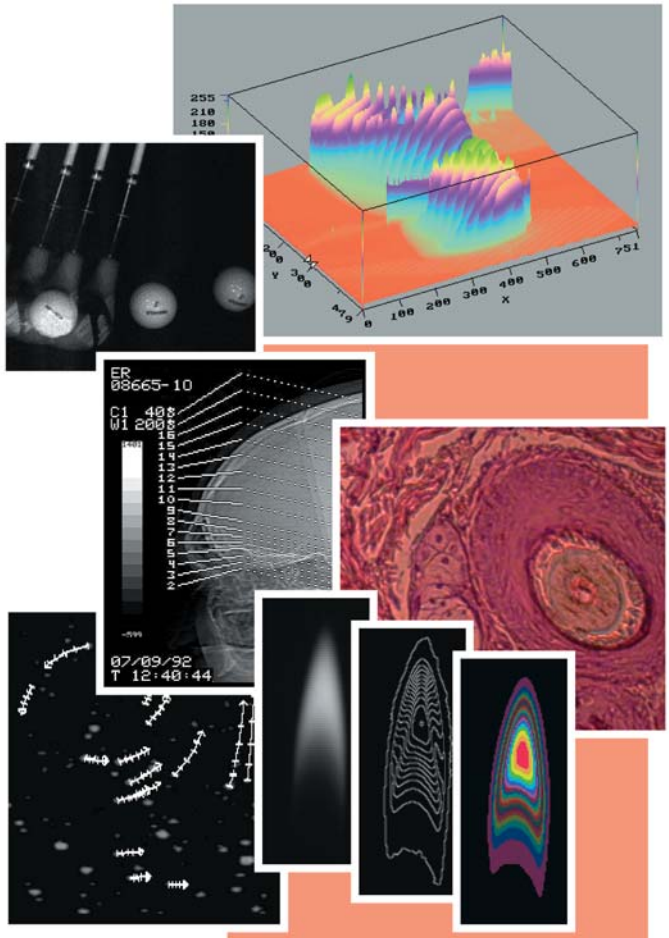
EPIX®

XCAP™ SOFTWARE

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 psuedo-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.

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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]

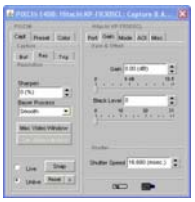
The XCAP-Viewer version allows loading and viewing single images and image sequences from files, such as those saved by XCAP-Lite, XCAP-Ltd, or XCAP-Std. XCAP-Viewer also allows browsing the hundreds of processing, measurement, analysis, load/save, and graphics features that can be applied to images 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, I^2C, 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 board[4], 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 CAPTURE[5]

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/VGA w. 16 bits per pixel. Suggested: ACP or PCI Express S/VGA w. 24 or 32 bits per pixel.
Linux: Graphics display system (S/VGA) supporting TrueColor or DirectColor mode. Video display rate depends upon video format, S/VGA card, S/VGA 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, CalComp 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 USB[10] 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/VGA 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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CT brain scan image courtesy of Dataview, Inc. Specifications subject to change without notice. EPIX® imaging products are made in the USA. Copyright © 2012 EPIX, Inc. All rights reserved. 21-Sep-2012.

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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
- TWAIN Select Source (Win)	Yes	Yes	No	No	No
- TWAIN 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
- TWAIN 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	Yes
- 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	No	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	No	No
- Shortcuts	Yes	Yes	Yes	Yes	No
- GIO Event Capture Single	Yes	Yes	Yes	Yes	No
- GIO Event Capture Sequence	Yes	Yes	Yes	No	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)

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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
Adimec -					
1000c	Area Bayer	C.L. Serial	Yes	No	No
1000m	Area Mono	C.L. Serial	N/A	No	No
RA-1000m	Area Mono	C.L. Serial	N/A	No	No
A2000c/d	Area Bayer	C.L. Serial	Yes	No	No
A2000c/s	Area Bayer	C.L. Serial	Yes	No	No
A2000m/d	Area Mono	C.L. Serial	N/A	No	No
A2000m/s	Area Mono	C.L. Serial	N/A	No	No
MX12P/2xx3	Area Mono	RS-232	N/A	No	No
MX12P/8xx3	Area Mono	RS-232	N/A	No	No
OPAL-1000m/CL	Area Mono	C.L. Serial	N/A	No	No
OPAL-1000c/CL	Area Bayer	C.L. Serial	Yes	No	No
OPAL-1600m/CL	Area Mono	C.L. Serial	N/A	No	No
OPAL-1600c/CL	Area Bayer	C.L. Serial	Yes	No	No
OPAL-2000m/CL	Area Mono	C.L. Serial	N/A	No	No
OPAL-2000c/CL	Area Bayer	C.L. Serial	Yes	No	No
OPAL-4000m/CL	Area Mono	C.L. Serial	N/A	No	No
OPAL-4000c/CL	Area Bayer	C.L. Serial	Yes	No	No
OPAL-8000m/CL	Area Mono	C.L. Serial	N/A	No	No
OPAL-8000c/CL	Area Bayer	C.L. Serial	Yes	No	No
Allied Vision Technologies -					
Bonito CMC-4000	Area Mono	C.L. Serial	N/A	No	No
Bonito CMC-4000C	Area Bayer	C.L. Serial	Yes	No	No
Amber -					
AE4128	Area Mono	RS-232	N/A	No	No
AE4256	Area Mono	RS-232	N/A	No	No
Aptina -					
MT9J001	Area Mono	I²C Serial	N/A	No	Yes
MT9J001C	Area Bayer	I²C Serial	Yes	No	Yes
MT9N001C	Area Bayer	I²C Serial	Yes	No	Yes
MT9V032	Area Mono	I²C Serial	N/A	No	Yes
MT9V032C	Area Bayer	I²C Serial	Yes	No	Yes
Atmel -					
ATMOS 1M30	Area Mono	C.L. Serial	N/A	No	No
ATMOS 1M60	Area Mono	C.L. Serial	N/A	No	No
ATMOS 2M30	Area Mono	C.L. Serial	N/A	No	No
ATMOS 2M60	Area Mono	C.L. Serial	N/A	No	No
AViiVA C2 CL 4010	Line Mono	C.L. Serial	N/A	No	No
AViiVA M4 CL 2048	Line Mono	C.L. Serial	N/A	No	No
AViiVA M4 CL 6144	Line Mono	C.L. Serial	N/A	No	No
AViiVA M4 CL 8192	Line Mono	C.L. Serial	N/A	No	No
AViiVA SC2 CL 4010	Line RGB	C.L. Serial	No	No	No
Camelia 4M	Area Mono	RS-232	N/A	No	No
Camelia 4M Bayer	Area Bayer	RS-232	Yes	No	No
Camelia C1 CL 8M	Area Bayer	C.L. Serial	Yes	No	No
Camelia C1 LV 8M	Area Bayer	RS-232	Yes	No	No
Camelia M1 CL 8M	Area Mono	C.L. Serial	N/A	No	No
Camelia M1 LV 8M	Area Mono	RS-232	N/A	No	No
Atmel-Grenoble -					
78CA88A	Area Mono	None	N/A	No	No
TH78CA13	Line Mono	RS-232	N/A	No	No
TH78CA14	Line Mono	RS-232	N/A	No	No
TH78CA15	Line Mono	RS-232	N/A	No	No
Basler -					
A101 (A113) & A101-P	Area Mono	RS-232	N/A	No	No
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A101-C(P) (A113-C) w. Toucan	Area RGB	RS-232	No	No	No
A102k	Area Mono	RS-232	N/A	No	No
A201(A210) Dual Output	Area Mono	RS-232	N/A	No	No
A201b	Area Mono	RS-232	N/A	No	No
A201bc	Area Bayer	RS-232	Yes	No	No
A201 One Tap w. Toucan	Area RGB	RS-232	No	No	No
A202K	Area Mono	C.L. Serial	N/A	No	No
A202KC	Area Bayer	C.L. Serial	Yes	No	No
A301b	Area Mono	C.L. Serial	N/A	No	No
A301bc	Area Bayer	C.L. Serial	Yes	No	No
A301k	Area Mono	C.L. Serial	N/A	No	No
A301kc	Area Bayer	C.L. Serial	Yes	No	No
A302b	Area Mono	C.L. Serial	N/A	No	No
A302bc	Area Bayer	C.L. Serial	Yes	No	No
A302k	Area Mono	C.L. Serial	N/A	No	No
A302kc	Area Bayer	C.L. Serial	Yes	No	No
A402k	Area Mono	C.L. Serial	N/A	No	No
A402k	Area Mono	C.L. Serial	N/A	No	No
A403k	Area Mono	C.L. Serial	N/A	No	No
A403kc	Area Bayer	C.L. Serial	Yes	No	No
A404k	Area Mono	C.L. Serial	N/A	No	No
A404kc	Area Bayer	C.L. Serial	Yes	No	No
A406k	Area Mono	C.L. Serial	N/A	No	No
A406kc	Area Bayer	C.L. Serial	Yes	No	No
A501k	Area Mono	C.L. Serial	N/A	No	No
A501kc	Area Bayer	C.L. Serial	Yes	No	No
A504k	Area Mono	C.L. Serial	N/A	No	No
A504kc	Area Bayer	C.L. Serial	Yes	No	No
Ace acA2000-140km	Area Mono	C.L. Serial	N/A	No	No
Ace acA2000-340km	Area Mono	C.L. Serial	N/A	No	No
Ace acA2040-70km	Area Mono	C.L. Serial	N/A	No	No
Ace acA2040-180km	Area Mono	C.L. Serial	N/A	No	No
Ace acA2000-140kc	Area Bayer	C.L. Serial	Yes	No	No
Ace acA2000-340kc	Area Bayer	C.L. Serial	Yes	No	No
Ace acA2040-70kc	Area Bayer	C.L. Serial	Yes	No	No
Ace acA2040-180kc	Area Bayer	C.L. Serial	Yes	No	No
Aviator avA1000km	Area Mono	C.L. Serial	N/A	No	No
Aviator avA1000kc	Area Bayer	C.L. Serial	Yes	No	No
Aviator avA1600km	Area Mono	C.L. Serial	N/A	No	No
Aviator avA1600kc	Area Bayer	C.L. Serial	Yes	No	No
Aviator avA1900km	Area Mono	C.L. Serial	N/A	No	No
Aviator avA1900kc	Area Bayer	C.L. Serial	Yes	No	No
Aviator avA2300km	Area Mono	C.L. Serial	N/A	No	No
Aviator avA2300kc	Area Bayer	C.L. Serial	Yes	No	No
L50	Line Mono	PIXCI® signals	N/A	No	No
L75	Line Mono	RS-232	N/A	No	No
L101(L120) 1K Dual Output	Line Mono	RS-232	N/A	No	No
L101(L120) 1K Single Output	Line Mono	RS-232	N/A	No	No
L101(L120) 2K Dual Output	Line Mono	RS-232	N/A	No	No
L101(L120) 2K Single Output	Line Mono	RS-232	N/A	No	No
L101K-1K	Line Mono	C.L. Serial	N/A	No	No
L101K-2K	Line Mono	C.L. Serial	N/A	No	No
L102(L130) 1K Dual Output	Line Mono	RS-232	N/A	No	No
L102(L130) 1K Single Output	Line Mono	RS-232	N/A	No	No
L102(L130) 2K Dual Output	Line Mono	RS-232	N/A	No	No
L102(L130) 2K Single Output	Line Mono	RS-232	N/A	No	No
L103(L140)-1K Dual Output	Line Mono	RS-232	N/A	No	No
L103(L140)-1K Single Output	Line Mono	RS-232	N/A	No	No
L103(L140)-2K Dual Output	Line Mono	RS-232	N/A	No	No
L103(L140)-2K Single Output	Line Mono	RS-232	N/A	No	No
L103K-1K	Line Mono	C.L. Serial	N/A	No	No
L103K-2K	Line Mono	C.L. Serial	N/A	No	No
L104(L160)-1K Dual Output	Line Mono	RS-232	N/A	No	No
L104(L160)-1K Single Output	Line Mono	RS-232	N/A	No	No
L104(L160)-2K Dual Output	Line Mono	RS-232	N/A	No	No
L104(L160)-2K Single Output	Line Mono	RS-232	N/A	No	No
L104K-1K	Line Mono	C.L. Serial	N/A	No	No
L104K-2K	Line Mono	C.L. Serial	N/A	No	No
L201(L220)-4K Dual Output	Line Mono	RS-232	N/A	No	No
L201(L220)-4K Single Output	Line Mono	RS-232	N/A	No	No

