FrameLink Express
Release Notes – 06/09/2014

- Updated Application program to version 2.0.0.623 (from 1.5.0.234).
- Updated Library/SDK to version 3.0.0.623 (from 3.5.0. 234).
- Updated Driver to version 2.0.0.623 (from 1.5.0. 234).
- Updated VCE-CLPCIe03 Firmware to version 0.4.0.2 (from 0.4.0.1).
- Initial release of VCE-CLPCIe04 Firmware to version 0.5.0.11.

Release – 2.0.0.623 Appl 2.0.0.623 Lib/SDK 3.0.0.623 Drv 2.0.0.623	Changes from Release – 1.5.0.243 Appl 1.5.0.243 Lib/SDK 3.5.0.243 Drv 1.5.0.243	
1	Drv	Added support for CLPCIe04 (Full and Deca modes)
2	Drv	(LabView) Labview 64b support
3	Drv	(Matlab) Matlab 2013b, 2014a support
4	SDK	.NET samples fixed
5	App	PoCL dialog updated
6	App	Card Selector dialog added
7	App	PCIe capabilities added to Statistics dialog
8	App	Full and Deca modes added
9	App	Histogram panel crash fixed
10	App	Text overlay fixed for TIFF and AVI
11	Installer	New CAM files added

VCE-CLEX01, VCE-CLEX02 and VCE-CLPCIe01 Firmware: no changes

VCE-CLPCIe02 Firmware: no changes

VCE-CLPCIe03 Firmware:

Firmware – 0.4.0.2	Changes from version 0.4.0.1
1	Changed PoCL control: allow Off/Ch1/Ch2/Both settings

VCE-CLPCIe04 Firmware:

Firmware – 0.5.0.11	
1	Initial release for PCIe x4 card with Deca support.

- Updated Application program to version 1.5.0.234 (from 1.5.0.229).
- Updated Library/SDK to version 3.5.0.234 (from 3.5.0.229).
- Updated Driver to version 1.5.0.234 (from 1.5.0. 229).
- Updated VCE-CLEX01, VCE-CLEX02 and VCE-CLPCIe01 Firmware to version 0.2.0.9 (from 0.2.0.6).
- Updated VCE-CLPCIe02 Firmware to version 0.3.0.13 (from 0.3.0.12).
- Initial release of VCE-CLPCIe03 Firmware to version 0.4.0.1.

Release – 1.5.0.243 Appl 1.5.0.243 Lib/SDK 3.5.0.243 Drv 1.5.0.243	Changes from Release – 1.5.0.229 Appl 1.5.0.229 Lib/SDK 3.5.0.229 Drv 1.5.0.229	
1	Drv	Added support for x4 cards
2	Drv	BSOD if discovering the connected cameras fixed
3	App	Card Selector dialog added
4	App	Bug with AVI file for RGB24 video fixed
5	App	Concurrent PoCL in the Medium mode added
6	App	H Average Histogram in 4-tap mode fixed
7	App	Multiple PLC GUI errors fixed
8	Installer	Wrong libiomp version fixed

VCE-CLEX01, VCE-CLEX02 and VCE-CLPCIe01 Firmware:

Firmware – 0.2.0.9	Changes from version 0.2.0.6
1	Solved IRQ lock-up problem when there are lots of UART_Rx and DMA_DONE interrupts.
2	Changed UART RX_FIFO to use real FIFO instead of SRAM.
3	Made several performance improvements to UART receiver.

VCE-CLPCIe02 Firmware:

Firmware – 0.3.0.13	Changes from version 0.3.0.12
1	Solved IRQ lock-up problem when there are lots of UART_Rx and DMA_DONE interrupts.
2	Changed UART RX_FIFO to use real FIFO instead of SRAM.
3	Made several performance improvements to UART receiver.
4	Change PoCL logic so that the PoCL State Machines for both channels are enabled simultaneously in Medium mode.

VCE-CLPCIe03 Firmware:

Firmware – 0.4.0.1	
1	Initial release for PCIe x4 card with Dual Base / Single Medium support.

