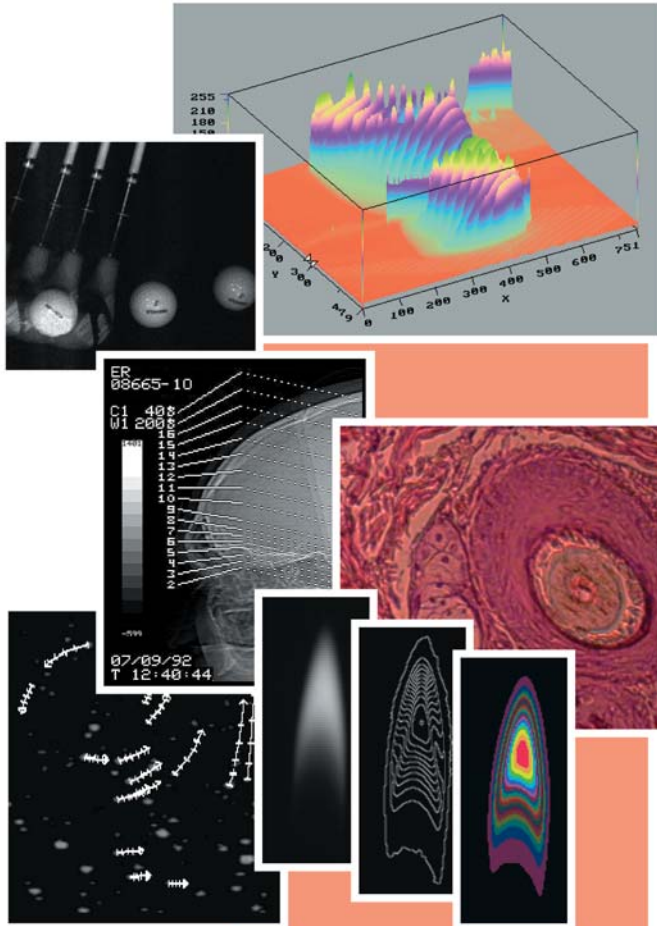


Ready-to-Run Image Analysis Software for PIXCI® Imaging Boards



APPLICATIONS

- Image Enhancement & Archival
- Image Analysis & Measurement
- Event & Motion Study
- Cine-loop Capture
- CT, MR, Ultrasound Image Capture
- Stereo & Multi-Camera Imaging
- Visual Inspection & Comparison
- Machine Vision & Quality Control
- Image Sensor Evaluation & Testing
- Particle Analysis, Counting & Tracking

PIXCI® IMAGING POWER

Designed to augment the features of PIXCI® imaging boards, XCAP puts image processing power at fingertip control. Under Windows 95, 98, ME, NT, 2000, XP, Vista, or 7, or under Linux, with a few clicks of the mouse, easy-to-use menus and dialogs allow simple or complex imaging tasks to be effortlessly completed.

IMAGING SOLUTIONS

XCAP is engineered to provide solutions across diverse imaging technologies. Quality control, medical imaging, microscopy, machine vision, research & development, and varied applications requiring motion capture, image enhancement, calibrated measurement, particle analysis, multi-camera imaging, or image archival, are all easily accomplished.

Together, a PIXCI® frame grabber and XCAP seamlessly integrate most popular video cameras with a broad array of features: individual, sequence, or triggered capture and display; video enhancement and pseudo-color; examination of image details; an extensive library of image processing functions; graphical annotation; image export, import, and printing; and programmable video resolution.¹

ADVANCED TECHNOLOGY

XCAP combines an easy-to-use Java-based graphical user interface with highly efficient "C" and assembler image processing routines. Multi-threading allows virtually unlimited views, graphs, and analyses of one or multiple images.

Simultaneous presentation and manipulation of multiple images, whether from PIXCI® frame buffers, TWAIN devices, or from disk, of varying resolutions and pixel formats, are all built-in features of XCAP.

XCAP includes a scripting language, user-defined tool bars, and non-procedural "spread sheet" programming for automating image analysis and inspection tasks. Other applications, in virtually any programming language, can remotely control XCAP through scripts.

ENGINEERED FLEXIBILITY

XCAP is a scientific and engineering package providing hundreds of qualitative and quantitative imaging operations. Engineered with a unique flexible architecture, XCAP empowers researchers and developers to meet today's requirements, as well as the evolving demands of future applications.

EPIX, Inc. has been providing imaging solutions to the research and industrial communities since 1984. Join the camera manufacturers, radiologists, astronomers, biologists, machine vision, quality control, and other engineers, who rely upon EPIX® imaging solutions.

FEATURES

XCAP VERSIONS

The XCAP-Lite version provides access to PIXCI® imaging board(s) and can also load, view, and save images and image sequences to/from files, while PIXCI® imaging board(s) are present and open for use. XCAP-Lite also exports customized video formats and camera serial commands to assist programming PIXCI® imaging boards via the XCLIB "C" library. For imaging boards capturing directly into host computer memory, XCAP-Lite is limited to 64 MBytes of frame buffer memory; no limitation on frame buffer memory when used with the PIXCI® CL3SD or PIXCI® SI2. XCAP-Lite is provided with each PIXCI® imaging board.

The XCAP-Ltd version provides access to PIXCI® imaging board(s) and includes all features of the -Lite version, adding graphics, load/save images and image sequences in additional formats, and more image viewer and convenience features. XCAP-Ltd can load, view, and save single images and image sequences even when the PIXCI® imaging board(s) are not present. XCAP-Ltd supports full access to as much as 4 GBytes of frame buffer memory under 32 bit systems, and is limited to 8 GByte of frame buffer memory under 64 bit systems.²

The XCAP-Std version provides access to PIXCI® imaging board(s) and includes all features of the -Ltd version, also enabling use of all image processing, measurement, graphics, load/save, image viewer, and analysis features. XCAP-Std can load, view, analyze, and save pre-existing images and image sequences even when the PIXCI® imaging board(s) are not present. XCAP-Std supports full access to as much as 4 GBytes of frame buffer memory under 32 bit systems, and to as much as 16 EByte of frame buffer memory under 64 bit systems.³

The XCAP-Viewer version allows loading and viewing single images and image sequences from files, such as those saved by XCAP-Lite, XCAP-Ltd, or XCAP-Std. XCAP-Viewer also allows browsing the hundreds of processing, measurement, analysis, load/save, and graphics features that can be applied to images and allows browsing XCAP's integrated camera controls.

INTEGRATED CAMERA CONTROLS

Built-in, camera-specific, on-screen graphical controls for selected cameras that are configured via RS-232, I²C, or Camera Link, integrate the camera's controls within XCAP! No need to also run the camera manufacturer's software - both PIXCI® imaging board and camera can be configured together!

For selected cameras configured by physical switch settings, XCAP provides an on-screen virtual camera and switches - setting the on-screen switches to match the physical switches easily configures the PIXCI® imaging board to match the camera!

For cameras controlled by hardwired signals via the PIXCI® frame grabber, XCAP provides a convenient graphical user interface.



Provides integrated camera controls for Adimec, Allied Vision, Atmel, Basler, Baumer, CIS, CMOS Sensor, Cohu, Dalsa, Dalstar, E2V, FLIR, Hamamatsu, Hitachi, Ikegami, Imperx, Indigo, Intevac, ISVI, Jai, Mikrotron, NED, PCO AG, Perkin Elmer, Point Grey, Princeton Instruments, Pulnix (Jai), Raptor Photonics, Reticon, Salvador Imaging, Sensors Unlimited, Sentech, Silicon Imaging, SILICON VIDEO®, Sony, Takenaka, Thomson/Thales, Toshiba Teli, Uniq Vision, Vieworks, and many other cameras. See the complete list of integrated camera controls at www.epixinc.com/guide/index.htm.

GENERIC CAMERA LINK CONFIGURATION

Use any Camera Link camera, combined with a Camera Link style PIXCI® imaging board⁴, even when XCAP doesn't provide camera specific controls. An easy to use graphical interface configures XCAP and PIXCI® imaging board for the camera's resolution, bit depth, color space, etc. Use the camera manufacturer's software for control of the camera via serial commands, or directly enter serial commands into XCAP's 'terminal' dialog.

MULTIPLE FORMAT VIDEO CAPTURE⁵

Capture from any video source supported by a PIXCI® imaging board: area scan, line scan, high resolution, high frame rate cameras; with digital or analog output; in monochrome or color; with 8, 10, 12, or more bits per monochrome pixel or color pixel component value.

Control the capture window, undersampling, and reconfigurable frame buffers. Capture from multiple cameras with multiple imaging boards.

Provides video rate image sequence capture, triggered event acquisition, continuous (circular) sequence acquisition until terminated by trigger event, video recording to memory, video recording to disk,⁶ live recursive or FIFO averaging, and live merge of RGB filtered monochrome images into color. Allows trigger on TTL signal, time of day, mouse, or video time code.

SOFTWARE TEST DRIVE: Have a PIXCI® imaging board with older software? Download XCAP from www.epixinc.com to see the newest XCAP solution.

View the camera compatibility list? Download XCAP-Viewer and click **PIXCI®**, **PIXCI® Camera Info**. Click under **Adjust Dialog** to see the built-in controls for your camera!

Don't yet have a PIXCI® imaging board? Download XCAP-Viewer and peruse its windows and features. (Many features, other than perusal and image display requires either a PIXCI® imaging board, or use of the XCAP-Ltd or -Std versions).

Peruse the full manual? Download XCAP-Viewer and click **Help, XCAP Reference Manual**.

SPECIFICATIONS

IMAGING DEVICES:

Supports any PIXCI® A, A310, D, D24, D32, D2X, D3X, CL1, CL2, CL3SD, E1, E1DB, E4, E4DB, E8, E8DB, EB1, EB1-PoCL, EC1, ECB1, ECB1-34, ECB2, EL1, EL1DB, ELS2, SI, SI1, SI2, SI4, SV2, SV3, SV4, SV5, or SV7 series imaging board.⁷

Up to eight (32 bit O.S.) or sixteen (64 bit O.S.) identical PIXCI® series imaging boards can be operated simultaneously.⁸ XCAP-Std version also allows operating up to four non-identical PIXCI® imaging boards.

Supports up to eight (32 bit O.S.) or sixteen (64 bit O.S.) SILICON VIDEO® 1281M, 1281C, 1310, 1310C, 2112, 2112C, 5C10, 5M10, 642M, 642C, 643M, 643C, 9C10, 9M001, 9M001C, 9T001C, 10C6, 10M6, 10C-CL, 10M-CL, WGA-C, or WGA-M cameras.

The XCAP-Std version allows capturing from TWAIN compatible devices (Windows only). The XCAP-Ltd and -Std versions also provide image load, save, process, analysis, and graphics features without a PIXCI® imaging board present.

OPERATING SYSTEM:

For Windows 95, 98, and ME, as a 32 bit, multi-threaded, application.

For Windows NT (V4.0), 2000, XP, Vista, and 7 as a 32 bit, multi-threaded, application.

For Windows XP(x64), Vista(x64), and 7(x64) as a 64 bit, multi-threaded, application.

For Linux (kernel V2.4.8 or later) on Intel 80x86.

For Linux (kernel V2.6 or later) on Intel x86-64.

REQUIREMENTS:

Processor/Memory - Intel Pentium or newer processor and 32-64 MBytes of memory exclusive of user-requested in-memory image buffers, operating system, and other software.

Graphics Display - Windows: Minimum: Windows compatible S/VA w. 16 bits per pixel. Suggested: ACP or PCI Express S/VA w. 24 or 32 bits per pixel.

Linux: Graphics display system (S/VA) supporting TrueColor or DirectColor mode. Video display rate depends upon video format, S/VA card, S/VA mode, and motherboard speed and bandwidth.⁹

Mouse - A Windows or Linux compatible mouse is required.

Printer - Image and graphics printing on any Windows or Linux compatible printer. Special support for high-quality printing on Hewlett-Packard PCL4 and PCL5 compatible printers, IBM 4019 Laser-Printer, Cal-Comp PlotMaster, and Alden 9315 printers.