Camera	Type	Controls	Software White/Color Balance	Software AGC/AEC	Software per-Pixel Normalization
Basler (continued) -					
L202(L230)-4K Dual Output	Line Mono	RS-232	N/A	No	No
L202(L230)-4K Single Output	Line Mono	RS-232	N/A	No	No
L203(L240)-4K Dual Output	Line Mono	RS-232	N/A	No	No
L203(L240)-4K Single Output	Line Mono	RS-232	N/A	No	No
L301kc	Line RGB	C.L. Serial	Yes	No	No
L301kc-12k	Line RGB	C.L. Serial	Yes	No	No
L301 w. BIC RGB	Line RGB	RS-232	Yes	No	No
L304kc	Line RGB	C.L. Serial	No	No	No
L401k	Line Mono	C.L. Serial	N/A	No	No
L402k	Line Mono	C.L. Serial	N/A	No	No
L801k	Line Mono	C.L. Serial	N/A	No	No
L802k	Line Mono	C.L. Serial	N/A	No	No
L803k	Line Mono	C.L. Serial	N/A	No	No
Sprint spL2048_39km	Line Mono	C.L. Serial	N/A	No	No
Sprint spL2048_70km	Line Mono	C.L. Serial	N/A	No	No
Sprint spL2048_140km	Line Mono	C.L. Serial	N/A	No	No
Sprint spL4096_20km	Line Mono	C.L. Serial	N/A	No	No
Sprint spL4096_39km	Line Mono	C.L. Serial	N/A	No	No
Sprint spL4096_70kc	Line RGB	C.L. Serial	No	No	No
Sprint spL4096_70km	Line Mono	C.L. Serial	N/A	No	No
Sprint spL4096_140km	Line Mono	C.L. Serial	N/A	No	No
Baumer -					
HXC13	Area Mono	C.L. Serial	N/A	No	Yes
HXC20	Area Mono	C.L. Serial	N/A	No	No
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 Mono	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
BioPhotonics -					
Qmax 650	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
CIS					
VCC-F32S29CL Bayer Mode	Area Bayer	C.L. Serial	Yes	No	No
VCC-F32S29CL RGB Mode	Area RGB	C.L. Serial	Yes	No	No
VCC-G22V31PCL	Area Mono	C.L. Serial	N/A	No	No
VCC-G32S11CL	Area Mono	C.L. Serial	N/A	No	No
CMOS Sensor -					
i-cis S-206-0250	Line Mono	C.L. Serial	N/A	No	Yes
i-cis S-206-0520	Line Mono	C.L. Serial	N/A	No	Yes
Cohu -					
4110	Area Mono	None	N/A	No	No
6612	Area Mono	None	N/A	No	No
6612RGB	Area Bayer	None	Yes	No	No
7500	Area Mono	RS-232	N/A	No	No
7500-CL	Area Mono	C.L. Serial	N/A	No	No
7700/7722-CL	Area Bayer	C.L. Serial	Yes	No	No
7700/7712-CL	Area Mono	C.L. Serial	N/A	No	No
7800/7820-CL	Area Bayer	C.L. Serial	Yes	No	No
7800/7810-CL	Area Mono	C.L. Serial	N/A	No	No
7800/7840-CL	Area Bayer	C.L. Serial	Yes	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
CTEC Photonics -					
1300	Area Mono	PIXCI® signals	N/A	No	No
Cooke					
PCO.Edge	Area Mono	C.L. Serial	N/A	No	No
Cypress -					
HAS2	Area Mono	I²C Serial	N/A	No	Yes
LUPA-300	Area Mono	I²C Serial	N/A	No	Yes
LUPA-300RGB	Area Bayer	I²C Serial	Yes	No	Yes
Dage-MTI -					
IFG-300	Area Mono	RS-232	N/A	No	No
Dalsa -					
1M28-SA	Area Mono	C.L. Serial	N/A	No	No
1M75-SA	Area Mono	C.L. Serial	N/A	No	No
1M150-SA	Area Mono	C.L. Serial	N/A	No	No
CL-C3-0256A	Line Mono	PIXCI® signals	N/A	No	No
CL-C3-0256N	Line Mono	PIXCI® signals	N/A	No	No
CL-C3-0512A	Line Mono	PIXCI® signals	N/A	No	No
CL-C3-0512N	Line Mono	PIXCI® signals	N/A	No	No
CL-C3-1024A	Line Mono	PIXCI® signals	N/A	No	No
CL-C3-1024N	Line Mono	PIXCI® signals	N/A	No	No
CL-C3-1728A	Line Mono	PIXCI® signals	N/A	No	No
CL-C3-1728N	Line Mono	PIXCI® signals	N/A	No	No
CL-C3-2048A	Line Mono	PIXCI® signals	N/A	No	No
CL-C3-2048N	Line Mono	PIXCI® signals	N/A	No	No
CL-C4-0256A	Line Mono	PIXCI® signals	N/A	No	No
CL-C4-0256N	Line Mono	PIXCI® signals	N/A	No	No
CL-C4-0512A	Line Mono	PIXCI® signals	N/A	No	No
CL-C4-0512N	Line Mono	PIXCI® signals	N/A	No	No
CL-C4-1024A	Line Mono	PIXCI® signals	N/A	No	No
CL-C4-1024N	Line Mono	PIXCI® signals	N/A	No	No
CL-C4-1728A	Line Mono	PIXCI® signals	N/A	No	No
CL-C4-1728N	Line Mono	PIXCI® signals	N/A	No	No
CL-C4-2048A	Line Mono	PIXCI® signals	N/A	No	No
CL-C4-2048N	Line Mono	PIXCI® signals	N/A	No	No
CL-C5-2048A	Line Mono	PIXCI® signals	N/A	No	No
CL-C5-2048N	Line Mono	PIXCI® signals	N/A	No	No
CL-C6-2048A	Line Mono	PIXCI® signals	N/A	No	No
CL-C6-2048T	Line Mono	PIXCI® signals	N/A	No	No
CL-C7-3456A	Line Mono	PIXCI® signals	N/A	No	No
CL-C7-3456N	Line Mono	PIXCI® signals	N/A	No	No
CL-C7-4096A	Line Mono	PIXCI® signals	N/A	No	No
CL-C7-4096N	Line Mono	PIXCI® signals	N/A	No	No
CL-C8-6000A	Line Mono	PIXCI® signals	N/A	No	No
CL-C8-6000N	Line Mono	PIXCI® signals	N/A	No	No
CL-CB-0512A	Line Mono	PIXCI® signals	N/A	No	No
CL-CB-0512T	Line Mono	PIXCI® signals	N/A	No	No
CL-CB-0512W	Line Mono	PIXCI® signals	N/A	No	No
CL-CB-1024A	Line Mono	PIXCI® signals	N/A	No	No
CL-CB-1024A TwoCam	Line Mono	PIXCI® signals	N/A	No	No
CL-CB-1024T	Line Mono	PIXCI® signals	N/A	No	No
CL-CB-1024W	Line Mono	PIXCI® signals	N/A	No	No
CL-CB-2048A	Line Mono	PIXCI® signals	N/A	No	No
CL-CB-2048T	Line Mono	PIXCI® signals	N/A	No	No
CL-CB-2048W	Line Mono	PIXCI® signals	N/A	No	No
CL-E1-0512A	Line Mono	PIXCI® signals	N/A	No	No
CL-E1-1024A	Line Mono	PIXCI® signals	N/A	No	No
CL-E1-2048A	Line Mono	PIXCI® signals	N/A	No	No
CL-E2-0512A	Line Mono	PIXCI® signals	N/A	No	No
CL-E2-1024A	Line Mono	PIXCI® signals	N/A	No	No
CL-E2-2048A	Line Mono	PIXCI® signals	N/A	No	No
CL-F2-0512A	Line Mono	PIXCI® signals	N/A	No	No