FrameLink Express
Release Notes – 05/28/2013

- Updated Application program to version 1.5.0.229 (from 1.5.0.219).
- Updated Library/SDK to version 3.5.0.229 (from 3.5.0. 219).
- Updated Driver to version 1.5.0.229 (from 1. 5.0. 219).
- Updated VCE-CLPCIe02 Firmware to version 0.3.0.12 (from 0.3.0.11)

Release – 1.5.0.229 Appl 1.5.0.229 Lib/SDK 3.5.0.229 Drv 1.5.0.229	Changes from Release – 1.5.0.219 Appl 1.5.0.219 Lib/SDK 3.5.0.219 Drv 1.5.0.219	
1	Drv	Matlab: Problem with AOI in non-single tap mode fixed.
2	App	FLEx Bandwidth warning message added.
3	App	LUT support added for 14bpp, 16 bpp and RGB24.
4	App	PLC GUI minor bugs fixed
5	Installer	Copy clseripx.dll according CL spec 2.0
6	Installer	CAM files for new Imperx cameras added

VCE-CLEX01, VCE-CLEX02 and VCE-CLPCIe01 Firmware:

Firmware – 0.2.0.6	No changes

VCE-CLPCIe02 Firmware:

Firmware – 0.3.0.12	Changes from version 0.3.0.11
1	Fixed bug in the PLC's Pulse Generator "SendN" mode which produced only N-1 pulses instead of N pulses..

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FrameLink Express
Release Notes – 04/08/2013

- Updated Application program to version 1.5.0.219 (from 1.5.0.216).
- Updated Library/SDK to version 3.5.0.219 (from 3.5.0.216).
- Updated Driver to version 1.5.0.219 (from 1. 5.0.216).
- Updated VCE-CLPCIe02 Firmware to version 0.3.0.11 (from 0.3.0.10).

Release – 1.5.0.219 Appl 1.5.0.219 Lib/SDK 3.5.0.219 Drv 1.5.0.219	Changes from Release – 1.5.0.216 Appl 1.5.0.216 Lib/SDK 3.5.0.216 Drv 1.5.0.216	
1	Drv	DirectShow: fixed Divide by Zero Exception when input source changed.
2	SDK	PLC methods defaults fixed.
3	App	PLC Method3 and Custom ARM fixed.
4	Installer	Copy clseripx.dll to folder specified by CLSERIALPATH registry value.

VCE-CLEX01, VCE-CLEX02 and VCE-CLPCIe01 Firmware:

Firmware – 0.2.0.6	No changes

VCE-CLPCIe02 Firmware:

Firmware – 0.3.0.11	Changes from version 0.3.0.10
1	Fixed Camera Link channel #2 PLC's ability to drive OUT[4:1] signals.

FrameLink Express
Release Notes – 01/02/2013

- Updated Application program to version 1.5.0.216 (from 1.4.0.128).
- Updated Library/SDK to version 3.5.0.216 (from 3.3.2.110).
- Updated Driver to version 1.5.0.216 (from 1.4.0.128).
- Updated VCE-CLEX01, VCE-CLEX02 and VCE-CLPCIe01 Firmware to version 0.2.0.6 (from 0.2.0.2).
- Updated VCE-CLPCIe02 Firmware to version 0.3.0.10 (from 0.3.0.7).

Release – 1.5.0.216 Appl 1.5.0.216 Lib/SDK 3.5.0.216 Drv 1.5.0.216	Changes from Release – 1.4.0.128 Appl 1.4.0.128 Lib/SDK 3.3.2.110 Drv 1.4.0.128	
1	Drv	UART error on fast CPU fixed.
2	Drv	Added support for new DEV_IDs for PCIe cards.
3	Drv	UART error with COM port and simultaneously grabbing fixed
4	Drv	DirectShow: Memory leak fixed.
5	Drv	DirectShow: De-Bayer bug on 32b OS fixed.
6	Drv	Matlab: 2012b support added
7	Drv	Matlab: UART problem fixed
8	Drv	PLC and PoCL support added
9	SDK	Added TrueSense-to-RGB conversion.
10	SDK	Device surprise add-removal handling on runtime.
11	SDK	.NET SDK and sample added
12	SDK	TrueSense CFA de-mosaicking SDK added
13	SDK	PLC and PoCL support added to API, C++ Manual and Sample
14	App	Added support for TrueSense cameras.
15	App	Device surprise add-removal handling on runtime.
16	App	Bobcat 4taps configuration added
17	App	Position check added to prevent the panel to be out of screen
18	App	PLC and PoCL panels added
19	App	Full screen mode added