Disk Space - Approximately 140 megabytes, exclusive of stored images and reports.

Other - The XCAP-Ltd and -Std versions use a USB¹⁰ authorization key, or a key on the parallel port which may be shared with a printer.

SOFTWARE INCLUDES:

Browsable reference manual. Printed reference manual included with XCAP-Std and -Ltd; optionally available for XCAP-Lite.

1. Features dependent upon hardware options, or upon a specific version of the PIXCI® imaging card, function only in conjunction with required hardware.

2,3. The maximum available computer based frame buffer memory is also limited by the computer hardware, configuration, and operating systems.

4. The PIXCI® CL3SD and CL1 are customized for one, or a group of similar, cameras and can't be used as a generic Camera Link imaging card.

5. Support for various video formats, resolution, triggering and other features are dependent upon specific version(s) of the PIXCI® imaging card, and are effective only in conjunction with required hardware.

6. Frame rate is dependent upon host PC hardware and disk drive(s).

7. Software may require upgrade to operate future versions of the PIXCI® imaging board. PIXCI® SV2 and SV3 are not supported under 64 bit Windows or Linux.

8. Each functional half of a PIXCI® E1DB, E4DB, E8DB, ECB2, EL1DB, ELS2, SI2, or SV7, or each functional quarter of a PIXCI® SI4, counts as one board.

9. Contact EPIX, Inc. for suggested S/VA cards which support full video rate display in conjunction with a specific PIXCI® imaging board.

10. Requires O.S. with support for USB devices.

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FEATURES

XCAP Feature	-Plus	-Std	-Ltd	-Lite (A)	-Viewer
File -					
- Load New Image	Yes	Yes	Yes	Yes (C)	Yes (C)
- Load New Image Sequence	Yes	Yes	Yes	Yes (C)	Yes (C)
- Image File Info	Yes	Yes	Yes	Yes	Yes
- TWIN Select Source (Win)	Yes	Yes	No	No	No
- TWIN New Acquire (Win)	Yes	Yes	No	No	No
Images -					
- New Image (Workspace)	Yes	Yes	Yes	Yes	Yes
Scripts -					
- Record	Yes	Yes	No	No	No
- Play	Yes	Yes	Yes	Yes	No
- Remote Control	Yes	Yes	No	No	No
- Load Tool Bar	Yes	Yes	No	No	No
Utility -					
- Black Board	Yes	Yes	No	No	No
- Message Log	Yes	Yes	Yes	Yes	Yes
- Audio Clip (Win)	Yes	Yes	Yes	Yes	No
- RS-232 Terminal	Yes	Yes	Yes	Yes	Yes
- Screen Capture	Yes	Yes	Yes	No	No
- I/O Port Peek & Poke (W95)	Yes	Yes	Yes	Yes	Yes
Devices -					
- Birger EF232	Yes	Yes	Yes	Yes	Yes
- Directed Perception Pan-Tilt Unit	Yes	Yes	Yes	Yes	Yes
- Fujinon CCTV Lens	Yes	Yes	Yes	Yes	Yes
- Illumination Technologies 3900	Yes	Yes	Yes	Yes	Yes
- Sagebrush Pan-Tilt Gimbal	Yes	Yes	Yes	Yes	Yes
- Volpi intralux dc-1100	Yes	Yes	Yes	Yes	Yes
PIXCI® -					
- Open/Close -					
- Single Board	Yes	Yes	Yes	Yes	No
- Multiple Identical Boards	Yes	Yes	Yes	Yes	No
- Multiple Different Boards	Yes	Yes	No	No	No
- Frame Buffer Memory Limit -					
w. PIXCI® CL3SD	None (E)	None (E)	None (E)	None	N/A
w. PCI 32 bit	None (E)	None (E)	4 GByte (E)	64 MByte(E)	N/A
w. PCI 64 bit	None (E)	None (E)	4 GByte (E)	64 MByte(E)	N/A
w. PCI Express & 32 bit O.S.	None (E)	None (E)	4 GByte (E)	64 MByte(E)	N/A
w. PCI Express & 64 bit O.S.	None (E)	None (E)	8 GByte (E)	64 MByte(E)	N/A
w. ExpressCard/54 & 32 bit O.S.	None (E)	None (E)	4 GByte (E)	64 MByte(E)	N/A
w. ExpressCard/54 & 64 bit O.S.	None (E)	None (E)	8 GByte (E)	64 MByte(E)	N/A
- Driver Assistant/Wizard	Yes	Yes	Yes	Yes	No
- Video Setup	Yes	Yes	Yes	Yes	No
- Export Video Setup	Yes	Yes	Yes	Yes	No
- Import Video Setup	Yes	Yes	Yes	Yes	No
- TWIN Sourcery (Win)	Yes	Yes	Yes	Yes	No
- Image-Pro Sourcery (Win)	Yes	Yes	Yes	Yes	No
- Status	Yes	Yes	Yes	Yes	No
- Serial Terminal	Yes	Yes	Yes	Yes	No
- Connections Info	Yes	Yes	Yes	Yes	Yes
- Camera Info	Yes	Yes	Yes	Yes	Yes
- Camera Specific Controls	Yes (F)	Yes (F)	Yes (F)	Yes (F)	No
Help -					
- XCAP Release Notes	Yes	Yes	Yes	Yes	Yes
- XCAP Reference Manual	Yes	Yes	Yes	Yes	Yes
- PC Configuration Tips	Yes	Yes	Yes	Yes	Yes
File -					
- Save Image	Yes	Yes	Yes	Yes (C)	No
- Load Image	Yes	Yes	Yes	Yes (C)	Yes (C)
- Save Image Sequence	Yes	Yes	Yes	No	No
- Load Image Sequence	Yes	Yes	Yes	Yes (C)	Yes (C)
- E-Mail Image	Yes	Yes	Yes	No	No
- Print Image	Yes	Yes	Yes	Yes (R)	No
- Duplicate Image	Yes	Yes	Yes	No	No
- Duplicate Image Sequence	Yes	Yes	Yes	No	No
- BlackBoard Image	Yes	Yes	No	No	No
View -					
- Full Screen	Yes	Yes	Yes	No	No
- Palette	Yes	Yes	Yes	Yes (G)	Yes (G)
- Sequence Play	Yes	Yes	Yes	Yes	No
- Sequence Thumbnails	Yes	Yes	Yes	No	No
- Cursor	Yes	Yes	Yes	Yes	Yes
- Zoom, Pan, Scroll	Yes	Yes	Yes	Yes	Yes
- Launch 2nd Viewer	Yes	Yes	Yes	No	No
Examine					
- Pixel Peek	Yes	Yes	Yes	Yes (H)	Yes (H)
- Pixel Peek & Poke	Yes	Yes	Yes	Yes	Yes
- Pixel Plot Row	Yes	Yes	Yes	Yes (I)	Yes (I)
- Pixel Plot Column	Yes	Yes	Yes	Yes (I)	Yes (I)
- Pixel Plot Buffer	Yes	Yes	Yes	Yes (I)	Yes (I)
- Pixel Plot All Rows	Yes	Yes	Yes	No	No
- Pixel Plot 3D	Yes	Yes	Yes	Yes (S)	Yes (S)
- SMPTE VITC	Yes	Yes	Yes	Yes	No
Modify -					
- Patterns	Yes	Yes	Yes	Yes	Yes
- Set	Yes	Yes	Yes (J)	Yes (J)	Yes (J)
- Arithmetic	Yes	Yes	No	No	No
- Binning	Yes	Yes	No	No	No
- Contrast Modification	Yes	Yes	No	No	No
- Convolution	Yes	Yes	No	No	No
- Correlation Map	Yes	Yes	No	No	No
- Edge Detection	Yes	Yes	No	No	No
- FFT	Yes	Yes	No	No	No
- HSB Tweak	Yes	Yes	No	No	No
- Interlace & Flicker	Yes	Yes	No	No	No
- Morphology	Yes	Yes	No	No	No
- Noise Generator	Yes	Yes	No	No	No
- Normalization	Yes	Yes	No	No	No
- Rotation & Shift	Yes	Yes	No	No	No
- Spatial Filtering	Yes	Yes	No	No	No
- Spatial Normalization	Yes	Yes	No	No	No
- Threshold	Yes	Yes	No	No	No
- Threshold Adaptive	Yes	Yes	No	No	No
- Warping	Yes	Yes	No	No	No
- Copy & Resize	Yes	Yes	No	No	No
- Pair Arithmetic	Yes	Yes	No	No	No
- Pair Normalization	Yes	Yes	No	No	No
- Triplet Normalization	Yes	Yes	No	No	No
- Average Sequence	Yes	Yes	No	No	No
- Difference Sequence	Yes	Yes	No	No	No
- Tile Sequence	Yes	Yes	No	No	No

XCAP Feature	-Plus	-Std	-Ltd	-Lite (A)	-Viewer
Measure -					
- Intensity Calibration	Yes	Yes	No	No	No
- Spatial Calibration	Yes	Yes	No	No	No
- Histogram	Yes	Yes	No	No	No
- Histogram Pair	Yes	Yes	No	No	No
- Mass & Moments	Yes	Yes	No	No	No
- Line Profile	Yes	Yes	Yes (K,L)	Yes (I,K,L)	Yes (I,K,L)
- Radial Mass Plot	Yes	Yes	No	No	No
- Ruler	Yes	Yes	Yes (K)	Yes (K)	Yes (K)
- Protractor	Yes	Yes	No	No	No
- Cartesian Reticle	Yes	Yes	Yes (K)	Yes (K)	Yes (K)
- Polar Reticle	Yes	Yes	No	No	No
- Dist. & Angle Crosshairs	Yes	Yes	No	No	No
- Shape Analysis	Yes	Yes	No	No	No
- Blob Analysis	Yes	Yes	No	No	No
- Particle Tracking	Yes	Yes	No	No	No
- SubPixel Edger	Yes	Yes	No	No	No
- Ellipse Fitter	Yes	Yes	No	No	No
- Correlation Finder	Yes	Yes	No	No	No
Draw -					
- Arrow	Yes	Yes	Yes	Yes	Yes
- Text	Yes	Yes	Yes	Yes	No
- Point	Yes	Yes	Yes	No	No
- Points	Yes	Yes	Yes	No	No
- Bezier Curve	Yes	Yes	Yes	No	No
- Circle	Yes	Yes	Yes	No	No
- Circle Arc	Yes	Yes	Yes	No	No
- Ellipse	Yes	Yes	Yes	No	No
- Ellipse Arc	Yes	Yes	Yes	No	No
- Line	Yes	Yes	Yes	Yes	Yes
- Parallel Lines	Yes	Yes	Yes	No	No
- Path Curve	Yes	Yes	Yes	No	No
- Polyline	Yes	Yes	Yes	No	No
- Rectangle	Yes	Yes	Yes	No	No
- Window	Yes	Yes	Yes	Yes	Yes
- Annulus	Yes	Yes	Yes	No	No
- Annulus Arc	Yes	Yes	Yes	No	No
- Bezier Region	Yes	Yes	Yes	No	No
- Elliptical Annulus	Yes	Yes	Yes	No	No
- Elliptical Annulus Arc	Yes	Yes	Yes	No	No
- Rectangle Array	Yes	Yes	Yes	No	No
- Path Enclosed	Yes	Yes	Yes	No	No
- Polygon	Yes	Yes	Yes	No	No
- Rectangular Frame	Yes	Yes	Yes	No	No
- Graphic Manager	Yes	Yes	Yes	Yes	Yes
- Paint Brush	Yes	Yes	Yes	No	No
- Paint Fill	Yes	Yes	Yes	No	No
- Image Overlay	Yes	Yes	No	No	No
Capture -					
- Snap (Video)	Yes	Yes	Yes	Yes	No
- Live (Video)	Yes	Yes	Yes	Yes	No
- Frame Date&Time Stamp	Yes	Yes	Yes	Yes	No
- First Buffer	Yes	Yes	Yes	Yes	No
- Next Buffer	Yes (M)	Yes (M)	Yes (M)	Yes (M)	No
- Previous Buffer	Yes (M)	Yes (M)	Yes (M)	Yes (M)	No
- Last Buffer	Yes (M)	Yes (M)	Yes (M)	Yes (M)	No
Adjustments -					
- Snap/Live Buffer Number	Yes	Yes	Yes	Yes	No
- Resolution (video window)	Yes	Yes	Yes	Yes	No
- Camera Specific Controls	Yes (F)	Yes (F)	Yes (F)	Yes (F)	No
- Color & White Balance	Yes (N)	Yes (N)	Yes (N)	Yes (N)	No
- Auto Gain/Exposure Control	Yes (O)	Yes (O)	Yes (O)	No (O)	No
- Pixel Normalization	Yes (V)	Yes (V)	Yes (V)	Yes (V)	No
- Load & Save Presets	Yes	Yes	Yes	Yes	No
Shortcuts					
- GIO Event Capture Single	Yes	Yes	Yes	Yes	No
- GIO Event Capture Sequence	Yes	Yes	Yes	Yes	No
- Waterfall Display	Yes	Yes	Yes	Yes	No
- RGB Merge	Yes	Yes	Yes	No	No
- Frame Average	Yes	Yes	No	No	No
- Quad Pixel Merge	Yes	No	No	No	No
- Lens Control -					
- Birger EF232	Yes	Yes	No(U)	No(U)	No
Sequence Capture (Single Sequence and Continuous Sequence) -					
- to Frame Buffers	Yes (E)	Yes (E)	Yes (E)	Yes (P)(E)	No
- to Frame Buffers at Event	Yes	Yes	Yes	No (Q)	No
- to Virtual Memory	Yes	Yes	Yes (T)	Yes (P)(T)	No
- to Virtual Memory at Event	Yes	Yes	Yes (T)	No (Q)	No
- to Image Files	Yes	Yes	Yes	No	No
- to Image Files at Event	Yes	Yes	Yes	No	No
- to Image Files - FTP Copy	Yes	Yes	Yes	No	No
- to Image Files - HTTP Server	Yes	Yes	Yes	No	No
- to Disk File	Yes	Yes	No	No	No
- to Disk File at Event	Yes	Yes	No	No	No
- to StreamStor (Win)	Yes	No	No	No	No

