



COMPATIBILITY TEST

LABORATORY SERIES

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Testing Documentation

- Subject: Machine Vision Cameras Compatibility versus Newnex Length Solutions
- Goal: To ensure compatibility between Newnex's Connectivity Solutions and the Imaging Source USB 3.0 Cameras
- Duration: over 24 hours
- Location: Newnex's Technical Laboratory, 3041 Olcott st, Santa Clara, CA 95054
- Cameras tested: the Imaging Source USB 3.0: Model # DFK 23U618 and DMK 23UM021
- Newnex products tested:
 - US2-AMCBI1-3M: USB 3.0 A to Micro B with USB3 Vision Locking Cable, 3M
 - US226AMCBI1-5M: USB 3.0 A to Micro B with USB3 Vision Locking Cable, 5M
 - US226AMCBR115M: USB 3.0 A to Micro B Right Angle R-1 with USB3 Vision Locking cable, 5M
 - FireNEX-H3M-08: USB 3.0 High Flex Active Repeater Cable, 8M
 - FireNEX-uLINK 8M: USB 3.0 Active Repeater Cable, 8M
 - FireNEX-uLINK-DS: USB 3.0 Active Repeater Dongle
 - FireNEX-ULP 12M: USB 3.0 Active Repeater Cable with external power jack, 12M
 - FireNEX-ULP 14M: USB 3.0 Active Repeater Cable with external power jack, 14M
 - FireNEX-UL 16M: USB 3.0 Active Repeater Cable, 16M
 - FireNEX-5000H: USB 3.0 Optical Repeater with Power Delivery Option, 300M
 - FireNEX-uHUB: USB 3.0 Industrial Hub

Detailed Testing Parameters

Operating System	Windows 7 – 64bits with Intel H77 Chipset CPU: i7-3450		
PCIe Card	Fresco Logic, Renesas	USB 3.0 Host	Intel

Test Results

Desired Distance	Machine Vision Cameras		
	Types	The Imaging Source	
	Model#	DFK 23U618	DMK 23UM021
	Version (mono/color)	Color	Mono
	MP	0.3 MP	1 MP
3M	US2-AMCBI1-3M	COMPATIBLE	COMPATIBLE
5M	US226AMCBI1-5M, US226AMCBR115M	COMPATIBLE	COMPATIBLE
8M	FireNEX-uLINK 8M, FireNEX-H3M-08	COMPATIBLE	COMPATIBLE
10M	FireNEX-uLINK-DS ⁽¹⁾	COMPATIBLE	COMPATIBLE
12M	FireNEX-ULP 12M	COMPATIBLE	COMPATIBLE
14M	FireNEX-ULP 14M	COMPATIBLE	COMPATIBLE
16M	FireNEX-UL 16M	COMPATIBLE	COMPATIBLE
10M, 24M	FireNEX-uHUB ⁽²⁾	COMPATIBLE	COMPATIBLE
100-300M	FireNEX-5000H ⁽³⁾	COMPATIBLE	COMPATIBLE
Testing Specification			
	Color Code During Test	RGB 32	RGB 24 (HD)
	Transfer Rate During Test (fps)	120	60
	Resolution During Test (pixels)	640x480	1280x720

(1): FireNEX-uLINK-DS was set up using two 5 meters USB 3.0 cables with the Dongle in the middle of the PC and the camera

(2): FireNEX-uHUB was tested in two set-ups. One set up used two 5 meters USB 3.0 cables, and the other set-up used two 12 meters USB 3.0 repeater cables. For each set-up, the hub is in the middle of the PC and the camera.

(3): FireNEX-5000H: Tested up to 300 meters without power delivery option and 100 meters with power delivery option.

Conclusion

With over 24 hours of comprehensive testing with USB 3.0 PCIe cards from Fresco Logic, Renesas and USB 3.0 host from Intel, Newnex US2-AMCB11-3M, US226AMCB11-5M, US226AMCBR115M, FireNEX-H3M-08, FireNEX-uLINK 8M, FireNEX-uLINK-DS, FireNEX-uHUB, FireNEX-ULP 12M, FireNEX-ULP 14M, FireNEX-UL 16M, and FireNEX-5000H demonstrate to be fully compatible with the Imaging Source USB 3.0 cameras, Model# DFK 23U618 and DMK 23UM021.