VCE-CLEX01, VCE-CLEX02 and VCE-CLPCIe01 Firmware:

Firmware – 0.2.0.6	Changes from version 0.2.0.2
1	Fixed Camera Link clock detection for Medium cameras
2	Increased size of UART Rx FIFO from 16 to 64 bytes

VCE-CLPCIe02 Firmware:

Firmware – 0.3.0.10	Changes from version 0.3.0.7
1	Fixed Camera Link clock detection for Medium cameras
2	Increased size of UART Rx FIFO from 16 to 64 bytes

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FrameLink Express
Release Notes – 08/10/2011

- Updated Application program to version 1.4.0.128 (from 1.3.0.99).
- Updated Library/SDK to version 3.3.2.110 (from 3.0.0.50).
- Updated Driver to version 1.4.0.128 (from 1.3.0.99).
- Updated Firmware to version 0.2.0.2 (from 0.1.0.13).

Release – 1.4.0.128 Appl 1.4.0.128 Lib/SDK 3.3.2.110 Drv 1.4.0.128	Changes from Release – 1.3.0.99 Appl 1.3.0.99 Lib/SDK 3.0.0.50 Drv 1.3.0.99	
1	Appl	Added support for Medium modes.
2	Appl	Disabled switching between channels if Grabbing is on.
3	Appl	Fixed crash when allocating buffers for very large frame size.
4	SDK	Fixed WidthPreValid field in VCECLB_CameraDataEx structure processing for 10-, 12-, 14- and 16-bit images.
5	SDK	Added support for Medium modes.
6	SDK	Fixed de-packing algorithm for packed data.
7	SDK	Fixed crash when allocating buffers for very large frame size.
8	Drv	Multiple cards support.
9	Drv	Virtual COM port for multiple cards.
10	Drv	CameraLink Medium mode support.
11	Drv	Fixed Halcon driver.
12	Drv	Fixed image buffer allocation/deallocation.
13	Drv	Fixed driver handle open-close bug.

Firmware – 0.2.0.2	Changes from version 0.1.0.13
1	Added support for Medium modes.

- Updated Application program to version 1.3.0.99 (from 1.2.0.78).
- Updated Library/SDK to version 3.0.0.50 (from 3.0.0.49).
- Updated Driver to version 1.3.0.99 (from 1.2.0.178).
- Updated Firmware to version 0.1.0.13 (from 0.1.0.12).