(continued)

FEATURES

Notes: (A) For -Lite, the imaging board is assumed installed and open for use, otherwise -Lite provides the same features as -Viewer. (C) For -Lite and -Viewer, images may not be loaded directly from an Internet URL, or saved directly to an FTP URL. (E) A combination of the characteristics of PIXCI® imaging cards, operating systems, and of software. The PIXCI® CL3SD and SI2 have on-board frame buffer memory, other PIXCI® imaging cards use computer based frame buffer memory. The PIXCI® CL1, CL2, D, D24, D32, D2X, D3X, SI, SV2, SV3, SV4, and SV5 are designed to access up to 4 GB of computer memory. The PIXCI® A310, E1, E1DB, E4, E4DB, E8, E8DB, EB1, EB1-PoCL, EC1, ECB1, ECB1-34, ECB2, EL1, EL1DB, ELS2, SI1, SI4, and SV7 are designed to access up to 16 EByte of computer memory (a theoretical limit, as no currently available PC provides 16 EByte of memory). For -Lite, a maximum of 64 MByte of computer based frame buffer memory is supported. On 32 bit systems, -Std and XCAP-Ltd support up to 4 GBytes of computer based frame buffer memory. On 64 bit systems, XCAP-Std supports up to 16 EByte of computer based frame buffer memory; XCAP-Ltd supports up to 8 GByte of computer based frame buffer memory. The maximum available computer based frame buffer memory is also limited by the computer hardware, configuration, and memory needed by the operating system. (F) Camera specific controls provided for cameras supported by PIXCI® ELS2, SI, SI1, SI2, and SI4, and for most digital cameras supported by PIXCI® CL1, CL2, CL3SD, D, D24, D32, D2X, D3X, E1, E1DB, E4, E4DB, E8, E8DB, EB1, EB1-PoCL, EC1, ECB1, ECB1-34, ECB2, EL1, and EL1DB: the PIXCI® Camera Info feature shows the specific, customized, support provided for each camera. (G) For -Lite and -Viewer, the View, Palette feature does not include save, load, import, or export, nor the "Extract Bright/Dark Reference" features. (H) For -Lite and -Viewer, the Examine, Pixel Peek feature does not include save. (I) For -Lite and -Viewer, plotting features do not include statistics, save, or export options. For -Viewer, plotting features do not include printing. (J) For -Ltd, -Lite, and -Viewer, the Modify, Set feature does not include non-rectangular regions. (K) For -Ltd, -Lite, and -Viewer, the Measure features do not include calibration. (L) For -Ltd, -Lite, and -Viewer, the Line Profile is limited to straight lines. (M) Subject to the amount of frame buffer memory versus image resolution yielding more than one frame buffer. (N) For Bayer output digital color cameras with software providing white balance and color corrections. The -Lite provides automatic, continuous, white balance only for SILICON VIDEO® cameras. The -Lite does not provide custom color calibration from a Macbeth chart or other color reference. (O) Software implemented AGC/AEC is provided for selected cameras: of those, -Lite provides AGC/AEC only for SILICON VIDEO® cameras. (P) For -Lite, the Sequence Capture does not include the time stamp feature, nor the strobe features added by software (as selected in the Sequence Capture dialog): any strobe features provided by the PIXCI® imaging board or camera (either inherent or selected in the Capture & Adjust dialog) are available. (Q) For -Lite, the "triggered" sequence capture is provided when the camera is being triggered (often referred to as "Async Reset Mode"): sequence capture from a free-running camera where the trigger or event is handled separately is not provided. (R) For -Lite, the image printing feature supports only the operating system's built-in image printing feature(s), not printing via EPIX® imaging drivers. (S) For -Lite and -Viewer, plotting features do not include save or export options. For -Viewer, plotting features do not include printing. (T) For -Lite, the sequence capture to virtual memory is limited to using 1 GByte of virtual memory For -Ltd, the sequence capture to virtual memory is limited to using 4 GByte of virtual memory. The operating system's configuration may impose additional limitations. (U) Interactive control of the lens is provided, but not automatic aperture or automatic focus features. (V) Software implemented pixel normalization is provided for SILICON VIDEO® and other selected cameras: of those, -Lite does not provide pixel normalization in generic Camera Link mode. (W95) Feature available only under Windows 95, 98, and ME. (Win) Feature available only under Windows.