A DETAILED OVERVIEW — DIGITAL CAMERA SUPPORT (continued)

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
CL-F2-2048A	Line Mono	PIXCI® signals	N/A	No	No
CL-P1-0512	Line Mono	PIXCI® signals	N/A	No	No
CL-P1-1024	Line Mono	PIXCI® signals	N/A	No	No
CL-P1-2048	Line Mono	PIXCI® signals	N/A	No	No
CL-P1-4096	Line Mono	PIXCI® signals	N/A	No	No
CL-P4-6144(CL-P4-6144W)	Line Mono	PIXCI® signals	N/A	No	No
CL-P4-8192(CL-P4-8192W)	Line Mono	PIXCI® signals	N/A	No	No
CL-T5-1024	Line RGB	PIXCI® signals	No	No	No
CL-T5-2048	Line RGB	PIXCI® signals	No	No	No
CL-T7-1024	Line RGB	PIXCI® signals	No	No	No
CL-T7-2048	Line RGB	PIXCI® signals	No	No	No
CT-E1-0512A	Line Mono	PIXCI® signals	N/A	No	No
CT-E2-0512A	Line Mono	PIXCI® signals	N/A	No	No
CT-E4-2048(CT-E4-2048W)	Line Mono	PIXCI® signals	N/A	No	No
CT-E4-4096(CT-E4-4096W)	Line Mono	PIXCI® signals	N/A	No	No
CT-F3-2048	Line Mono	PIXCI® signals	N/A	No	No
CT-F3-4096	Line Mono	PIXCI® signals	N/A	No	No
CT-P1-1024(CT-P1-1024W)	Line Mono	PIXCI® signals	N/A	No	No
CT-P1-2048(CT-P1-2048W)	Line Mono	PIXCI® signals	N/A	No	No
CT-P1-4096(CT-P1-4096W)	Line Mono	PIXCI® signals	N/A	No	No
CT-P4-6144(CT-P4-6144W)	Line Mono	PIXCI® signals	N/A	No	No
CT-P4-8192(CT-P4-8192W)	Line Mono	PIXCI® signals	N/A	No	No
EC-11-01k40	Line Mono	PIXCI® signals	N/A	No	No
EC-11-02k40	Line Mono	PIXCI® signals	N/A	No	No
EC-11-05h40	Line Mono	PIXCI® signals	N/A	No	No
Falcon 1.4M100	Area Mono	C.L. Serial	N/A	No	No
Falcon PT-21-04M30	Area Mono	C.L. Serial	N/A	No	No
Falcon PT-22-04M30	Area Bayer	C.L. Serial	Yes	No	No
Falcon PT-41-04M60	Area Mono	C.L. Serial	N/A	No	No
Falcon PT-42-04M60	Area Bayer	C.L. Serial	Yes	No	No
Pantera DS-1A-01M30	Area Mono	C.L. Serial	N/A	No	No
Pantera DS-21-01M60	Area Mono	C.L. Serial	N/A	No	No
Pantera DS-21-04M15	Area Mono	C.L. Serial	N/A	No	No
Pantera PT-21-06M08	Area Mono	C.L. Generic	N/A	No	No
Piranha HS-4X-02K30	Line Mono	C.L. Serial	N/A	No	No
Piranha PC-30-02K80	Line RGB	C.L. Serial	No	No	No
Piranha PC-30-02K60	Line RGB	C.L. Serial	No	No	No
Piranha PC-30-04K80	Line RGB	C.L. Serial	No	No	No
Piranha PC-30-04K60	Line RGB	C.L. Serial	No	No	No
Piranha2 P2-4X-02K40	Line Mono	C.L. Serial	N/A	No	No
Piranha2 P2-4X-04K40	Line Mono	C.L. Serial	N/A	No	No
Piranha2 P2-4X-06K40	Line Mono	C.L. Serial	N/A	No	No
Piranha2 P2-4X-08K40	Line Mono	C.L. Serial	N/A	No	No
Piranha2 P2-21-1024	Line Mono	C.L. Serial	N/A	No	No
Piranha2 P2-21-2048	Line Mono	C.L. Serial	N/A	No	No
Piranha2 P2-21-4096	Line Mono	C.L. Serial	N/A	No	No
Piranha2 P2-21-6144	Line Mono	C.L. Serial	N/A	No	No
Piranha2 P2-21-8192	Line Mono	C.L. Serial	N/A	No	No
SP-11-01K30	Line Mono	PIXCI® signals	N/A	No	No
SP-11-01K40	Line Mono	PIXCI® signals	N/A	No	No
SP-11-02K30	Line Mono	PIXCI® signals	N/A	No	No
SP-11-02K40	Line Mono	PIXCI® signals	N/A	No	No
SP-11-05H30	Line Mono	PIXCI® signals	N/A	No	No
SP-11-05H40	Line Mono	PIXCI® signals	N/A	No	No
SP-13-02K30	Line Mono	PIXCI® signals	N/A	No	No
SP-14-01k30	Line Mono	PIXCI® signals	N/A	No	No
SP-14-01k40	Line Mono	PIXCI® signals	N/A	No	No
SP-14-02k30	Line Mono	PIXCI® signals	N/A	No	No
SP-14-02k40	Line Mono	PIXCI® signals	N/A	No	No
SP-14-05h30	Line Mono	PIXCI® signals	N/A	No	No
SP-14-05h40	Line Mono	PIXCI® signals	N/A	No	No
Spyder2 S2-1x-01K40	Line Mono	C.L. Serial	N/A	No	No
Spyder2 S2-1x-02K40	Line Mono	C.L. Serial	N/A	No	No
Spyder2 S2-1x-05H40	Line Mono	C.L. Serial	N/A	No	No
Spyder2 S2-2x-04K40	Line Mono	C.L. Serial	N/A	No	No
TR31-01k25	Line RGB	RS-232	No	No	No
TR31-01k25 10 Bit	Line RGB	RS-232	No	No	No
TR31-02k25	Line RGB	RS-232	No	No	No
TR31-02k25 10 Bit	Line RGB	RS-232	No	No	No
TR33-01k25	Line RGB	RS-232	No	No	No
TR33-02k25	Line RGB	RS-232	No	No	No
TR34-01k25	Line RGB	RS-232	No	No	No
TR34-02k25	Line RGB	RS-232	No	No	No
TR35-01k25	Line RGB	RS-232	No	No	No
TR35-02k25	Line RGB	RS-232	No	No	No
Dalstar -					
CA-D1-0064A	Area Mono	None	N/A	No	No
CA-D1-0064T	Area Mono	None	N/A	No	No
CA-D1-0256A	Area Mono	PIXCI® signals	N/A	No	No
CA-D1-0256T	Area Mono	PIXCI® signals	N/A	No	No
CA-D7T	Area Mono	PIXCI® signals	N/A	No	No
CA-D8-0512	Area Mono	PIXCI® signals	N/A	No	No
DS-2x-01M40(CA-D4A)	Area Mono	PIXCI® signals	N/A	No	No
DS-4x-65K955(CA-D6-0256)	Area Mono	PIXCI® signals	N/A	No	No
DS-4x-300K262(CA-D6-0512)	Area Mono	PIXCI® signals	N/A	No	No
DS-11-16K7H(CA-D1-0128A)	Area Mono	PIXCI® signals	N/A	No	No
DS-12-16K5H(CA-D1-0128T)	Area Mono	PIXCI® signals	N/A	No	No
Dalstar(SMD) -					
1M30P	Area Mono	RS-232	N/A	No	No
1M30PC	Area Bayer	RS-232	Yes	No	No
1M30TC	Area Bayer	RS-232	Yes	No	No
1M60	Area Mono	RS-232	N/A	No	No
4M4	Area Mono	RS-232	N/A	No	No
4M15	Area Mono	RS-232	N/A	No	No
6M3P	Area Mono	RS-232	N/A	No	No
6M3PC	Area Bayer	RS-232	Yes	No	No
64K1M	Area Mono	RS-232	N/A	No	No
BT25	Area Mono	RS-232	N/A	No	No
DS-1x-01M15(1M15)	Area Mono	RS-232	N/A	No	No
DS-1x-01M30(1M30)	Area Mono	RS-232	N/A	No	No
DS-1x-04M4(4M4)	Area Mono	RS-232	N/A	No	No
DS-1x-06M3(6M3P)	Area Mono	RS-232	N/A	No	No
DVC -					
DVC-08	Area Mono	None	N/A	No	No
DVC-10	Area Mono	None	N/A	No	No
DVC-1300C-RS-232	Area Bayer	RS-232	Yes	Yes	No
DVC-1300C w/o RS-232	Area Bayer	Switches	Yes	No	No
DVC-1300-RS-232	Area Mono	RS-232	N/A	Yes	No
DVC-1300 w/o RS-232	Area Mono	Switches	N/A	No	No
DVC-1310	Area Mono	RS-232	N/A	Yes	No
DVC-1310AC	Area Bayer	RS-232	Yes	Yes	No
DVC-1310AC-CL	Area Bayer	C.L. Serial	Yes	Yes	No
DVC-1310AM	Area Mono	RS-232	N/A	Yes	No
DVC-1310AM-CL	Area Bayer	C.L. Serial	N/A	Yes	No
DVC-1310C	Area Bayer	RS-232	Yes	Yes	No
DVC-1312	Area Mono	RS-232	N/A	Yes	No
DVC-1312AC	Area Bayer	RS-232	Yes	Yes	No
DVC-1312AC-CL	Area Bayer	C.L. Serial	Yes	Yes	No
DVC-1312AM	Area Mono	RS-232	N/A	Yes	No
DVC-1312AM-CL	Area Mono	C.L. Serial	N/A	Yes	No
DVC-1312C	Area Bayer	RS-232	Yes	Yes	No
DVC-1412AC	Area Bayer	RS-232	Yes	Yes	No
DVC-1412AC-CL	Area Bayer	C.L. Serial	Yes	Yes	No
DVC-1412AM	Area Mono	RS-232	N/A	Yes	No
DVC-1412AM-CL	Area Mono	C.L. Serial	N/A	Yes	No
DVC-Intensicam I (10 bit)	Area Mono	RS-232	N/A	Yes	No
DVC-Intensicam I (12 bit)	Area Mono	RS-232	N/A	Yes	No
DVC-Intensicam II	Area Mono	RS-232	N/A	Yes	No

