



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 Hamamatsu USB 3.0 Camera
- Duration: over 2 hours
- Location: Newnex’s Technical Laboratory, 3041 Olcott st, Santa Clara, CA 95054
- Camera tested: Hamamatsu USB 3.0: Model # C11440-50U
- Newnex products tested:
 - US2-AMCB11-3M: USB 3.0 A to Micro B with USB3 Vision Locking Cable, 3M
 - US226AMCB11-5M: 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, 300M
 - FireNEX-uHUB: USB 3.0 Industrial Hub
 - FireNEX-5000H: USB 3.0 Optical Repeater with Power Delivery Option, 300M

Detail 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	Hamamatsu
	Model#	C11440-50U
	Version (mono/color)	color
3M	US2-AMCB11-3M	COMPATIBLE
5M	US226AMCB11-5M, US226AMCBR115M	COMPATIBLE
8M	FireNEX-uLINK 8M, FireNEX-H3M-08	COMPATIBLE
10M	FireNEX-uLINK-DS ⁽¹⁾	COMPATIBLE
12M	FireNEX-ULP 12M	COMPATIBLE
14M	FireNEX-ULP 14M	COMPATIBLE
16M	FireNEX-UL 16M	COMPATIBLE
10M, 24M	FireNEX-uHUB ⁽²⁾	COMPATIBLE
100-300M	FireNEX-5000H ⁽³⁾	COMPATIBLE
Testing Specification		
	Power Consumption (Watt)	2.75~3
	Transfer Rate During Test (fps)	45.4
	Resolution During Test (pixels)	1920x1440

(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 up to 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-AMCBI1-3M, US226AMCBI1-5M, US226AMCBR115M, FireNEX-H3M-08, FireNEX-uLINK 8M, FireNEX-uLINK-DS, FireNEX-uHUB, FireNEX-ULP 12M, FireNEX-ULP 14M, FireNEX-UL 16M, and FireNEX-5000H demonstrated to be fully compatible with Hamamatsu USB 3.0 camera, Model# C11440-50U.