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A DETAILED OVERVIEW — DIGITAL CAMERA SUPPORT

Camera	Type	Controls	Software White/Color Balance	Software AGC/AEC	Software per-Pixel Normalization	Camera	Type	Controls	Software White/Color Balance	Software AGC/AEC	Software per-Pixel Normalization
Adimtec -						Basler (continued) -					
1000c	Area Bayer	C.L. Serial	Yes	No	No	L202/L230-4K Dual Output	Line Mono	RS-232	N/A	No	No
1000m	Area Mono	C.L. Serial	N/A	No	No	L202/L230-4K Single Output	Line Mono	RS-232	N/A	No	No
RA-1000m	Area Mono	C.L. Serial	N/A	No	No	L203/L240-4K Dual Output	Line Mono	RS-232	N/A	No	No
A2000c/d	Area Bayer	C.L. Serial	Yes	No	No	L203/L240-4K Single Output	Line Mono	RS-232	N/A	No	No
A2000c/s	Area Bayer	C.L. Serial	Yes	No	No	L301kc	Line RGB	C.L. Serial	Yes	No	No
A2000m/d	Area Mono	C.L. Serial	N/A	No	No	L301kc-12K	Line RGB	C.L. Serial	Yes	No	No
A2000m/s	Area Mono	RS-232	N/A	No	No	L301 w. BIC RGB	Line RGB	RS-232	Yes	No	No
MX12P/2x3	Area Mono	RS-232	N/A	No	No	L304kc	Line RGB	C.L. Serial	No	No	No
MX12P/8x3	Area Mono	RS-232	N/A	No	No	L401k	Line Mono	C.L. Serial	N/A	No	No
OPAL-1000m/CL	Area Mono	C.L. Serial	N/A	No	No	L402k	Line Mono	C.L. Serial	N/A	No	No
OPAL-1000c/CL	Area Bayer	C.L. Serial	Yes	No	No	L501k	Line Mono	C.L. Serial	N/A	No	No
OPAL-1600m/CL	Area Mono	C.L. Serial	N/A	No	No	L502k	Line Mono	C.L. Serial	N/A	No	No
OPAL-1600c/CL	Area Bayer	C.L. Serial	Yes	No	No	L803k	Line Mono	C.L. Serial	N/A	No	No
OPAL-2000m/CL	Area Mono	C.L. Serial	N/A	No	No	Sprint spl.2048_39km	Line Mono	C.L. Serial	N/A	No	No
OPAL-2000c/CL	Area Bayer	C.L. Serial	Yes	No	No	Sprint spl.2048_70km	Line Mono	C.L. Serial	N/A	No	No
OPAL-4000m/CL	Area Mono	C.L. Serial	N/A	No	No	Sprint spl.2048_140km	Line Mono	C.L. Serial	N/A	No	No
OPAL-4000c/CL	Area Bayer	C.L. Serial	Yes	No	No	Sprint spl.4096_20km	Line Mono	C.L. Serial	N/A	No	No
OPAL-8000m/CL	Area Mono	C.L. Serial	N/A	No	No	Sprint spl.4096_39km	Line Mono	C.L. Serial	N/A	No	No
OPAL-8000c/CL	Area Bayer	C.L. Serial	Yes	No	No	Sprint spl.4096_70kc	Line RGB	C.L. Serial	No	No	No
						Sprint spl.4096_70km	Line Mono	C.L. Serial	N/A	No	No
						Sprint spl.4096_140km	Line Mono	C.L. Serial	N/A	No	No
Allied Vision Technologies -						Baumer -					
Bonito CMC-4000	Area Mono	C.L. Serial	N/A	No	No	HXC13	Area Mono	C.L. Serial	N/A	No	Yes
Bonito CMC-4000C	Area Bayer	C.L. Serial	Yes	No	No	HXC20	Area Mono	C.L. Serial	N/A	No	Yes
						HXC20c	Area Bayer	C.L. Serial	Yes	No	No
						HXC40	Area Mono	C.L. Serial	N/A	No	No
						HXC40c	Area Bayer	C.L. Serial	Yes	No	No
						SXC10	Area Mono	C.L. Serial	N/A	No	No
						SXC20	Area Bayer	C.L. Serial	N/A	No	No
						SXC21	Area Mono	C.L. Serial	N/A	No	No
						SXC40	Area Mono	C.L. Serial	N/A	No	No
						SXC80	Area Mono	C.L. Serial	N/A	No	No
Amber -						BioPhotonics -					
AE4128	Area Mono	RS-232	N/A	No	No	Qmax 650	Area Mono	RS-232	N/A	No	No
AE4256	Area Mono	RS-232	N/A	No	No	Chrontel -					
						CH5001	Area Mono/YUV	None	N/A	No	No
						CH5002	Area Mono/YUV	None	N/A	No	No
Aptina -						CIS					
MT9J001	Area Mono	I ² C Serial	N/A	No	Yes	VCC-F32S29CL Bayer Mode	Area Bayer	C.L. Serial	Yes	No	No
MT9J001C	Area Bayer	I ² C Serial	Yes	No	Yes	VCC-F32S29CL RGB Mode	Area Bayer	C.L. Serial	Yes	No	No
MT9V032	Area Mono	I ² C Serial	N/A	No	Yes	VCC-422V31PCL	Area Mono	C.L. Serial	N/A	No	No
MT9V032C	Area Bayer	I ² C Serial	Yes	No	Yes	VCC-G32S11CL	Area Mono	C.L. Serial	N/A	No	No
Atmel -						CMOS Sensor -					
ATMOS 1M30	Area Mono	C.L. Serial	N/A	No	No	i-cis S-206-0250	Line Mono	C.L. Serial	N/A	No	Yes
ATMOS 1M60	Area Mono	C.L. Serial	N/A	No	No	i-cis S-206-0520	Line Mono	C.L. Serial	N/A	No	Yes
ATMOS 2M30	Area Mono	C.L. Serial	N/A	No	No						
ATMOS 2M60	Area Mono	C.L. Serial	N/A	No	No	Colin -					
AVHVA C2 CL 4010	Line Mono	C.L. Serial	N/A	No	No	4110	Area Mono	None	N/A	No	No
AVHVA M4 CL 2048	Line Mono	C.L. Serial	N/A	No	No	6612	Area Mono	None	N/A	No	No
AVHVA M4 CL 6144	Line Mono	C.L. Serial	N/A	No	No	6612RGB	Area Bayer	None	Yes	No	No
AVHVA M4 CL 8192	Line Mono	C.L. Serial	N/A	No	No	7500	Area Mono	RS-232	N/A	No	No
AVHVA SC2 CL 4010	Line RGB	C.L. Serial	N/A	No	No	7500-CL	Area Bayer	C.L. Serial	N/A	No	No
Camelia 4M	Area Mono	RS-232	N/A	No	No	7700/7712-CL	Area Bayer	C.L. Serial	Yes	No	No
Camelia 4M Bayer	Area Bayer	RS-232	Yes	No	No	7700/7712-CL	Area Mono	C.L. Serial	N/A	No	No
Camelia C1 CL 8M	Area Bayer	C.L. Serial	Yes	No	No	7800/7820-CL	Area Bayer	C.L. Serial	Yes	No	No
Camelia C1 LV 8M	Area Bayer	RS-232	Yes	No	No	7800/7816-CL	Area Mono	C.L. Serial	N/A	No	No
Camelia M1 CL 8M	Area Mono	C.L. Serial	N/A	No	No	7800/7840-CL	Area Bayer	C.L. Serial	Yes	No	No
Camelia M1 LV 8M	Area Mono	RS-232	N/A	No	No	7800/7830-CL	Area Mono	C.L. Serial	N/A	No	No
						7800/7870-CL	Area Bayer	C.L. Serial	Yes	No	No
						7800/7860-CL	Area Mono	C.L. Serial	N/A	No	No
						7900/7920-CL	Area Bayer	C.L. Serial	Yes	No	No
						7900/7910-CL	Area Mono	C.L. Serial	N/A	No	No
Atmel-Grenoble -						CTEC Photonics -					
78C88A	Area Mono	None	N/A	No	No	1300	Area Mono	PIXCI® signals	N/A	No	No
TH78CA13	Line Mono	RS-232	N/A	No	No						
TH78CA14	Line Mono	RS-232	N/A	No	No	Cooke					
TH78CA15	Line Mono	RS-232	N/A	No	No	PCO.Edge	Area Mono	C.L. Serial	N/A	No	No
Basler -						Cypress -					
A101 (A113) & A101-P	Area Mono	RS-232	N/A	No	No	HAS2	Area Mono	I ² C Serial	N/A	No	Yes
A101-C (A113-C) & A101-CP	Area Bayer	RS-232	Yes	No	No	L11PA-300	Area Mono	I ² C Serial	N/A	No	Yes
A101-C(P) (A113-C) w. Toucan	Area RGB	RS-232	N/A	No	No	L11PA-300RGB	Area Bayer	I ² C Serial	Yes	No	Yes
A102c	Area Mono	RS-232	N/A	No	No						
A201(A210) Dual Output	Area Mono	RS-232	N/A	No	No	Dage-MTI -					
A201b	Area Mono	RS-232	N/A	No	No	IFG-300	Area Mono	RS-232	N/A	No	No
A201hc	Area Bayer	RS-232	Yes	No	No						
A201 One Tap w. Toucan	Area RGB	RS-232	N/A	No	No	Dalsa -					
A202c	Area Mono	C.L. Serial	N/A	No	No	IM28-SA	Area Mono	C.L. Serial	N/A	No	No
A202Kc	Area Bayer	C.L. Serial	Yes	No	No	IM75-SA	Area Mono	C.L. Serial	N/A	No	No
A301b	Area Mono	C.L. Serial	N/A	No	No	IM150-SA	Area Mono	C.L. Serial	N/A	No	No
A301hc	Area Bayer	C.L. Serial	Yes	No	No	CL-C3-0256A	Line Mono	PIXCI® signals	N/A	No	No
A301k	Area Mono	C.L. Serial	N/A	No	No	CL-C3-0256N	Line Mono	PIXCI® signals	N/A	No	No
A302b	Area Mono	C.L. Serial	N/A	No	No	CL-C3-0512A	Line Mono	PIXCI® signals	N/A	No	No
A302hc	Area Bayer	C.L. Serial	Yes	No	No	CL-C3-0512N	Line Mono	PIXCI® signals	N/A	No	No
A302k	Area Mono	C.L. Serial	N/A	No	No	CL-C3-1024A	Line Mono	PIXCI® signals	N/A	No	No
A403c	Area Bayer	C.L. Serial	Yes	No	No	CL-C3-1024N	Line Mono	PIXCI® signals	N/A	No	No
A404c	Area Mono	C.L. Serial	N/A	No	No	CL-C3-1728A	Line Mono	PIXCI® signals	N/A	No	No
A404kc	Area Bayer	C.L. Serial	Yes	No	No	CL-C3-1728N	Line Mono	PIXCI® signals	N/A	No	No
A406k	Area Mono	C.L. Serial	N/A	No	No	CL-C3-2048A	Line Mono	PIXCI® signals	N/A	No	No
A406kc	Area Bayer	C.L. Serial	Yes	No	No	CL-C3-2048N	Line Mono	PIXCI® signals	N/A	No	No
A501k	Area Mono	C.L. Serial	N/A	No	No	CL-C4-0256A	Line Mono	PIXCI® signals	N/A	No	No
A501hc	Area Bayer	C.L. Serial	Yes	No	No	CL-C4-0256N	Line Mono	PIXCI® signals	N/A	No	No
A504k	Area Mono	C.L. Serial	N/A	No	No	CL-C4-0512A	Line Mono	PIXCI® signals	N/A	No	No
A504kc	Area Bayer	C.L. Serial	Yes	No	No	CL-C4-0512N	Line Mono	PIXCI® signals	N/A	No	No
Ace acA2000-140km	Area Mono	C.L. Serial	N/A	No	No	CL-C4-1024A	Line Mono	PIXCI® signals	N/A	No	No
Ace acA2000-340km	Area Mono	C.L. Serial	N/A	No	No	CL-C4-1024N	Line Mono	PIXCI® signals	N/A	No	No
Ace acA2040-70km	Area Mono	C.L. Serial	N/A	No	No	CL-C4-1728A	Line Mono	PIXCI® signals	N/A	No	No
Ace acA2040-180km	Area Mono	C.L. Serial	N/A	No	No	CL-C4-1728N	Line Mono	PIXCI® signals	N/A	No	No
Ace acA2000-140kc	Area Bayer	C.L. Serial	Yes	No	No	CL-C4-2048A	Line Mono	PIXCI® signals	N/A	No	No
Ace acA2000-340kc	Area Bayer	C.L. Serial	Yes	No	No	CL-C5-2048N	Line Mono	PIXCI® signals	N/A	No	No
Ace acA2040-70kc	Area Bayer	C.L. Serial	Yes	No	No	CL-C6-2048A	Line Mono	PIXCI® signals	N/A	No	No
Ace acA2040-180kc	Area Bayer	C.L. Serial	Yes	No	No	CL-C7-2048T	Line Mono	PIXCI® signals	N/A	No	No
Aviator avA1000km	Area Mono	C.L. Serial	N/A	No	No	CL-C7-3456A	Line Mono	PIXCI® signals	N/A	No	No
Aviator avA1000kc	Area Bayer	C.L. Serial	Yes	No	No	CL-C7-3456N	Line Mono	PIXCI® signals	N/A	No	No
Aviator avA1600km	Area Mono	C.L. Serial	N/A	No	No	CL-C7-4096A	Line Mono	PIXCI® signals	N/A	No	No
Aviator avA1600kc	Area Bayer	C.L. Serial	Yes	No	No	CL-C7-4096N	Line Mono	PIXCI® signals	N/A	No	No
Aviator avA1900km	Area Mono	C.L. Serial	N/A	No	No	CL-C8-6090A	Line Mono	PIXCI® signals	N/A	No	No
Aviator avA1900kc	Area Bayer	C.L. Serial	Yes	No	No	CL-C8-6090N	Line Mono	PIXCI® signals	N/A	No	No
Aviator avA2300km	Area Mono	C.L. Serial	N/A	No	No	CL-CB-0512A	Line Mono	PIXCI® signals	N/A	No	No
Aviator avA2300kc	Area Bayer	C.L. Serial	Yes	No	No	CL-CB-0512T	Line Mono	PIXCI® signals	N/A	No	No
L50	Line Mono	PIXCI® signals	Yes	No	No	CL-CB-0512W	Line Mono	PIXCI® signals	N/A	No	No
L75	Line Mono	RS-232	N/A	No	No	CL-CB-1024A	Line Mono	PIXCI® signals	N/A	No	No
L101(L120) 1K Dual Output	Line Mono	RS-232	N/A	No	No	CL-CB-1024A TwoCam	Line Mono	PIXCI® signals	N/A	No	No
L101(L120) 1K Single Output	Line Mono	RS-232	N/A	No	No	CL-CB-1024T	Line Mono	PIXCI® signals	N/A	No	No
L101(L120) 2K Dual Output	Line Mono	RS-232	N/A	No	No	CL-CB-1024W	Line Mono	PIXCI® signals	N/A	No	No
L101(L120) 2K Single Output	Line Mono	RS-232	N/A	No	No	CL-CB-2048A	Line Mono</				

A DETAILED OVERVIEW — DIGITAL CAMERA SUPPORT (continued)