Release – 1.3.0.99 Appl 1.3.0.99 Lib/SDK 3.0.0.50 Drv 1.3.0.99	Changes from Release – 1.2.0.78 Appl 1.2.0.78 Lib/SDK 3.0.0.49 Drv 1.2.0.178	
1	Appl	Fixed Pre-Valid Height field in Camera Parameters dialog.
2	Appl	Fixed 3 Tap interleaved unpacking.
3	Appl	Added support of 32-bit application on 64-bit platform.
4	Appl	Fixed application crashing on scrolling of the image.
5	Appl	Upgraded to the IPP library for better performance.
6	Appl	Changed Bayer Interpolation to use Intel IPP Library.
7	Appl	Added CrashDump report - on an application crash a special file is created that can help diagnose the problem.
8	Appl	Fixed a bug that may cause some dialogs to have a disabled foreign menu bar.
9	Appl	Fixed default directory for CAM files.
10	Appl	Added BobCat color cameras to set of CAM files.
11	Appl	Fixed crash after clicking on Help-About menu item.
12	SDK	Fixed HeightPreValid field in VCECLB_CameraDataEx structure was ignored.
13	SDK	Fixed 3 Tap interleaved unpacking.
14	SDK	Added support of 32-bit application on 64-bit platform.
15	SDK	Upgraded to the IPP library for better performance.
16	SDK	Changed Bayer Interpolation to use Intel IPP Library.
17	SDK	Added logging of Read UART in SDK.
18	SDK	Added sample code for Halcon.
19	SDK	Fixed RGB camera mode.
20	Drv	Fixed DirectShow driver.
21	Drv	Fixed Matlab driver.
22	Drv	Fixed UART bug in Kernel driver.
23	Drv	Added support of 32-bit application on 64-bit platform.
24	Drv	Fixed image FIFO bug.
25	Drv	Fixed request cancellation error.
26	Drv	DTR/RTS processing fixed in Virtual COM Port.

Firmware – 0.1.0.13	Changes from version 0.1.0.12
1	Fixed problem where overruns due to a poorly performing PC could result in an interrupt storm and the PC to freeze.
2	Turned off PCI Express Low Power Negotiation.

- Updated Application program to version 1.2.0.78 (from 1.0.0.64).
- Updated Library/SDK to version 3.0.0.49 (from 3.0.0.42).
- Updated Driver to version 1.2.0.178 (from 1.0.9.154).
- Updated Firmware to version 0.1.0.12 (from 0.1.0.9).
- Added support for Windows 64 bit XP and Vista operating systems.
- Added a comprehensive set of CAM files to support cameras from leading camera vendors (i.e. Basler, Adimec, JAI/Pulnix, etc.).
- Added support for Microsoft DirectShow, MathWorks MATLAB, NI LabView, MVTech HALCON and Matrox MIL.

Release – 1.2.0.78 Appl 1.2.0.78 Lib/SDK 3.0.0.49 Drv 1.2.0.178	Changes from Release – 0.1.1.0 Appl 1.0.0.64 Lib/SDK 3.0.0.42 Drv 1.0.9.154	
1	Appl	Added password protection to Card Tester dialog.
2	Appl	Fixed behavior or RGB24 and RGB30 radio buttons in Camera Parameters dialog.
3	Appl	Changes default camera file opening to 'CAMFiles' folder in Camera Parameters dialog.
4	Appl	Fix tap reconstruction preview in Camera Parameters dialog.
5	Appl	Fixed animation for Tap Reconstruction of '2 tap, R->L Interleaved' in Camera Parameters dialog.
6	Appl	Fix pulse period and granularity fields so that they cannot be zero in CC Pulse Generator dialog.
7	Appl	Added 'unity' button to RGB Gain Control dialog.
8	Appl	Fixed BAUD rate settings not being saved/loaded from CAM file in Terminal dialog.
9	Appl	Fixed AVI file saving.
10	SDK	RGB conversion fixed.
11	SDK	Fixed UART timeout handling and documentation.
12	SDK	Support backward compatibility with FrameLink application (i.e. FLeX card, driver and library work with FL application).
13	SDK	Support forward compatibility with FrameLink card (i.e. FL card and driver work with FLeX SDK/application).
14	SDK	Fix RAW data unpacking and tap reconstruction bugs.
15	SDK	Made CAM file more readable by adding more formatting.
16	Drv	DMA Buffer request cancellation fixed.
17	Drv	New DMA Buffers management implemented.
18	Drv	Safely Remove for Vista fixed.
19	Drv	Digital Signature added to Vista driver.

Firmware – 0.1.0.12	Changes from version 0.1.0.9
1	Fixed problem where UART baud rate change took too long causing potential character loss following a BAUD rate change.
2	Fixed problem where the number of "clocks/line" reported in the Auto-Learn dialog would periodically report zero if the camera provides some lines with an LVAL of zero length during the frame.
3	Fixed the Remote Upgrade function to recover from an aborted programming cycle.