Camera	Type	Controls	Software White/Color Balance	Software AGC/AEC	Software per-Pixel Normalization
e2v -					
AViiVA M2 CL 0514	Line Mono	C.L. Serial	N/A	No	No
AViiVA M2 CL 1010	Line Mono	C.L. Serial	N/A	No	No
AViiVA M2 CL 1014	Line Mono	C.L. Serial	N/A	No	No
AViiVA M2 CL 2010	Line Mono	C.L. Serial	N/A	No	No
AViiVA M2 CL 2014	Line Mono	C.L. Serial	N/A	No	No
AViiVA M2 CL 4010	Line Mono	C.L. Serial	N/A	No	No
AViiVA SM2 CL 0514	Line Mono	C.L. Serial	N/A	No	No
AViiVA SM2 CL 1010	Line Mono	C.L. Serial	N/A	No	No
AViiVA SM2 CL 1014	Line Mono	C.L. Serial	N/A	No	No
AViiVA SM2 CL 2010	Line Mono	C.L. Serial	N/A	No	No
AViiVA SM2 CL 2014	Line Mono	C.L. Serial	N/A	No	No
AViiVA SM2 CL 4010	Line Mono	C.L. Serial	N/A	No	No
EG&G Reticon -					
LD2002 1 chan.	Line Mono	RS-232	N/A	No	No
LD2002 2 chan.	Line Mono	RS-232	N/A	No	No
LD2005 1 chan.	Line Mono	RS-232	N/A	No	No
LD2005 2 chan.	Line Mono	RS-232	N/A	No	No
LD2010 1 chan.	Line Mono	RS-232	N/A	No	No
LD2010 2 chan.	Line Mono	RS-232	N/A	No	No
LD2020 1 chan.	Line Mono	RS-232	N/A	No	No
LD2020 2 chan.	Line Mono	RS-232	N/A	No	No
LD2040 1 chan.	Line Mono	RS-232	N/A	No	No
LD2040 2 chan.	Line Mono	RS-232	N/A	No	No
LD2060 1 chan.	Line Mono	RS-232	N/A	No	No
LD2060 2 chan.	Line Mono	RS-232	N/A	No	No
LD2080 1 chan.	Line Mono	RS-232	N/A	No	No
LD2080 2 chan.	Line Mono	RS-232	N/A	No	No
MD4013	Area Mono	None	N/A	No	No
YD5010	Line RGB	C.L. Serial	N/A	No	No
YD5020	Line RGB	C.L. Serial	N/A	No	No
YD5040	Line RGB	C.L. Serial	N/A	No	No
YD5060	Line RGB	C.L. Serial	N/A	No	No
Eastman Kodak -					
KAC-0310	Area Mono	I^2C Serial	N/A	No	Yes
KAC-0310C	Area Bayer	I^2C Serial	Yes	No	Yes
KAC-1310	Area Mono	I^2C Serial	N/A	No	Yes
KAC-1310C	Area Bayer	I^2C Serial	Yes	No	Yes
FastVideo -					
LUPA300	Area Mono	None	N/A	No	No
Focus -					
FI-HR-2	Area Mono	RS-232	N/A	No	No
FI-HR-2C	Area Bayer	RS-232	Yes	No	No
FI-HR-M	Area Mono	RS-232	N/A	No	No
FI-HR-RGB	Area Bayer	RS-232	Yes	No	No
Foveon -					
Foveon F13 DevCam	Area RGB	C.L. Serial	Yes	No	Yes
Gigaphoton -					
Gigaphoton-256	Line Mono	PIXCI signals	N/A	No	No
Gigaphoton-512	Line Mono	PIXCI signals	N/A	No	No
Gigaphoton-1024	Line Mono	PIXCI signals	N/A	No	No
Goodrich Sensors Unlimited -					
SU128	Area Mono	Switches	N/A	No	No
SU320	Area Mono	Switches	N/A	No	No
SU320M	Area Mono	RS-232	N/A	No	No
SU640	Area Mono	Switches	N/A	No	No
SU640SDV	Area Mono	C.L. Serial	N/A	No	No
SU640SDV-II	Area Mono	C.L. Serial	N/A	No	No
Hamamatsu -					
C4742-95-8	Area Mono	RS-232	N/A	No	No
C4742-95-10	Area Mono	RS-232	N/A	No	No
C4742-95-12	Area Mono	RS-232	N/A	No	No
C7942	Area Mono	PIXCI® signals	N/A	No	No
C9250DP	Area Mono	None	N/A	No	No
HanVision -					
HVDUO-5M	Area RGB	C.L. Serial	Yes	No	No
HVDUO-10M (HVDUO3)	Area RGB	RS-232	Yes	No	No
HVDUO-10M-CL	Area RGB	C.L. Serial	Yes	No	No
HVSOLO-11	Line Mono	None	N/A	No	No
Hitachi -					
DDX-101	Area RGB	RS-232	No	No	No
KP-F30SCL	Area Mono	C.L. Serial	N/A	No	No
KP-FR30SCL	Area Bayer	C.L. Serial	Yes	No	No
KP-F31SCL	Area Mono	C.L. Serial	N/A	No	No
KP-FR31SCL	Area Bayer	C.L. Serial	Yes	No	No
KP-F80SCL	Area Mono	C.L. Serial	N/A	No	No
KP-F100	Area Mono	Switches	N/A	No	No
KP-F100A	Area Mono	RS-232	N/A	No	Yes
KP-F100A-CL	Area Mono	C.L. Serial	N/A	No	Yes
KP-F100B	Area Mono	RS-232	N/A	No	Yes
KP-F100B-CL	Area Mono	C.L. Serial	N/A	No	Yes
KP-F100C	Area Bayer	Switches	Yes	No	No
KP-F100-S7	Area Mono	Switches	N/A	No	No
KP-F100UV	Area Mono	RS-232	N/A	No	Yes
KP-F102	Area Mono	RS-232	N/A	No	No
KP-F110	Area Mono	Switches	N/A	No	No
KP-F120	Area Mono	RS-232	N/A	No	No
KP-F120-CL	Area Mono	C.L. Serial	N/A	No	No
KP-F200-CL	Area Mono	C.L. Serial	N/A	No	No
KP-F200SCL	Area Mono	C.L. Serial	N/A	No	No
KP-F230SCL	Area Mono	C.L. Serial	N/A	No	No
KP-FR230SCL	Area Bayer	C.L. Serial	Yes	No	No
KP-F500SCL	Area Mono	C.L. Serial	N/A	No	No
KP-FR500SCL	Area Bayer	C.L. Serial	Yes	No	No
KP-FD30-CL	Area RGB	C.L. Serial	No	No	No
KP-FD140SCL	Area RGB	C.L. Serial	No	No	No
KP-FD202SCL	Area RGB	C.L. Serial	No	No	No
HV-F22CL-S3	Area RGB	C.L. Serial	No	No	Yes
HV-F31CL-S3	Area RGB	C.L. Serial	No	No	Yes
IDT -					
M-3 Mono	Area Mono	C.L. Generic	N/A	No	No
M-3 Color	Area Bayer	C.L. Generic	Yes	No	No
M-5 Mono	Area Mono	C.L. Generic	N/A	No	No
M-5 Color	Area Bayer	C.L. Generic	Yes	No	No
Ikegami -					
SKC-141	Area Mono	RS-232	N/A	No	No
ITT Night Vision(Xybion) -					
ISG-750	Area Mono	None	N/A	No	No
Illunis -					
MMV-1020	Area Mono	C.L. Serial	N/A	No	No
MMV-1020C	Area Bayer	C.L. Serial	Yes	No	No
MMV-11000	Area Mono	C.L. Serial	N/A	No	No
MMV-11000C	Area Bayer	C.L. Serial	Yes	No	No
XMV-11000	Area Mono	C.L. Serial	N/A	No	No
IMPERX -					
Bobcat ICL-B0610C	Area Bayer	C.L. Serial	Yes	No	No
Bobcat ICL-B0610M	Area Mono	C.L. Serial	N/A	No	No
Bobcat ICL-B0620C	Area Bayer	C.L. Serial	Yes	No	No