Camera	Type	Controls	Software White/Color Balance	Software AGC/AEC	Software per-Pixel Normalization	Camera	Type	Controls	Software White/Color Balance	Software AGC/AEC	Software per-Pixel Normalization
Dalsa (continued) -											
CL-F2-1024A	Line Mono	PIXCI® signals	N/A	No	No	e2v -					
CL-F2-2048A	Line Mono	PIXCI® signals	N/A	No	No	AViVA M2 CL 0514	Line Mono	C.L. Serial	N/A	No	No
CL-P1-0512	Line Mono	PIXCI® signals	N/A	No	No	AViVA M2 CL 1010	Line Mono	C.L. Serial	N/A	No	No
CL-P1-1024	Line Mono	PIXCI® signals	N/A	No	No	AViVA M2 CL 1014	Line Mono	C.L. Serial	N/A	No	No
CL-P1-2048	Line Mono	PIXCI® signals	N/A	No	No	AViVA M2 CL 2010	Line Mono	C.L. Serial	N/A	No	No
CL-P1-4096	Line Mono	PIXCI® signals	N/A	No	No	AViVA M2 CL 2014	Line Mono	C.L. Serial	N/A	No	No
CL-P4-6144 (CL-P4-6144W)	Line Mono	PIXCI® signals	N/A	No	No	AViVA SM2 CL 0514	Line Mono	C.L. Serial	N/A	No	No
CL-P4-8192 (CL-P4-8192W)	Line Mono	PIXCI® signals	N/A	No	No	AViVA SM2 CL 1010	Line Mono	C.L. Serial	N/A	No	No
CL-T5-1024	Line RGB	PIXCI® signals	No	No	No	AViVA SM2 CL 1014	Line Mono	C.L. Serial	N/A	No	No
CL-T5-2048	Line RGB	PIXCI® signals	No	No	No	AViVA SM2 CL 2010	Line Mono	C.L. Serial	N/A	No	No
CL-T7-1024	Line RGB	PIXCI® signals	No	No	No	AViVA SM2 CL 2014	Line Mono	C.L. Serial	N/A	No	No
CL-T7-2048	Line RGB	PIXCI® signals	No	No	No	AViVA SM2 CL 4010	Line Mono	C.L. Serial	N/A	No	No
CT-E1-0512A	Line Mono	PIXCI® signals	N/A	No	No	EG&G Reticon -					
CT-E2-0512A	Line Mono	PIXCI® signals	N/A	No	No	LD2002.1 chan.	Line Mono	RS-232	N/A	No	No
CT-E4-2048 (CT-E4-2048W)	Line Mono	PIXCI® signals	N/A	No	No	LD2002.2 chan.	Line Mono	RS-232	N/A	No	No
CT-E4-4096 (CT-E4-4096W)	Line Mono	PIXCI® signals	N/A	No	No	LD2005.1 chan.	Line Mono	RS-232	N/A	No	No
CT-F3-2048	Line Mono	PIXCI® signals	N/A	No	No	LD2005.2 chan.	Line Mono	RS-232	N/A	No	No
CT-F3-4096	Line Mono	PIXCI® signals	N/A	No	No	LD2010.1 chan.	Line Mono	RS-232	N/A	No	No
CT-P1-1024 (CT-P1-1024W)	Line Mono	PIXCI® signals	N/A	No	No	LD2010.2 chan.	Line Mono	RS-232	N/A	No	No
CT-P1-2048 (CT-P1-2048W)	Line Mono	PIXCI® signals	N/A	No	No	LD2020.1 chan.	Line Mono	RS-232	N/A	No	No
CT-P1-4096 (CT-P1-4096W)	Line Mono	PIXCI® signals	N/A	No	No	LD2020.2 chan.	Line Mono	RS-232	N/A	No	No
CT-P4-6144 (CT-P4-6144W)	Line Mono	PIXCI® signals	N/A	No	No	LD2040.1 chan.	Line Mono	RS-232	N/A	No	No
CT-P4-8192 (CT-P4-8192W)	Line Mono	PIXCI® signals	N/A	No	No	LD2040.2 chan.	Line Mono	RS-232	N/A	No	No
EC-11-01k40	Line Mono	PIXCI® signals	N/A	No	No	LD2060.1 chan.	Line Mono	RS-232	N/A	No	No
EC-11-02k40	Line Mono	PIXCI® signals	N/A	No	No	LD2060.2 chan.	Line Mono	RS-232	N/A	No	No
EC-11-05k40	Line Mono	PIXCI® signals	N/A	No	No	LD2080.1 chan.	Line Mono	RS-232	N/A	No	No
Falcon 14M100	Area Mono	C.L. Serial	N/A	No	No	LD2080.2 chan.	Line Mono	RS-232	N/A	No	No
Falcon PT-21-04M30	Area Mono	C.L. Serial	N/A	No	No	MD4013	Area Mono	None	N/A	No	No
Falcon PT-22-04M30	Area Bayer	C.L. Serial	Yes	No	No	YD5010	Line RGB	C.L. Serial	N/A	No	No
Falcon PT-41-04M60	Area Mono	C.L. Serial	N/A	No	No	YD5020	Line RGB	C.L. Serial	N/A	No	No
Falcon PT-42-04M60	Area Bayer	C.L. Serial	Yes	No	No	YD5040	Line RGB	C.L. Serial	N/A	No	No
Pantera DS-1A-01M30	Area Mono	C.L. Serial	N/A	No	No	YD5060	Line RGB	C.L. Serial	N/A	No	No
Pantera DS-21-01M60	Area Mono	C.L. Serial	N/A	No	No	Eastman Kodak -					
Pantera DS-21-04M15	Area Mono	C.L. Serial	N/A	No	No	KAC-0310	Area Mono	I²C Serial	N/A	No	Yes
Pantera PT-21-06M08	Area Mono	C.L. Generic	N/A	No	No	KAC-0310C	Area Bayer	I²C Serial	Yes	No	Yes
Piranha HS-4X-02K30	Line Mono	C.L. Serial	N/A	No	No	KAC-1310	Area Mono	I²C Serial	N/A	No	Yes
Piranha PC-30-02K30	Line RGB	C.L. Serial	N/A	No	No	KAC-1310C	Area Bayer	I²C Serial	Yes	No	Yes
Piranha PC-30-04K80	Line RGB	C.L. Serial	No	No	No	FastVideo -					
Piranha PC-30-04K60	Line RGB	C.L. Serial	No	No	No	LUPA-300	Area Mono	None	N/A	No	No
Piranha2 P2-4X-02K40	Line Mono	C.L. Serial	N/A	No	No	Focus -					
Piranha2 P2-4X-04K40	Line Mono	C.L. Serial	N/A	No	No	FIHR-2	Area Mono	RS-232	N/A	No	No
Piranha2 P2-4X-06K40	Line Mono	C.L. Serial	N/A	No	No	FIHR-2C	Area Bayer	RS-232	Yes	No	No
Piranha2 P2-4X-08K40	Line Mono	C.L. Serial	N/A	No	No	FIHR-M	Area Mono	RS-232	Yes	No	No
Piranha2 P2-21-1024	Line Mono	C.L. Serial	N/A	No	No	FIHR-RGB	Area Bayer	RS-232	Yes	No	No
Piranha2 P2-21-2048	Line Mono	C.L. Serial	N/A	No	No	Fovon -					
Piranha2 P2-21-4096	Line Mono	C.L. Serial	N/A	No	No	Fovon F13 DevCam	Area RGB	C.L. Serial	Yes	No	Yes
Piranha2 P2-21-6144	Line Mono	C.L. Serial	N/A	No	No	Gigaphoton -					
Piranha2 P2-21-8192	Line Mono	C.L. Serial	N/A	No	No	Gigaphoton-256	Line Mono	PIXCI signals	N/A	No	No
SP-11-01K30	Line Mono	PIXCI® signals	N/A	No	No	Gigaphoton-512	Line Mono	PIXCI signals	N/A	No	No
SP-11-01K40	Line Mono	PIXCI® signals	N/A	No	No	Gigaphoton-1024	Line Mono	PIXCI signals	N/A	No	No
SP-11-02K30	Line Mono	PIXCI® signals	N/A	No	No	Goodrich Sensors Unlimited -					
SP-11-02K40	Line Mono	PIXCI® signals	N/A	No	No	SU128	Area Mono	Switches	N/A	No	No
SP-11-02K60	Line Mono	PIXCI® signals	N/A	No	No	SU320	Area Mono	Switches	N/A	No	No
SP-11-05H30	Line Mono	PIXCI® signals	N/A	No	No	SU320M	Area Mono	RS-232	N/A	No	No
SP-11-05H40	Line Mono	PIXCI® signals	N/A	No	No	SU640	Area Mono	Switches	N/A	No	No
SP-13-02K30	Line Mono	PIXCI® signals	N/A	No	No	SU640SDV	Area Mono	C.L. Serial	N/A	No	No
SP-14-01K30	Line Mono	PIXCI® signals	N/A	No	No	SU640SDV-II	Area Mono	C.L. Serial	N/A	No	No
SP-14-01K40	Line Mono	PIXCI® signals	N/A	No	No	Hamamatsu -					
SP-14-02K30	Line Mono	PIXCI® signals	N/A	No	No	C4742-95-8	Area Mono	RS-232	N/A	No	No
SP-14-02K40	Line Mono	PIXCI® signals	N/A	No	No	C4742-95-10	Area Mono	RS-232	N/A	No	No
SP-14-05k40	Line Mono	PIXCI® signals	N/A	No	No	C4742-95-12	Area Mono	RS-232	N/A	No	No
Spyder2 S2-1x-01K40	Line Mono	C.L. Serial	N/A	No	No	C7942	Area Mono	PIXCI® signals	N/A	No	No
Spyder2 S2-1x-02K40	Line Mono	C.L. Serial	N/A	No	No	C9250DP	Area Mono	None	N/A	No	No
Spyder2 S2-1x-05H40	Line Mono	C.L. Serial	N/A	No	No	HanVision -					
Spyder2 S2-2x-04K40	Line Mono	C.L. Serial	N/A	No	No	HVDUO-5M	Area RGB	C.L. Serial	Yes	No	No
TR31-01K25	Line RGB	RS-232	No	No	No	HVDUO-10M (HVDUO3)	Area RGB	RS-232	Yes	No	No
TR31-01K25 10 Bit	Line RGB	RS-232	No	No	No	HVDUO-10M-CL	Area RGB	C.L. Serial	Yes	No	No
TR31-02K25	Line RGB	RS-232	No	No	No	HVS0/LO-11	Line Mono	None	N/A	No	No
TR31-02K25 10 Bit	Line RGB	RS-232	No	No	No	Hitachi -					
TR33-01K25	Line RGB	RS-232	No	No	No	DDX-101	Area RGB	RS-232	N/A	No	No
TR33-02K25	Line RGB	RS-232	No	No	No	KP-F30SCL	Area Mono	C.L. Serial	N/A	No	No
TR34-01K25	Line RGB	RS-232	No	No	No	KP-FR30SCL	Area Bayer	C.L. Serial	Yes	No	No
TR34-02K25	Line RGB	RS-232	No	No	No	KP-F31SCL	Area Mono	C.L. Serial	N/A	No	No
TR35-01K25	Line RGB	RS-232	No	No	No	KP-F31SCL	Area Bayer	C.L. Serial	N/A	No	No
TR35-02K25	Line RGB	RS-232	No	No	No	KP-F80SCL	Area Mono	C.L. Serial	N/A	No	No
Dalstar -						Hamamatsu -					
CA-D1-0064A	Area Mono	None	N/A	No	No	C4742-95-8	Area Mono	RS-232	N/A	No	No
CA-D1-0064T	Area Mono	None	N/A	No	No	C4742-95-10	Area Mono	RS-232	N/A	No	No
CA-D1-0256A	Area Mono	PIXCI® signals	N/A	No	No	C4742-95-12	Area Mono	RS-232	N/A	No	No
CA-D1-0256T	Area Mono	PIXCI® signals	N/A	No	No	C7942	Area Mono	PIXCI® signals	N/A	No	No
CA-D7T	Area Mono	PIXCI® signals	N/A	No	No	C9250DP	Area Mono	None	N/A	No	No
CA-D8-0512	Area Mono	PIXCI® signals	N/A	No	No	HanVision -					
DS-2x-01M40 (CA-DA4)	Area Mono	PIXCI® signals	N/A	No	No	HVDUO-5M	Area RGB	C.L. Serial	Yes	No	No
DS-4x-65K95S (CA-D6-0256)	Area Mono	PIXCI® signals	N/A	No	No	HVDUO-10M (HVDUO3)	Area RGB	RS-232	Yes	No	No
DS-4x-300K262 (CA-D6-0512)	Area Mono	PIXCI® signals	N/A	No	No	HVDUO-10M-CL	Area RGB	C.L. Serial	Yes	No	No
DS-11-16K7H (CA-D1-0128A)	Area Mono	PIXCI® signals	N/A	No	No	HVS0/LO-11	Line Mono	None	N/A	No	No
DS-12-16K3H (CA-D1-0128T)	Area Mono	PIXCI® signals	N/A	No	No	Hitachi -					
Dalstar(SMD) -						Hitachi -					
IM30P	Area Mono	RS-232	N/A	No	No	DDX-101	Area RGB	RS-232	N/A	No	No
IM30PC	Area Bayer	RS-232	Yes	No	No	KP-F30SCL	Area Mono	C.L. Serial	N/A	No	No
IM30TC	Area Bayer	RS-232	Yes	No	No	KP-FR30SCL	Area Bayer	C.L. Serial	Yes	No	No
IM60	Area Mono	RS-232	N/A	No	No	KP-F31SCL	Area Mono	C.L. Serial	N/A	No	No
4M4	Area Mono	RS-232	N/A	No	No	KP-F31SCL	Area Bayer	C.L. Serial	N/A	No	No
4M15	Area Mono	RS-232	N/A	No	No	KP-F80SCL	Area Mono	C.L. Serial	N/A	No	No
6M3P	Area Mono	RS-232	N/A	No	No	KP-F100	Area Mono	Switches	N/A	No	No
6M3PC	Area Bayer	RS-232	Yes	No	No	KP-F100A	Area Mono	RS-232	N/A	No	Yes
64K1M	Area Mono	RS-232	N/A	No	No	KP-F100A-CL	Area Mono	C.L. Serial	N/A	No	Yes
BT25	Area Mono	RS-232	N/A	No	No	KP-F100B	Area Mono	RS-232	N/A	No	Yes
DS-1x-01M15 (IM15)	Area Mono	RS-232	N/A	No	No	KP-F100B-CL	Area Mono	C.L. Serial	N/A	No	Yes
DS-1x-01M30 (IM30)	Area Mono	RS-232	N/A	No	No	KP-F100C	Area Mono	Switches	Yes	No	No
DS-1x-04M4 (4M4)	Area Mono	RS-232	N/A	No	No	KP-F100C	Area Bayer	Switches	Yes	No	No
DS-1x-06M3 (6M3P)	Area Mono	RS-232	N/A	No	No	KP-F100-S7	Area Mono	Switches	N/A	No	No
DVC -						Hamamatsu -					
DVC-08	Area Mono	None	N/A	No	No	KP-F100TV	Area Mono	RS-232	N/A	No	Yes
DVC-10	Area Mono	None	N/A	No	No	KP-F102	Area Mono	RS-232	N/A	No	No
DVC-1300C-RS-232	Area Bayer	RS-232	Yes	Yes	No	KP-F110	Area Mono	RS-232	N/A	No	No
DVC-1300C-RS-232	Area Bayer	Switches	Yes	No	No	KP-F120	Area Mono	RS-232	N/A	No	No
DVC-1300 w/o RS-232	Area Mono	Switches	N/A	No	No	KP-F120-CL	Area Mono	C.L. Serial	N/A	No	No
DVC-1310	Area Mono	RS-232	N/A	Yes	No	KP-F200-CL	Area Mono	C.L. Serial	N/A	No	No
DVC-1310AC	Area Bayer	RS-232	Yes	Yes	No	KP-F200SCL	Area Mono	C.L. Serial	N/A	No	No
DVC-1310AC-CL	Area Bayer	C.L. Serial	Yes	Yes	No	KP-F230SCL	Area Mono	C.L. Serial	N/A	No	No
DVC-1310AM	Area Mono	RS-232	N/A	No	No	KP-F230SCL	Area Mono	C.L. Serial	N/A	No	No
DVC-1310AM-CL	Area Bayer	C.L. Serial	N/A	Yes	No	KP-FR230SCL	Area Bayer	C.L. Serial	Yes	No	No
DVC-1310C	Area Mono	RS-232	Yes	Yes	No	KP-F500SCL	Area Mono	C.L. Serial	N/A	No	No
DVC-1312	Area Mono	RS-232	N/A	Yes	No	KP-F500SCL	Area Bayer	C.L. Serial			