A DETAILED OVERVIEW — DIGITAL CAMERA SUPPORT (continued)

Camera	Type	Controls	Software White/Color Balance	Software AGC/AEC	Software Gain/Offset Normalization
IMPERX -					
Bobcat ICL-B0620M	Area Mono	C.L. Serial	N/A	No	No
Bobcat ICL-B1020M	Area Mono	C.L. Serial	N/A	No	No
Bobcat ICL-B1020C	Area Bayer	C.L. Serial	Yes	No	No
Bobcat ICL-B1310M	Area Mono	C.L. Serial	N/A	No	No
Bobcat ICL-B1310C	Area Bayer	C.L. Serial	Yes	No	No
Bobcat ICL-B1320M	Area Mono	C.L. Serial	N/A	No	No
Bobcat ICL-B1320C	Area Bayer	C.L. Serial	Yes	No	No
Bobcat ICL-B1410C	Area Bayer	C.L. Serial	Yes	No	No
Bobcat ICL-B1410M	Area Mono	C.L. Serial	N/A	No	No
Bobcat ICL-B1411M	Area Mono	C.L. Serial	N/A	No	No
Bobcat ICL-B1411C	Area Bayer	C.L. Serial	Yes	No	No
Bobcat ICL-B1610C	Area Bayer	C.L. Serial	Yes	No	No
Bobcat ICL-B1610M	Area Mono	C.L. Serial	N/A	No	No
Bobcat ICL-B1620C	Area Bayer	C.L. Serial	Yes	No	No
Bobcat ICL-B1620M	Area Mono	C.L. Serial	N/A	No	No
Bobcat ICL-B1621M	Area Mono	C.L. Serial	N/A	No	No
Bobcat ICL-B1621C	Area Bayer	C.L. Serial	Yes	No	No
Bobcat ICL-B1920C	Area Bayer	C.L. Serial	Yes	No	No
Bobcat ICL-B1920M	Area Mono	C.L. Serial	N/A	No	No
Bobcat ICL-B1921M	Area Mono	C.L. Serial	N/A	No	No
Bobcat ICL-B1921C	Area Bayer	C.L. Serial	Yes	No	No
Bobcat ICL-B2020C	Area Bayer	C.L. Serial	Yes	No	No
Bobcat ICL-B2020M	Area Mono	C.L. Serial	N/A	No	No
Bobcat ICL-B2320M	Area Mono	C.L. Serial	N/A	No	No
Bobcat ICL-B2320C	Area Bayer	C.L. Serial	Yes	No	No
Bobcat ICL-B2520M	Area Mono	C.L. Serial	N/A	No	No
Bobcat ICL-B2520C	Area Bayer	C.L. Serial	Yes	No	No
Bobcat ICL-B3320M	Area Mono	C.L. Serial	N/A	No	No
Bobcat ICL-B3320C	Area Bayer	C.L. Serial	Yes	No	No
Bobcat ICL-B4020C	Area Bayer	C.L. Serial	Yes	No	No
Bobcat ICL-B4020M	Area Mono	C.L. Serial	N/A	No	No
Bobcat ICL-B4820M	Area Mono	C.L. Serial	N/A	No	No
Bobcat ICL-B4820C	Area Bayer	C.L. Serial	Yes	No	No
Bobcat ICL-B4821M	Area Mono	C.L. Serial	N/A	No	No
Bobcat ICL-B4821C	Area Bayer	C.L. Serial	Yes	No	No
Bobcat ICL-B6620M	Area Mono	C.L. Serial	N/A	No	No
Bobcat ICL-B6620C	Area Bayer	C.L. Serial	Yes	No	No
Lynx IPX-1M48	Area Mono	C.L. Serial	N/A	No	No
Lynx IPX-1M48C	Area Bayer	C.L. Serial	Yes	No	No
Lynx IPX-1M48-L	Area Mono	C.L. Serial	N/A	No	No
Lynx IPX-1M48-LC	Area Bayer	C.L. Serial	Yes	No	No
Lynx IPX-2M30H-L	Area Mono	C.L. Serial	N/A	No	No
Lynx IPX-2M30H-LC	Area Bayer	C.L. Serial	Yes	No	No
Lynx IPX-2M30L	Area Mono	C.L. Serial	N/A	No	No
Lynx IPX-2M30LC	Area Bayer	C.L. Serial	Yes	No	No
Lynx IPX-4M15-L	Area Mono	C.L. Serial	N/A	No	No
Lynx IPX-4M15-LC	Area Bayer	C.L. Serial	Yes	No	No
Lynx IPX-11M5L	Area Mono	C.L. Serial	N/A	No	No
Lynx IPX-11M5LC	Area Bayer	C.L. Serial	Yes	No	No
Lynx IPX-16M3L	Area Mono	C.L. Serial	N/A	No	No
Lynx IPX-16M3LC	Area Bayer	C.L. Serial	Yes	No	No
Lynx IPX-VGA120L	Area Mono	C.L. Serial	N/A	No	No
Lynx IPX-VGA120LC	Area Bayer	C.L. Serial	Yes	No	No
Lynx IPX-VGA210	Area Mono	C.L. Serial	N/A	No	No
Lynx IPX-VGA210C	Area Bayer	C.L. Serial	Yes	No	No
Lynx IPX-VGA210L	Area Mono	C.L. Serial	N/A	No	No
Lynx IPX-VGA210LC	Area Bayer	C.L. Serial	Yes	No	No
MDC-1004 (MDC-M1CL01)	Area Mono	C.L. Serial	N/A	No	No
MDC-1004C (MDC-C1CL01)	Area Bayer	C.L. Serial	Yes	No	No
Indigo -					
Alpha NIR	Area Mono	RS-232	N/A	No	No
Phoenix-RTIE	Area Mono	None	N/A	No	No
Inframetrics -					
760	Area Mono	None	N/A	No	No
Intevac -					
MicroVista	Area Mono	C.L. Serial	N/A	No	No
INTRON -					
12	Area Mono	RS-232	N/A	No	No
12C	Area Bayer	RS-232	Yes	No	No
ISVI -					
IC-C05HCM	Area Bayer	C.L. Serial	Yes	No	Yes
IC-C10HCM	Area Bayer	C.L. Serial	Yes	No	Yes
IC-M15HFM	Area Mono	C.L. Serial	N/A	No	Yes
IC-C15HFM	Area Bayer	C.L. Serial	Yes	No	Yes
IC-M25HFM	Area Mono	C.L. Serial	N/A	No	Yes
IC-C25HFM	Area Bayer	C.L. Serial	Yes	No	Yes
Jai -					
CV-L107CL	Line RGB	C.L. Serial	No	No	No
CV-M2CL	Area Mono	C.L. Serial	N/A	No	No
CV-M4	Area Mono	None	N/A	No	No
CV-M4+CL	Area Mono	C.L. Serial	N/A	No	No
CV-M4CL	Area Mono	C.L. Serial	N/A	No	No
CV-M7+CL	Area Bayer	C.L. Serial	Yes	No	No
CV-M8CL	Area Bayer	C.L. Serial	Yes	No	No
CM-140MCL/PMCL	Area Mono	C.L. Serial	N/A	No	No
CB-140MCL/PMCL	Area Bayer	C.L. Serial	Yes	No	No
CM-200MCL/PMCL	Area Mono	C.L. Serial	N/A	No	No
CB-200MCL/PMCL	Area Bayer	C.L. Serial	Yes	No	No
JAI(Pulnix) -					
TM-1000/TM-1001	Area Mono	Switches	N/A	No	No
TM-1010	Area Mono	None	N/A	No	No
TM-1020-15	Area Mono	RS-232	N/A	No	No
TM-1020-15CL	Area Mono	C.L. Serial	N/A	No	No
TM-1040	Area Mono	RS-232	N/A	No	No
TM-1300	Area Mono	RS-232	N/A	No	No
TM-1320-15CL	Area Mono	C.L. Serial	N/A	No	No
TM-1325-CL	Area Mono	C.L. Serial	N/A	No	No
TM-1400-CL	Area Mono	C.L. Serial	N/A	No	No
TM-2016-8CL	Area Mono	C.L. Serial	N/A	No	No
TM-4100CL	Area Mono	C.L. Serial	N/A	No	No
TM-4200CL	Area Mono	C.L. Generic	No	No	No
TM-6700CL	Area Mono	C.L. Serial	N/A	No	No
TM-6710	Area Mono	RS-232	N/A	No	No
TM-6710-CL	Area Mono	C.L. Serial	N/A	No	No
TM-6740CL	Area Mono	C.L. Serial	N/A	No	No
TM-6760-CL	Area Mono	C.L. Serial	N/A	No	No
TM-9701	Area Mono	RS-232	N/A	No	No
JAI(Pulnix) -					
TMC-1000-CL	Area RGB	C.L. Serial	No	No	No
TMC-1020-15CL	Area Bayer	C.L. Serial	Yes	No	No
TMC-1320-15	Area Bayer	RS-232	Yes	No	No
TMC-1320-15CL	Area Bayer	C.L. Serial	Yes	No	No
TMC-1325-CL	Area Bayer	C.L. Serial	Yes	No	No
TMC-1400-CL	Area Bayer	C.L. Serial	Yes	No	No
TMC-4100CL	Area Bayer	C.L. Serial	Yes	No	No
TMC-6700CL	Area RGB	C.L. Serial	No	No	No
TMC-6760-CL	Area Bayer	C.L. Serial	Yes	No	No
TMC-9700	Area RGB	RS-232	No	No	No
LORD Imaging -					
DVL5000T	Line Mono	C.L. Generic	N/A	No	No