A DETAILED OVERVIEW — DIGITAL CAMERA SUPPORT (continued)

Camera	Type	Controls	Software White/Color Balance	Software AGC/AEC	Software Gain/Offset Normalization	Camera	Type	Controls	Software White/Color Balance	Software AGC/AEC	Software per-Pixel Normalization
IMPERX -						Mikrotro -					
Bobcat ICL-B1020M	Area Mono	C.L. Serial	N/A	No	No	MC1310	Area Mono	C.L. Generic	N/A	No	No
Bobcat ICL-B1020M	Area Mono	C.L. Serial	N/A	No	No	MC1311	Area Bayer	C.L. Generic	Yes	No	No
Bobcat ICL-B1020C	Area Bayer	C.L. Serial	Yes	No	No	MC1360	Area Mono	C.L. Serial	N/A	No	Yes
Bobcat ICL-B1310M	Area Mono	C.L. Serial	N/A	No	No	MC1361	Area Bayer	C.L. Serial	Yes	No	Yes
Bobcat ICL-B1310C	Area Bayer	C.L. Serial	Yes	No	No	MC1362	Area Mono	C.L. Serial	N/A	No	Yes
Bobcat ICL-B1320M	Area Mono	C.L. Serial	N/A	No	No	MC1363	Area Bayer	C.L. Serial	Yes	No	Yes
Bobcat ICL-B1320C	Area Bayer	C.L. Serial	Yes	No	No	Mitsubishi Rayon -					
Bobcat ICL-B1410C	Area Bayer	C.L. Serial	Yes	No	No	MKS-2048-20	Line Mono	PIXCI® signals	N/A	No	No
Bobcat ICL-B1410M	Area Mono	C.L. Serial	N/A	No	No	MKS-5000-20	Line Mono	PIXCI® signals	N/A	No	No
Bobcat ICL-B1411M	Area Mono	C.L. Serial	N/A	No	No	MKS-5000-40	Line Mono	PIXCI® signals	N/A	No	No
Bobcat ICL-B1411C	Area Bayer	C.L. Serial	Yes	No	No	MKS-7450-20	Line Mono	PIXCI® signals	N/A	No	No
Bobcat ICL-B1610C	Area Bayer	C.L. Serial	Yes	No	No	MKS-7450-40	Line Mono	PIXCI® signals	N/A	No	No
Bobcat ICL-B1610M	Area Mono	C.L. Serial	N/A	No	No	Micron -					
Bobcat ICL-B1620C	Area Bayer	C.L. Serial	Yes	No	No	MT9M001	Area Mono	FC Serial	N/A	No	Yes
Bobcat ICL-B1620M	Area Mono	C.L. Serial	N/A	No	No	MT9M001C	Area Bayer	FC Serial	Yes	No	Yes
Bobcat ICL-B1621M	Area Mono	C.L. Serial	N/A	No	No	MT9P001	Area Mono	FC Serial	N/A	No	Yes
Bobcat ICL-B1621C	Area Bayer	C.L. Serial	Yes	No	No	MT9P001C	Area Bayer	FC Serial	Yes	No	Yes
Bobcat ICL-B1920C	Area Bayer	C.L. Serial	Yes	No	No	MT9V001C	Area Bayer	FC Serial	Yes	No	Yes
Bobcat ICL-B1920M	Area Mono	C.L. Serial	N/A	No	No	MT9V022	Area Mono	FC Serial	N/A	No	Yes
Bobcat ICL-B1921M	Area Mono	C.L. Serial	N/A	No	No	MT9V022C	Area Bayer	FC Serial	Yes	No	Yes
Bobcat ICL-B1921C	Area Bayer	C.L. Serial	Yes	No	No	MT9V403	Area Mono	FC Serial	N/A	No	Yes
Bobcat ICL-B2020M	Area Mono	C.L. Serial	N/A	No	No	MT9V403C	Area Bayer	FC Serial	Yes	No	Yes
Bobcat ICL-B2020M	Area Mono	C.L. Serial	N/A	No	No	NAC					
Bobcat ICL-B2320C	Area Bayer	C.L. Serial	Yes	No	No	HotShot 512	Area Mono	C.L. Serial	N/A	No	No
Bobcat ICL-B2320M	Area Mono	C.L. Serial	N/A	No	No	HotShot 512C	Area Bayer	C.L. Serial	Yes	No	No
Bobcat ICL-B2329C	Area Bayer	C.L. Serial	Yes	No	No	HotShot 1280	Area Mono	C.L. Serial	N/A	No	No
Bobcat ICL-B3320M	Area Mono	C.L. Serial	N/A	No	No	HotShot 1280C	Area Bayer	C.L. Serial	Yes	No	No
Bobcat ICL-B3320C	Area Bayer	C.L. Serial	Yes	No	No	NEC -					
Bobcat ICL-B4020C	Area Bayer	C.L. Serial	Yes	No	No	XC4040SA/T2	Line Mono	C.L. Serial	N/A	No	No
Bobcat ICL-B4020M	Area Mono	C.L. Serial	N/A	No	No	Perkin Elmer -					
Bobcat ICL-B4820M	Area Mono	C.L. Serial	N/A	No	No	LD3521-CL	Line Mono	PIXCI® signals	N/A	No	No
Bobcat ICL-B4820M	Area Mono	C.L. Serial	N/A	No	No	LD3521-LVDS	Line Mono	PIXCI® signals	N/A	No	No
Bobcat ICL-B4821M	Area Mono	C.L. Serial	N/A	No	No	LD3522-CL	Line Mono	PIXCI® signals	N/A	No	No
Bobcat ICL-B4821C	Area Bayer	C.L. Serial	Yes	No	No	LD3522-LVDS	Line Mono	PIXCI® signals	N/A	No	No
Bobcat ICL-B6620M	Area Mono	C.L. Serial	N/A	No	No	LD3523-CL	Line Mono	PIXCI® signals	N/A	No	No
Bobcat ICL-B6620C	Area Bayer	C.L. Serial	Yes	No	No	LD3523-LVDS	Line Mono	PIXCI® signals	N/A	No	No
Lynx IPX-1M48	Area Mono	C.L. Serial	N/A	No	No	LD3541-CL	Line Mono	PIXCI® signals	N/A	No	No
Lynx IPX-1M48C	Area Bayer	C.L. Serial	Yes	No	No	LD3541-LVDS	Line Mono	PIXCI® signals	N/A	No	No
Lynx IPX-1M48-L	Area Mono	C.L. Serial	N/A	No	No	LD3542-CL	Line Mono	PIXCI® signals	N/A	No	No
Lynx IPX-1M48-LC	Area Bayer	C.L. Serial	Yes	No	No	LD3542-LVDS	Line Mono	PIXCI® signals	N/A	No	No
Lynx IPX-2M30L-L	Area Mono	C.L. Serial	N/A	No	No	LD3543-CL	Line Mono	PIXCI® signals	N/A	No	No
Lynx IPX-2M30L-LC	Area Bayer	C.L. Serial	Yes	No	No	LD3543-LVDS	Line Mono	PIXCI® signals	N/A	No	No
Lynx IPX-2M30L	Area Mono	C.L. Serial	N/A	No	No	SmartBlue SB4040	Line Mono	C.L. Serial	N/A	No	No
Lynx IPX-2M30LC	Area Bayer	C.L. Serial	Yes	No	No	SmartBlue SB1440	Line Mono	C.L. Serial	N/A	No	No
Lynx IPX-4M15-L	Area Mono	C.L. Serial	N/A	No	No	SmartBlue SB2400	Line Mono	C.L. Serial	N/A	No	No
Lynx IPX-4M15-LC	Area Bayer	C.L. Serial	Yes	No	No	SmartBlue SB4480	Line Mono	C.L. Serial	N/A	No	No
Lynx IPX-11M5L	Area Mono	C.L. Serial	N/A	No	No	YD5010	Line RGB	C.L. Serial	Yes	No	No
Lynx IPX-11M5LC	Area Bayer	C.L. Serial	Yes	No	No	YD5020	Line RGB	C.L. Serial	Yes	No	No
Lynx IPX-16M3L	Area Mono	C.L. Serial	N/A	No	No	YD5040	Line RGB	C.L. Serial	Yes	No	No
Lynx IPX-16M3LC	Area Bayer	C.L. Serial	Yes	No	No	YD5060	Line RGB	C.L. Serial	Yes	No	No
Lynx IPX-VGA120L	Area Mono	C.L. Serial	N/A	No	No	Photon Vision -					
Lynx IPX-VGA120LC	Area Bayer	C.L. Serial	Yes	No	No	ACS-1	Area Mono	None	N/A	No	No
Lynx IPX-VGA210	Area Mono	C.L. Serial	N/A	No	No	Photofocus -					
Lynx IPX-VGA210C	Area Bayer	C.L. Serial	Yes	No	No	MV-D1024E	Area Mono	C.L. Generic	N/A	No	No
Lynx IPX-VGA210L	Area Mono	C.L. Serial	N/A	No	No	MV-D1280E	Area Mono	C.L. Generic	N/A	No	No
Lynx IPX-VGA210LC	Area Bayer	C.L. Serial	Yes	No	No	Photo Research -					
MDC-1004 (MDC-M1CL01)	Area Mono	C.L. Serial	N/A	No	No	PR-920	Area Mono	None	N/A	No	No
MDC-1004C (MDC-C1CL01)	Area Bayer	C.L. Serial	Yes	No	No	Point Grey -					
Indigo -						Gazette GZL-CL-22C5					
Alpha NIR	Area Mono	RS-232	N/A	No	No	Gazette GZL-CL-41C6	Area Mono	C.L. Serial	N/A	No	No
Phoenix-RITE	Area Mono	None	N/A	No	No	Princeton Instruments					
Infratec -						ES1602					
760	Area Mono	None	N/A	No	No	ES2001	Area Mono	C.L. Serial	N/A	Yes	Yes
Intevac -						ES2001 Dual					
MicroVista	Area Mono	C.L. Serial	N/A	No	No	ES2001 RGB	Area RGB/Bayer	C.L. Serial	Yes	Yes	Yes
INTRON -						ES2020					
12	Area Mono	RS-232	N/A	No	No	ES2020RGB	Area RGB/Bayer	C.L. Serial	Yes	Yes	Yes
12C	Area Bayer	RS-232	Yes	No	No	ES2091	Area Mono	C.L. Serial	N/A	Yes	Yes
ISVI -						ES2093 Dual					
IC-C0SHCM	Area Bayer	C.L. Serial	Yes	No	Yes	ES2093RGB	Area RGB/Bayer	C.L. Serial	Yes	Yes	Yes
IC-C10HCM	Area Bayer	C.L. Serial	Yes	No	Yes	ES3200	Area Mono	C.L. Serial	N/A	Yes	Yes
IC-M15HEM	Area Mono	C.L. Serial	N/A	No	Yes	ES4020	Area Mono	C.L. Serial	N/A	Yes	Yes
IC-C15HEM	Area Bayer	C.L. Serial	Yes	No	Yes	ES4020 Dual	Area Mono	C.L. Serial	N/A	Yes	Yes
IC-M25HEM	Area Mono	C.L. Serial	N/A	No	Yes	ES4020RGB	Area RGB/Bayer	C.L. Serial	Yes	Yes	Yes
IC-C25HEM	Area Bayer	C.L. Serial	Yes	No	Yes	Raptor Photonics -					
Jai -						Cygnat					
CV-L107CL	Line RGB	C.L. Serial	No	No	No	Falcon-CL	Area Mono	C.L. Serial	N/A	Yes	Yes
CV-M2CL	Area Mono	C.L. Serial	N/A	No	No	Have-CL	Area Mono	C.L. Serial	N/A	No	Yes
CV-M4	Area Mono	None	N/A	No	No	Kingfisher674	Area Mono	C.L. Serial	N/A	No	Yes
CV-M44-CL	Area Mono	C.L. Serial	N/A	No	No	Kite-CL	Area Mono	C.L. Serial	N/A	Yes	Yes
CV-M44CL	Area Mono	C.L. Serial	N/A	No	No	Owl-CL High Speed	Area Mono	C.L. Serial	N/A	No	No
CV-M7+CL	Area Bayer	C.L. Serial	Yes	No	No	Owl-CL-320	Area Mono	C.L. Serial	N/A	No	Yes
CV-M8CL	Area Bayer	C.L. Serial	Yes	No	No	Osprey	Area Mono	C.L. Serial	N/A	Yes	Yes
CM-140MCL/PMCL	Area Mono	C.L. Serial	N/A	No	No	Redlake (DuncanTech) -					
CB-140MCL/PMCL	Area Bayer	C.L. Serial	Yes	No	No	DT1100	Area RGB	RS-232	No	No	No
CM-200MCL/PMCL	Area Mono	C.L. Serial	N/A	No	No	MS3100-RGB	Area RGB	RS-232	No	No	No
CB-200MCL/PMCL	Area Bayer	C.L. Serial	Yes	No	No	MS3100-RGB(CL)	Area RGB	C.L. Serial	No	No	No
JAI(Pulnix) -						RH1100					
TM-1000/TM-1001	Area Mono	Switches	N/A	No	No	Redlake MAND -					
TM-1010	Area Mono	None	N/A	No	No	L4.8 bit	Area Mono	Switches	N/A	No	No
TM-1020-15	Area Mono	RS-232	N/A	No	No	1.48 8 bit	Area Mono	RS-232	N/A	No	No
TM-1020-15CL	Area Mono	C.L. Serial	N/A	No	No	1.61 8 bit	Area Mono	RS-232	N/A	No	No
TM-1040	Area Mono	RS-232	N/A	No	No	1.61 10 bit	Area Mono	RS-232	N/A	No	No
TM-1300	Area Mono	RS-232	N/A	No	No	4.23 8 bit	Area Mono	RS-232	N/A	No	No
TM-1320-15CL	Area Mono	C.L. Serial	N/A	No	No	4.23 10 bit	Area Mono	RS-232	N/A	No	No
TM-1400-CL	Area Mono	C.L. Serial	N/A	No	No	6.31 8 bit	Area Mono	RS-232	N/A	No	No
TM-2016-8CL	Area Mono	C.L. Serial	N/A	No	No	6.31 10 bit	Area Mono	RS-232	N/A	No	No
TM-4100CL	Area Mono	C.L. Serial	N/A	No	No	16.81 8 bit	Area Mono	RS-232	N/A	No	No
TM-4200CL	Area Mono	C.L. Generic	No	No	No	16.81 10 bit	Area Mono	RS-232	N/A	No	No
TM-6700CL	Area Mono	C.L. Serial	N/A	No	No	ES-1.0/8 bit 2 chan.	Area Mono	RS-232	N/A	No	No
TM-6710	Area Mono	RS-232	N/A	No	No	ES-1.0/10 bit 1 chan.	Area Mono	RS-232	N/A	No	No
TM-6710-CL	Area Mono	C.L. Serial	N/A	No	No	ES-1.0/10 bit 1 chan. RGB/Toucan8	Area RGB	RS-232	No	No	No
TM-6740CL	Area Mono	C.L. Serial	N/A	No	No	ES-1.0/10 bit 2 chan.	Area Mono	RS-232	N/A	No	No
TM-6760-CL	Area Mono	C.L. Serial	N/A	No	No	ES-1.0/1015T	Area Mono	RS-232	N/A	No	No
TM-9701	Area Mono	RS-232	N/A	No	No	ES-1.0/1015T RGB/Toucan8	Area RGB	RS-232	No	No	No
JAI(Pulnix) -						ES-1.0/1030T					
TMC-1000-CL	Area RGB	C.L. Serial	No	No	No	ES-1.0/1215 12 bit	Area Mono	RS-232	N/A	No	No
TMC-1020-15CL	Area Bayer	C.L. Serial	Yes	No	No	ES-1.0/1230 12 bit	Area Mono	RS-232	N/A	No	No
TMC-1320-15	Area Bayer	RS-232	Yes	No	No	ES-1.0/1260 12 bit	Area Mono	RS-232	N/A	No	No
TMC-1320-15CL	Area Bayer	C.L. Serial	Yes	No	No	LORD Imaging -					
TMC-1325-CL	Area Bayer	C.L. Serial	Yes	No	No	DVL5000T					
TMC-1400-CL	Area Bayer	C.L. Serial	Yes	No	No	Line Mono					
TMC-4100CL	Area Bayer	C.L. Serial	Yes	No	No	C.L. Generic					
TMC-6700CL	Area RGB	C.L. Serial	No	No	No	N/A					
TMC-6760-CL	Area Bayer	C.L. Serial	Yes	No	No	No					
TMC-9700	Area RGB	RS-232	No	No	No	No					
LORD Imaging -						DVL5000T					
DVL5000T	Line Mono	C.L. Generic	N/A	No	No	No					