Camera	Type	Controls	Software White/Color Balance	Software AGC/AEC	Software per-Pixel Normalization
Mikrotron -					
MC1310	Area Mono	C.L. Generic	N/A	No	No
MC1311	Area Bayer	C.L. Generic	Yes	No	No
MC1360	Area Mono	C.L. Serial	N/A	No	Yes
MC1361	Area Bayer	C.L. Serial	Yes	No	Yes
MC1362	Area Mono	C.L. Serial	N/A	No	Yes
MC1363	Area Bayer	C.L. Serial	Yes	No	Yes
Mitsubishi Rayon -					
MKS-2048-20	Line Mono	PIXCI® signals	N/A	No	No
MKS-5000-20	Line Mono	PIXCI® signals	N/A	No	No
MKS-5000-40	Line Mono	PIXCI® signals	N/A	No	No
MKS-7450-20	Line Mono	PIXCI® signals	N/A	No	No
MKS-7450-40	Line Mono	PIXCI® signals	N/A	No	No
Micron -					
MT9M001	Area Mono	I²C Serial	N/A	No	Yes
MT9M001C	Area Bayer	I²C Serial	Yes	No	Yes
MT9P001	Area Mono	I²C Serial	N/A	No	Yes
MT9P001C	Area Bayer	I²C Serial	Yes	No	Yes
MT9T001C	Area Bayer	I²C Serial	Yes	No	Yes
MT9V022	Area Mono	I²C Serial	N/A	No	Yes
MT9V022C	Area Bayer	I²C Serial	Yes	No	Yes
MT9V403	Area Mono	I²C Serial	N/A	No	Yes
MT9V403C	Area Bayer	I²C Serial	Yes	No	Yes
NAC -					
HotShot 512	Area Mono	C.L. Serial	N/A	No	No
HotShot 512C	Area Bayer	C.L. Serial	Yes	No	No
HotShot 1280	Area Mono	C.L. Serial	N/A	No	No
HotShot 1280C	Area Bayer	C.L. Serial	Yes	No	No
NED -					
XCM4040SAT2	Line Mono	C.L. Serial	N/A	No	No
Perkin Elmer -					
LD3521-CL	Line Mono	PIXCI® signals	N/A	No	No
LD3521-LVDS	Line Mono	PIXCI® signals	N/A	No	No
LD3522-CL	Line Mono	PIXCI® signals	N/A	No	No
LD3522-LVDS	Line Mono	PIXCI® signals	N/A	No	No
LD3523-CL	Line Mono	PIXCI® signals	N/A	No	No
LD3523-LVDS	Line Mono	PIXCI® signals	N/A	No	No
LD3541-CL	Line Mono	PIXCI® signals	N/A	No	No
LD3541-LVDS	Line Mono	PIXCI® signals	N/A	No	No
LD3542-CL	Line Mono	PIXCI® signals	N/A	No	No
LD3542-LVDS	Line Mono	PIXCI® signals	N/A	No	No
LD3543-CL	Line Mono	PIXCI® signals	N/A	No	No
LD3543-LVDS	Line Mono	PIXCI® signals	N/A	No	No
SmartBlue SB0440	Line Mono	C.L. Serial	N/A	No	No
SmartBlue SB1440	Line Mono	C.L. Serial	N/A	No	No
SmartBlue SB2480	Line Mono	C.L. Serial	N/A	No	No
SmartBlue SB4480	Line Mono	C.L. Serial	N/A	No	No
YD5010	Line RGB	C.L. Serial	Yes	No	No
YD5020	Line RGB	C.L. Serial	Yes	No	No
YD5040	Line RGB	C.L. Serial	Yes	No	No
YD5060	Line RGB	C.L. Serial	Yes	No	No
Photon Vision -					
ACS-1	Area Mono	None	N/A	No	No
Photonfocus -					
MV-D1024E	Area Mono	C.L. Generic	N/A	No	No
MV2-D1280	Area Mono	C.L. Generic	N/A	No	No
Photo Research -					
PR-920	Area Mono	None	N/A	No	No
Point Grey -					
Gazelle GZL-CL-22C5	Area Mono	C.L. Serial	N/A	No	No
Gazelle GZL-CL-41C6	Area Mono	C.L. Serial	N/A	No	No
Princeton Instruments					
ES1602	Area Mono	C.L. Serial	N/A	Yes	Yes
ES2001	Area Mono	C.L. Serial	N/A	Yes	Yes
ES2001 Dual	Area Mono	C.L. Serial	N/A	Yes	Yes
ES2001 Quad	Area Mono	C.L. Serial	N/A	Yes	Yes
ES2001RGB	Area RGB/Bayer	C.L. Serial	Yes	Yes	Yes
ES2020	Area Mono	C.L. Serial	N/A	Yes	Yes
ES2020RGB	Area RGB/Bayer	C.L. Serial	Yes	Yes	Yes
ES2093	Area Mono	C.L. Serial	N/A	Yes	Yes
ES2093 Dual	Area Mono	C.L. Serial	N/A	Yes	Yes
ES2093RGB	Area RGB/Bayer	C.L. Serial	Yes	Yes	Yes
ES3200	Area Mono	C.L. Serial	N/A	Yes	Yes
ES4020	Area Mono	C.L. Serial	N/A	Yes	Yes
ES4020 Dual	Area Mono	C.L. Serial	N/A	Yes	Yes
ES4020 Quad	Area Mono	C.L. Serial	N/A	Yes	Yes
ES4020RGB	Area RGB/Bayer	C.L. Serial	Yes	Yes	Yes
EC11000	Area Mono	C.L. Serial	N/A	Yes	Yes
EC11000 Dual	Area Mono	C.L. Serial	N/A	Yes	Yes
EC11000 Quad	Area Mono	C.L. Serial	N/A	Yes	Yes
ES11000	Area Mono	C.L. Serial	N/A	Yes	Yes
ES11000 Dual	Area Mono	C.L. Serial	N/A	Yes	Yes
ES11000 Quad	Area Mono	C.L. Serial	N/A	Yes	Yes
ES11000RGB	Area RGB/Bayer	C.L. Serial	Yes	Yes	Yes
EC16000	Area Mono	C.L. Serial	N/A	Yes	Yes
EP16000	Area Mono	C.L. Serial	N/A	Yes	Yes
Raptor Photonics -					
Cygnet	Area Mono	C.L. Serial	N/A	Yes	Yes
Falcon-CL	Area Mono	C.L. Serial	N/A	Yes	Yes
Hawk-CL	Area Mono	C.L. Serial	N/A	No	Yes
Kingfisher674	Area Mono	C.L. Serial	N/A	No	Yes
Kite-CL	Area Mono	C.L. Serial	N/A	Yes	Yes
Owl-CL High Speed	Area Mono	C.L. Serial	N/A	No	No
Owl-CL-320	Area Mono	C.L. Serial	N/A	No	Yes
Osprey	Area Mono	C.L. Serial	N/A	Yes	Yes
Redlake(DuncanTech) -					
DT1100	Area RGB	RS-232	No	No	No
MS3100-RGB	Area RGB	RS-232	No	No	No
MS3100-RGB(CL)	Area RGB	C.L. Serial	No	No	No
RH1100	Area RGB	RS-232	No	No	No
Redlake MASD -					
1.4 8 bit	Area Mono	Switches	N/A	No	No
1.4i 8 bit	Area Mono	RS-232	N/A	No	No
1.6i 8 bit	Area Mono	RS-232	N/A	No	No
1.6i 10 bit	Area Mono	RS-232	N/A	No	No
4.2i 8 bit	Area Mono	RS-232	N/A	No	No
4.2i 10 bit	Area Mono	RS-232	N/A	No	No
6.3i 8 bit	Area Mono	RS-232	N/A	No	No
6.3i 10 bit	Area Mono	RS-232	N/A	No	No
16.8i 8 bit	Area Mono	RS-232	N/A	No	No
16.8i 10 bit	Area Mono	RS-232	N/A	No	No
ES-1.0 8 bit 2 chan.	Area Mono	RS-232	N/A	No	No
ES-1.0/10 bit 1 chan.	Area Mono	RS-232	N/A	No	No
ES-1.0/10 bit 1 chan. RGB/Toucan8	Area RGB	RS-232	No	No	No
ES-1.0/10 bit 2 chan.	Area Mono	RS-232	N/A	No	No
ES-1.0/1015T	Area Mono	RS-232	N/A	No	No
ES-1.0/1015T RGB/Toucan8	Area RGB	RS-232	No	No	No
ES-1.0/1030T	Area Mono	RS-232	N/A	No	No
ES-1.0/1215 12 bit	Area Mono	RS-232	N/A	No	No
ES-1.0/1230 12 bit	Area Mono	RS-232	N/A	No	No
ES-1.0/1260 12 bit	Area Mono	RS-232	N/A	No	No