A DETAILED OVERVIEW — DIGITAL CAMERA SUPPORT (continued)

Camera	Type	Controls	Software White/Color Balance	Software AGC/AEC	Software per-Pixel Normalization	Camera	Type	Controls	Software White/Color Balance	Software AGC/AEC	Software per-Pixel Normalization
Redlake MASD -						Tichawa -					
ES-10C/8 bit 1 chan. Bayer	Area Bayer	RS-232	Yes	No	No	CE-8520-200	Line Mono	C.L. Generic	N/A	No	No
ES-10MV	Area Mono	RS-232	N/A	No	No	MiniCIS-600	Line Mono	C.L. Generic	N/A	No	No
ES-10/SC 8 bit 1 chan.	Area Mono	RS-232	N/A	No	No	MiniCIS-400	Line Mono	C.L. Generic	N/A	No	No
ES-10/SC RGB/Toucan8	Area RGB	RS-232	No	No	No	MiniCIS-100	Line Mono	C.L. Generic	N/A	No	No
ES-4.0 8 bit 1 chan.	Area Mono	RS-232	N/A	No	No	MiniCIS-100	Line Mono	C.L. Generic	N/A <td No	No	
ES-4.0 8 bit 2 chan.	Area Mono	RS-232	N/A	No	No	MiniCIS-200	Line Mono	C.L. Generic	N/A	No	No
ES-4.0 12 bit	Area Mono	RS-232	N/A	No	No	MiniCIS-200a	Line Mono	C.L. Generic	N/A	No	No
ES-4.0 12 bit 1 chan.	Area Mono	RS-232	N/A	No	No	Tobiba -					
ES-4.0 12 bit 2 chan.	Area Mono	RS-232	N/A	No	No	IK-SX1	Area Mono	Switches	N/A	No	No
ES-4.0/E 8 bit 2 chan.	Area Mono	RS-232	N/A	No	No	IK-SX1L	Area Mono	Switches	N/A	No	No
ES-4.0/E 12 bit 2 chan.	Area Mono	RS-232	N/A	No	No	IK-TU51CU	Area RGB	RS-232	No	No	No
ES-4.0/E 12 bit 2 chan.	Area Mono	RS-232	N/A	No	No	IK-TU61	Area RGB	RS-232	No	No	No
ES-310 8 bit 2 chan.	Area Mono	RS-232	N/A	No	No	UNIQ -					
ES-310 Turbo 2 chan.	Area Mono	RS-232	N/A	No	No	AS520	Area Mono	C.L. Serial	N/A	No	Yes
ES-1020	Area Mono	C.L. Serial	N/A	No	No	AS5000	Area Mono	C.L. Serial	N/A	No	Yes
ES-1020C	Area Bayer	C.L. Serial	Yes	No	No	AS5000C	Area Bayer	C.L. Serial	Yes	No	Yes
Salvador Imaging -						UC-600	Area Bayer	Switches	Yes	No	No
SI-VGA60-EM-Color	Area Bayer	C.L. Serial	Yes	Yes	Yes	UC-600-CL	Area Bayer	C.L. Serial	Yes	No	Yes
SI-VGA60-EM	Area Mono	C.L. Serial	N/A	Yes	Yes	UC-800-CL	Area Bayer	C.L. Serial	Yes	No	Yes
SI-1M30-EM	Area Mono	C.L. Serial	N/A	Yes	Yes	UC-610-CL	Area Bayer	C.L. Serial	Yes	No	Yes
SI-1M44-EM	Area Mono	C.L. Serial	N/A	Yes	Yes	UC-610-CL	Area Bayer	C.L. Serial	Yes	No	Yes
SI-1M44-EM-Color	Area Bayer	C.L. Serial	Yes	Yes	Yes	UC-685	Area Bayer	Switches	Yes	No	No
Silicon Imaging -						UC-685-CL	Area Bayer	C.L. Serial	Yes	No	Yes
SI-640HF	Area Mono	C.L. Serial	N/A	Yes	Yes	UC-800	Area Bayer	Switches	Yes	No	No
SI-640HFRGB	Area Bayer	C.L. Serial	Yes	Yes	Yes	UC-800-CL	Area Bayer	C.L. Serial	Yes	No	No
SI-1280FM	Area Mono	C.L. Serial	N/A	Yes	Yes	UC-900	Area Bayer	Switches	Yes	No	No
SI-1280FRGB	Area Bayer	C.L. Serial	Yes	Yes	Yes	UC-900-CL	Area Bayer	C.L. Serial	Yes	No	Yes
SI-1300M	Area Mono	C.L. Serial	N/A	Yes	Yes	UC-900-CL 12 bit	Area Bayer	C.L. Serial	Yes	No	Yes
SI-1300RGB	Area Bayer	C.L. Serial	Yes	Yes	Yes	UC-930	Area Bayer	Switches	Yes	No	No
SI-1920HD-M	Area Mono	C.L. Serial	N/A	No	Yes	UC-930-CL	Area Bayer	C.L. Serial	Yes	No	Yes
SI-1920HD-RGB	Area Bayer	C.L. Serial	Yes	No	Yes	UNIQ -					
SI-3170M	Area Mono	C.L. Serial	N/A	Yes	Yes	UC-1000	Area Bayer	Switches	Yes	No	No
SI-3170RGB	Area Bayer	C.L. Serial	Yes	Yes	Yes	UC-1030	Area Bayer	Switches	Yes	No	No
SI-3171M	Area Mono	C.L. Serial	N/A	Yes	Yes	UC-1800	Area Bayer	RS-232	Yes	No	No
SI-3171RGB	Area Bayer	C.L. Serial	Yes	Yes	Yes	UC-1800 12 bit	Area Bayer	RS-232	Yes	No	No
SI-3300RGB	Area Bayer	C.L. Serial	Yes	Yes	Yes	UC-1800-CL	Area Bayer	C.L. Serial	Yes	No	Yes
SI-4000	Area Bayer	C.L. Serial	Yes	Yes	Yes	UC-1800-CL	Area Bayer	C.L. Serial	Yes	No	Yes
SI-6600M	Area Mono	C.L. Serial	N/A	Yes	Yes	UC-2000-CL	Area Bayer	C.L. Serial	Yes	No	Yes
SI-6600RGB	Area Bayer	C.L. Serial	Yes	Yes	Yes	UF-1000	Area Mono	RS-232	N/A	No	No
SI-14000	Area Mono	C.L. Serial	N/A	Yes	Yes	UF-1000-CL	Area Mono	C.L. Serial	N/A	No	Yes
SI-14000RGB	Area Bayer	C.L. Serial	Yes	Yes	Yes	UP-600	Area Mono	Switches	N/A	No	Yes
SILICON VIDEO® -						UP-600-CL	Area Mono	C.L. Serial	N/A	No	Yes
0310	Area Mono	FC Serial	N/A	No	Yes	UP-610	Area Mono	Switches	N/A	No	No
0310C	Area Bayer	FC Serial	Yes	No	Yes	UP-610-CL	Area Mono	C.L. Serial	N/A	No	No
10C-CL	Area Bayer	C.L. Serial	Yes	Yes	Yes	UP-680-CL	Area Mono	C.L. Serial	N/A	No	Yes
10M-CL	Area Mono	C.L. Serial	N/A	Yes	Yes	UP-685	Area Mono	Switches	N/A	No	No
10C6	Area Bayer	FC Serial	Yes	Yes	Yes	UP-685-CL	Area Mono	C.L. Serial	N/A	No	No
10M6	Area Mono	FC Serial	N/A	Yes	Yes	UP-800	Area Mono	Switches	N/A	No	No
1281C	Area Bayer	FC Serial	Yes	Yes	Yes	UP-800-CL	Area Mono	C.L. Serial	N/A	No	Yes
1281M	Area Mono	FC Serial	N/A	Yes	Yes	UP-900	Area Mono	Switches	N/A	No	No
1310	Area Mono	FC Serial	Yes	Yes	Yes	UP-900-CL	Area Mono	C.L. Serial	N/A	No	Yes
1310C	Area Bayer	FC Serial	Yes	Yes	Yes	UP-900-CL 12 bit	Area Mono	C.L. Serial	N/A	No	Yes
2112	Area Mono	FC Serial	N/A	Yes	Yes	UP-900DS-CL	Area Mono	C.L. Serial	N/A	No	Yes
2112C	Area Bayer	FC Serial	Yes	Yes	Yes	UP-930	Area Mono	Switches	N/A	No	No
2212	Area Mono	FC Serial	N/A	Yes	Yes	UP-930-CL	Area Mono	C.L. Serial	N/A	No	Yes
2212C	Area Bayer	FC Serial	Yes	Yes	Yes	UP-1000	Area Mono	Switches	N/A	No	No
5C10	Area Bayer	FC Serial	Yes	Yes	Yes	UP-1030	Area Mono	Switches	N/A	No	No
5M10	Area Mono	FC Serial	N/A	Yes	Yes	UP-1800	Area Mono	RS-232	N/A	No	No
642C	Area Bayer	FC Serial	Yes	Yes	Yes	UP-1800 12 bit	Area Mono	Switches	N/A	No	No
642M	Area Mono	FC Serial	N/A	Yes	Yes	UP-1800-CL	Area Mono	C.L. Serial	N/A	No	Yes
643C	Area Bayer	FC Serial	Yes	Yes	Yes	UP-1800-CL 12 bit	Area Mono	C.L. Serial	N/A	No	Yes
643M	Area Mono	FC Serial	N/A	Yes	Yes	UP-1800DS	Area Mono	RS-232	N/A	No	No
9C10	Area Bayer	FC Serial	Yes	Yes	Yes	UP-1800DS-CL	Area Mono	C.L. Serial	N/A	No	Yes
9M001	Area Mono	FC Serial	N/A	Yes	Yes	UP-1830	Area Mono	Switches	N/A	No	No
9M001C	Area Bayer	FC Serial	Yes	Yes	Yes	UP-1830-CL	Area Mono	C.L. Serial	N/A	No	Yes
9T001C	Area Bayer	FC Serial	Yes	Yes	Yes	UP-1830-CL 12 bit	Area Mono	C.L. Serial	N/A	No	Yes
WGA-C	Area Bayer	FC Serial	Yes	No	Yes	Varian -					
WGA-M	Area Mono	FC Serial	N/A	No	Yes	PaxScan 1313	Area Mono	None	N/A	No	No
SONY -						PaxScan 2520	Area Mono	RS-232	N/A	No	No
XCL-U1000C	Area RGB	C.L. Serial	No	No	No	PaxScan 4030A	Area Mono	RS-232	N/A	No	No
XCL-U1000	Area Mono	C.L. Serial	N/A	No	No	PaxScan 4030R	Area Mono	Switches	N/A	No	No
XCL-V500	Area Mono	C.L. Serial	N/A	No	No	Vieworks					
XCL-X700	Area Mono	C.L. Serial	N/A	No	No	VA-1M120	Area Mono	C.L. Serial	N/A	No	No
SVS-VISTEK -						VA-2M168	Area Mono	C.L. Serial	N/A	No	No
SVS28SSCCL	Area Bayer	C.L. Serial	Yes	No	No	VA-2M1W64	Area Mono	C.L. Serial	N/A	No	No
SVS28SSCL	Area Mono	C.L. Serial	N/A	No	No	VA-2M1W64C	Area Bayer	C.L. Serial	Yes	No	No
SVS28SSCCL	Area Bayer	C.L. Serial	Yes	No	No	VA-4M132	Area Mono	C.L. Serial	N/A	No	No
SVS28SSCL	Area Mono	C.L. Serial	N/A	No	No	VA-4M132C	Area Bayer	C.L. Serial	Yes	No	No
Symagery -						VA-8M116	Area Mono	C.L. Serial	N/A	No	No
VCAL281	Area Mono	FC Serial	N/A	No	Yes	VA-8M116C	Area Bayer	C.L. Serial	Yes	No	No
VCAL281C	Area Bayer	FC Serial	Yes	No	Yes	VA-2M168C	Area Bayer	C.L. Serial	Yes	No	No
Seitex -						VA-29MC-M5	Area Mono	C.L. Serial	N/A	No	No
STC-CL33A	Area Mono	C.L. Serial	N/A	No	No	VA-29MC-C5	Area Bayer	C.L. Serial	Yes	No	No
STC-CL33A	Area Bayer	C.L. Serial	Yes	No	No	VC-4M110C	Area Mono	C.L. Serial	N/A	No	No
STC-CL83A	Area Mono	C.L. Serial	Yes	No	No	VC-4M110C	Area Bayer	C.L. Serial	Yes	No	No
STC-CL202A	Area Mono	C.L. Serial	N/A	No	No	VC-4M1160	Area Mono	C.L. Serial	N/A	No	No
STC-CL202A	Area Bayer	C.L. Serial	Yes	No	No	VH-2M	Area Mono	C.L. Serial	N/A	No	No
STC-CL232A	Area Mono	C.L. Serial	N/A	No	No	VH-2M-C	Area Bayer	C.L. Serial	Yes	No	No
STC-CL232A	Area Bayer	C.L. Serial	Yes	No	No	VH-4M	Area Mono	C.L. Serial	N/A	No	No
STC-CL500A	Area Mono	C.L. Serial	N/A	No	No	VH-4M-C	Area Bayer	C.L. Serial	Yes	No	No
STC-CL500A	Area Bayer	C.L. Serial	Yes	No	No	VH-11M-C	Area Mono	C.L. Serial	N/A	No	No
STC-CL1500	Area Mono	Switches	N/A	No	No	VH-16M	Area Mono	C.L. Serial	N/A	No	No
STL-2048	Line Mono	PIXCI® signals	N/A	No	No	VH-16M-C	Area Bayer	C.L. Serial	Yes	No	No
STL-5150	Line Mono	PIXCI® signals	N/A	No	No	VH-VGA	Area Mono	C.L. Serial	N/A	No	No
STL-7400RCL	Line Mono	C.L. Serial	N/A	No	No	VH-VGA-C	Area Bayer	C.L. Serial	Yes	No	No
STL-7450	Line Mono	PIXCI® signals	N/A	No	No	VM-2M	Area Mono	C.L. Serial	N/A	No	No
Takenaka -						VM-2M-C	Area Bayer	C.L. Serial	N/A	No	No
FC300	Area Mono	RS-232	N/A	No	No	VM-4M	Area Mono	C.L. Serial	N/A	No	No
FC800	Area Mono	RS-232	N/A	No	No	VM-4M-C	Area Bayer	C.L. Serial	Yes	No	No
FC1300	Area Mono	RS-232	N/A	No	No	VM-4M1-C	Area Mono	C.L. Serial	N/A	No	No
FC1500	Area Mono	RS-232	N/A	No	No	VM-11M	Area Mono	C.L. Serial	N/A	No	No
TL2048	Line Mono	PIXCI® signals	N/A	No	No	VM-11M-C	Area Bayer	C.L. Serial	Yes	No	No
TL5150	Line Mono	PIXCI® signals	N/A	No	No	VM-16M	Area Mono	C.L. Serial	N/A	No	No
TL7450	Line Mono	PIXCI® signals	N/A	No	No	VM-16M-C	Area Bayer	C.L. Serial	Yes	No	No
Teli -						VDS-Vosskuhler -					
CS3910	Area Mono	Switches	N/A	No	No	CMC-4000	Area Mono	C.L. Serial	N/A	No	No
CS3910BH	Area Mono	Switches	N/A	No	No	CMC-4000C	Area Bayer	C.L. Serial	Yes	No	No
CS3920	Area Mono	Switches	N/A	No	No	Zoran -					
CS3930UV	Area Mono	Switches	N/A	No	No	ZR732112-MQS	Area Mono	FC Serial	N/A	No	Yes
CS6910CL	Area RGB	C.L. Serial	No	No	No	ZR732112-PQS	Area Bayer	FC Serial	Yes	No	Yes
CSB-4000CL-10A	Area Mono	C.L. Serial	N/A	No	No	ZR732121-MQS	Area Mono	FC Serial	N/A	No	Yes
CleverDragon CSCQ515BC23	Area Mono	C.L. Serial	N/A	No	Yes	ZR732121-PQS	Area Bayer	FC Serial	Yes	No	Yes
CleverDragon CSCQ515C23	Area Bayer	C.L. Serial	Yes	No	Yes	ZR732131-MC	Area Mono	FC Serial	N/A	No	Yes
CleverDragon CSCQ515C23	Area RGB	C.L. Serial	Yes	No	Yes	ZR732131-PLC	Area Bayer	FC Serial	Yes	No	Yes
CleverDragon CSC12M25BMP19	Area Mono	C.L. Serial	N/A	No	No	ZR732316-MLC	Area Mono	FC Serial			