A DETAILED OVERVIEW — DIGITAL CAMERA SUPPORT (continued)

Camera	Type	Controls	Software White/Color Balance	Software AGC/AEC	Software per-Pixel Normalization
Redlake MASD -					
ES-1.0/C/8 bit 1 chan. Bayer	Area Bayer	RS-232	Yes	No	No
ES-1.0/MV	Area Mono	RS-232	N/A	No	No
ES-1.0/SC 8 bit 1 chan.	Area Mono	RS-232	N/A	No	No
ES-1.0/SC RGB/Toucan8	Area RGB	RS-232	No	No	No
ES-4.0 8 bit 1 chan.	Area Mono	RS-232	N/A	No	No
ES-4.0 8 bit 2 chan.	Area Mono	RS-232	N/A	No	No
ES-4.0 12 bit	Area Mono	RS-232	N/A	No	No
ES-4.0 12 bit 1 chan.	Area Mono	RS-232	N/A	No	No
ES-4.0 12 bit 2 chan.	Area Mono	RS-232	N/A	No	No
ES-4.0/E 8 bit 2 chan.	Area Mono	RS-232	N/A	No	No
ES-4.0/E 12 bit 2 chan.	Area Mono	RS-232	N/A	No	No
ES-4.0/E 12 bit 2 chan.	Area Mono	RS-232	N/A	No	No
ES-310 8 bit 2 chan.	Area Mono	RS-232	N/A	No	No
ES-310 Turbo 2 chan.	Area Mono	RS-232	N/A	No	No
ES-1020	Area Mono	C.L. Serial	N/A	No	No
ES-1020C	Area Bayer	C.L. Serial	Yes	No	No
Salvador Imaging -					
SI-VGA60-EM-Color	Area Bayer	C.L. Serial	Yes	Yes	Yes
SI-VGA60-EM	Area Mono	C.L. Serial	N/A	Yes	Yes
SI-1M30-EM	Area Mono	C.L. Serial	N/A	Yes	Yes
SI-16M4-EM	Area Mono	C.L. Serial	N/A	Yes	Yes
SI-16M4-EM-Color	Area Bayer	C.L. Serial	Yes	Yes	Yes
Silicon Imaging -					
SI-640HFM	Area Mono	C.L. Serial	N/A	Yes	Yes
SI-640HFRGB	Area Bayer	C.L. Serial	Yes	Yes	Yes
SI-1280FM	Area Mono	C.L. Serial	N/A	Yes	Yes
SI-1280FRGB	Area Bayer	C.L. Serial	Yes	Yes	Yes
SI-1300M	Area Mono	C.L. Serial	N/A	Yes	Yes
SI-1300RGB	Area Bayer	C.L. Serial	Yes	Yes	Yes
SI-1920HD-M	Area Mono	C.L. Serial	N/A	No	Yes
SI-1920HD-RGB	Area Bayer	C.L. Serial	Yes	No	Yes
SI-3170M	Area Mono	C.L. Serial	N/A	Yes	Yes
SI-3170RGB	Area Bayer	C.L. Serial	Yes	Yes	Yes
SI-3171M	Area Mono	C.L. Serial	N/A	Yes	Yes
SI-3171RGB	Area Bayer	C.L. Serial	Yes	Yes	Yes
SI-3300RGB	Area Bayer	C.L. Serial	Yes	Yes	Yes
SI-4000	Area Bayer	C.L. Serial	Yes	Yes	Yes
SI-6600M	Area Mono	C.L. Serial	N/A	Yes	Yes
SI-6600RGB	Area Bayer	C.L. Serial	Yes	Yes	Yes
SI-14000	Area Mono	C.L. Serial	N/A	Yes	Yes
SI-14000RGB	Area Bayer	C.L. Serial	Yes	Yes	Yes
SILICON VIDEO® -					
0310	Area Mono	I²C Serial	N/A	No	Yes
0310C	Area Bayer	I²C Serial	Yes	No	Yes
10C-CL	Area Bayer	C.L. Serial	Yes	Yes	Yes
10M-CL	Area Mono	C.L. Serial	N/A	Yes	Yes
10C6	Area Bayer	I²C Serial	Yes	Yes	Yes
10M6	Area Mono	I²C Serial	N/A	Yes	Yes
1281C	Area Bayer	I²C Serial	Yes	Yes	Yes
1281M	Area Mono	I²C Serial	N/A	Yes	Yes
1310	Area Mono	I²C Serial	N/A	Yes	Yes
1310C	Area Bayer	I²C Serial	Yes	Yes	Yes
2112	Area Mono	I²C Serial	N/A	Yes	Yes
2112C	Area Bayer	I²C Serial	Yes	Yes	Yes
2212	Area Mono	I²C Serial	N/A	Yes	Yes
2212C	Area Bayer	I²C Serial	Yes	Yes	Yes
5C10	Area Bayer	I²C Serial	Yes	Yes	Yes
5M10	Area Mono	I²C Serial	N/A	Yes	Yes
642C	Area Bayer	I²C Serial	Yes	Yes	Yes
642M	Area Mono	I²C Serial	N/A	Yes	Yes
643C	Area Bayer	I²C Serial	Yes	Yes	Yes
643M	Area Mono	I²C Serial	N/A	Yes	Yes
9C10	Area Bayer	I²C Serial	Yes	Yes	Yes
9M001	Area Mono	I²C Serial	N/A	Yes	Yes
9M001C	Area Bayer	I²C Serial	Yes	Yes	Yes
9T001C	Area Bayer	I²C Serial	Yes	Yes	Yes
WGA-C	Area Bayer	I²C Serial	Yes	No	Yes
WGA-M	Area Mono	I²C Serial	N/A	No	Yes
SONY -					
XCL-U1000C	Area RGB	C.L. Serial	No	No	No
XCL-U1000	Area Mono	C.L. Serial	N/A	No	No
XCL-V500	Area Mono	C.L. Serial	N/A	No	No
XCL-X700	Area Mono	C.L. Serial	N/A	No	No
SVS-VISTEK -					
SVS205SCCL	Area Bayer	C.L. Serial	Yes	No	No
SVS205SCL	Area Mono	C.L. Serial	N/A	No	No
SVS285SCCL	Area Bayer	C.L. Serial	Yes	No	No
SVS285SCL	Area Mono	C.L. Serial	N/A	No	No
Symagery -					
VCA1281	Area Mono	I²C Serial	N/A	No	Yes
VCA1281C	Area Bayer	I²C Serial	Yes	No	Yes
Sentech -					
STC-CL33A	Area Mono	C.L. Serial	N/A	No	No
STC-CLC33A	Area Bayer	C.L. Serial	Yes	No	No
STC-CL83A	Area Mono	C.L. Serial	N/A	No	No
STC-CLC83A	Area Bayer	C.L. Serial	Yes	No	No
STC-CL202A	Area Mono	C.L. Serial	N/A	No	No
STC-CLC202A	Area Bayer	C.L. Serial	Yes	No	No
STC-CL232A	Area Mono	C.L. Serial	N/A	No	No
STC-CLC232A	Area Bayer	C.L. Serial	Yes	No	No
STC-CL500A	Area Mono	C.L. Serial	N/A	No	No
STC-CLC500A	Area Bayer	C.L. Serial	Yes	No	No
STC-CL1500	Area Mono	Switches	N/A	No	No
STL-2048	Line Mono	PIXCI® signals	N/A	No	No
STL-5150	Line Mono	PIXCI® signals	N/A	No	No
STL-7400RCL	Line Mono	C.L. Serial	N/A	No	No
STL-7450	Line Mono	PIXCI® signals	N/A	No	No
Takenaka -					
FC300	Area Mono	RS-232	N/A	No	No
FC800	Area Mono	RS-232	N/A	No	No
FC1300	Area Mono	RS-232	N/A	No	No
FC1500	Area Mono	RS-232	N/A	No	No
TL2048	Line Mono	PIXCI® signals	N/A	No	No
TL5150	Line Mono	PIXCI® signals	N/A	No	No
TL7450	Line Mono	PIXCI® signals	N/A	No	No
Teli -					
CS3910	Area Mono	Switches	N/A	No	No
CS3910BH	Area Mono	Switches	N/A	No	No
CS3920	Area Mono	Switches	N/A	No	No
CS3930UV	Area Mono	Switches	N/A	No	No
CS6910CL	Area RGB	C.L. Serial	No	No	No
CSB-4000CL-10A	Area Mono	C.L. Serial	N/A	No	No
CleverDragon CSCQS15BC23	Area Mono	C.L. Serial	N/A	No	Yes
CleverDragon CSCQS15CC23	Area Bayer	C.L. Serial	Yes	No	Yes
CleverDragon CSCQS15CC23	Area RGB	C.L. Serial	Yes	No	Yes
CleverDragon CSC12M25BMP19	Area Mono	C.L. Serial	N/A	No	No
CleverDragon CSC12M25CMP19	Area Bayer	C.L. Serial	Yes	No	No
CSL8000CL Mono Mode	Line Mono	C.L. Generic	No	No	No
CSL8000CL RGB Mode	Line RGB	C.L. Generic	No	No	No
Thomson/Thales -					
TH9560	Line Mono	Switches	N/A	No	No
Tichawa -					
CIS-0520-200	Line Mono	C.L. Generic	N/A	No	No
MiniCIS-600	Line Mono	C.L. Generic	N/A	No	No
MiniCIS-400	Line Mono	C.L. Generic	N/A	No	No
MiniCIS-100	Line Mono	C.L. Generic	N/A	No	No
MiniCIS-200	Line Mono	C.L. Generic	N/A	No	No
MiniCIS-200x4	Line Mono	C.L. Generic	N/A	No	No
Toshiba -					
IK-SX1	Area Mono	Switches	N/A	No	No
IK-SX1L	Area Mono	Switches	N/A	No	No
IK-TU51CU	Area RGB	RS-232	No	No	No
IK-TU61	Area RGB	RS-232	No	No	No
UNIQ -					
AS620	Area Mono	C.L. Serial	N/A	No	Yes
AS5000	Area Mono	C.L. Serial	N/A	No	Yes
AS5000C	Area Bayer	C.L. Serial	Yes	No	Yes
UC-600	Area Bayer	Switches	Yes	No	No
UC-600-CL	Area Bayer	C.L. Serial	Yes	No	Yes
UC-610	Area Bayer	Switches	Yes	No	No
UC-610-CL	Area Bayer	C.L. Serial	Yes	No	Yes
UC-685	Area Bayer	Switches	Yes	No	No
UC-685-CL	Area Bayer	C.L. Serial	Yes	No	Yes
UC-800	Area Bayer	Switches	Yes	No	No
UC-800-CL	Area Bayer	C.L. Serial	Yes	No	Yes
UC-900	Area Bayer	Switches	Yes	No	No
UC-900-CL	Area Bayer	C.L. Serial	Yes	No	Yes
UC-900-CL 12 bit	Area Bayer	C.L. Serial	Yes	No	Yes
UC-930	Area Bayer	Switches	Yes	No	No
UC-930-CL	Area Bayer	C.L. Serial	Yes	No	Yes
UNIQ -					
UC-1000	Area Bayer	Switches	Yes	No	No
UC-1030	Area Bayer	Switches	Yes	No	No
UC-1800	Area Bayer	RS-232	Yes	No	No
UC-1800 12 bit	Area Bayer	RS-232	Yes	No	No
UC-1800-CL	Area Bayer	C.L. Serial	Yes	No	Yes
UC-1800DS	Area Bayer	RS-232	Yes	No	No
UC-1800DS-CL	Area Bayer	C.L. Serial	Yes	No	Yes
UC-1830	Area Bayer	Switches	Yes	No	No
UC-1830-CL	Area Bayer	C.L. Serial	Yes	No	Yes
UC-2000-CL	Area Bayer	C.L. Serial	Yes	No	Yes
UF-1000	Area Mono	RS-232	N/A	No	No
UF-1000-CL	Area Mono	C.L. Serial	N/A	No	Yes
UP-600	Area Mono	Switches	N/A	No	No
UP-600-CL	Area Mono	C.L. Serial	N/A	No	Yes
UP-610	Area Mono	Switches	N/A	No	No
UP-610-CL	Area Mono	C.L. Serial	N/A	No	Yes
UP-680-CL	Area Mono	C.L. Serial	N/A	No	No
UP-685	Area Mono	Switches	N/A	No	No
UP-685-CL	Area Mono	C.L. Serial	N/A	No	Yes
UP-800	Area Mono	Switches	N/A	No	No
UP-800-CL	Area Mono	C.L. Serial	N/A	No	Yes
UP-900	Area Mono	Switches	N/A	No	No
UP-900-CL	Area Mono	C.L. Serial	N/A	No	Yes
UP-900-CL 12 bit	Area Mono	C.L. Serial	N/A	No	Yes
UP-900DS-CL	Area Mono	C.L. Serial	N/A	No	Yes
UP-930	Area Mono	Switches	N/A	No	No
UP-930-CL	Area Mono	C.L. Serial	N/A	No	Yes
UP-1000	Area Mono	Switches	N/A	No	No
UP-1030	Area Mono	Switches	N/A	No	No
UP-1800	Area Mono	RS-232	N/A	No	No
UP-1800 12 bit	Area Mono	Switches	N/A	No	No
UP-1800-CL	Area Mono	C.L. Serial	N/A	No	Yes
UP-1800-CL 12 bit	Area Mono	C.L. Serial	N/A	No	Yes
UP-1800DS	Area Mono	RS-232	N/A	No	No
UP-1800DS-CL	Area Mono	C.L. Serial	N/A	No	Yes
UP-1830	Area Mono	Switches	N/A	No	No
UP-1830A	Area Mono	Switches	N/A	No	No
UP-1830-CL	Area Mono	C.L. Serial	N/A	No	Yes
UP-1830-CL 12 bit	Area Mono	C.L. Serial	N/A	No	Yes
Varian -					
PaxScan 1313	Area Mono	None	N/A	No	No
PaxScan 2520	Area Mono	RS-232	N/A	No	No
PaxScan 4030A	Area Mono	RS-232	N/A	No	No
PaxScan 4030R	Area Mono	Switches	N/A	No	No
Vieworks					
VA-1M120	Area Mono	C.L. Serial	N/A	No	No
VA-1M120C	Area Bayer	C.L. Serial	Yes	No	No
VA-2M68	Area Mono	C.L. Serial	N/A	No	No
VA-2MW64	Area Mono	C.L. Serial	N/A	No	No
VA-2MW64C	Area Bayer	C.L. Serial	Yes	No	No
VA-4M32	Area Mono	C.L. Serial	N/A	No	No
VA-4M32C	Area Bayer	C.L. Serial	Yes	No	No
VA-8M16	Area Mono	C.L. Serial	N/A	No	No
VA-8M16C	Area Bayer	C.L. Serial	Yes	No	No
VA-2M68C	Area Bayer	C.L. Serial	Yes	No	No
VA-29MC-M5	Area Mono	C.L. Serial	N/A	No	No
VA-29MC-C5	Area Bayer	C.L. Serial	Yes	No	No
VC-4M110	Area Mono	C.L. Serial	N/A	No	No
VC-4M110C	Area Bayer	C.L. Serial	Yes	No	No
VC-4M160	Area Mono	C.L. Serial	N/A	No	No
VC-4M160C	Area Bayer	C.L. Serial	Yes	No	No
VH-2M	Area Mono	C.L. Serial	N/A	No	No
VH-2M-C	Area Bayer	C.L. Serial	Yes	No	No
VH-4M	Area Mono	C.L. Serial	N/A	No	No
VH-4M-C	Area Bayer	C.L. Serial	Yes	No	No
VH-11M	Area Mono	C.L. Serial	N/A	No	No
VH-11M-C	Area Bayer	C.L. Serial	Yes	No	No
VH-16M	Area Mono	C.L. Serial	N/A	No	No
VH-16M-C	Area Bayer	C.L. Serial	Yes	No	No
VH-VGA	Area Mono	C.L. Serial	N/A	No	No
VH-VGA-C	Area Bayer	C.L. Serial	Yes	No	No
VM-2M	Area Mono	C.L. Serial	N/A	No	No
VM-2M-C	Area Bayer	C.L. Serial	Yes	No	No
VM-4M	Area Mono	C.L. Serial	N/A	No	No
VM-4M-C	Area Bayer	C.L. Serial	Yes	No	No
VM-11M	Area Mono	C.L. Serial	N/A	No	No
VM-11M-C	Area Bayer	C.L. Serial	Yes	No	No
VM-16M	Area Mono	C.L. Serial	N/A	No	No
VM-16M-C	Area Bayer	C.L. Serial	Yes	No	No
VDS-Vosskuhler -					
CMC-4000	Area Mono	C.L. Serial	N/A	No	No
CMC-4000C	Area Bayer	C.L. Serial	Yes	No	No
Zoran -					
ZR732112-MQS	Area Mono	I²C Serial	N/A	No	Yes
ZR732112-PQS	Area Bayer	I²C Serial	Yes	No	Yes
ZR732212-MQS	Area Mono	I²C Serial	N/A	No	Yes
ZR732212-PQS	Area Bayer	I²C Serial	Yes	No	Yes
ZR732312-MLC	Area Mono	I²C Serial	N/A	No	Yes
ZR732312-PLC	Area Bayer	I²C Serial	Yes	No	Yes
ZR732316-MLC	Area Mono	I²C Serial	N/A	No	Yes
ZR732316-PLC	Area Bayer	I²C Serial	Yes	No	Yes

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