iPORT HDSDI-U3 External Frame Grabbers

Simple to integrate USB3 Vision video interface for HD-SDI cameras, video processors, and systems

Overview

Pleora's iPORT™ HDSDI-U3 External Frame Grabbers provide systems manufacturers and integrators with cost and design flexibility advantages by converting HD-SDI cameras, video processors, and systems into native USB3 Vision™ equipment. With these external frame grabbers, HD-SDI equipment can transport high-speed imaging and video data over the widely available USB 3.0 bus. The equipment can also be used with a broader selection of smaller form factor, low-power computing platforms to help reduce system costs.

Based on a field-proven design, the HDSDI-U3 delivers additional benefits including high bandwidth output, extended operating temperature range, GPIO, and RS-485 data communications functionality enabling real-time, low-jitter triggering of cameras, video processors, and synchronization of other imaging system elements.

The HDSDI-U3 transmits video from HD-SDI cameras, endoscopes, and other equipment with low, predictable latency over a USB 3.0 link. The connection at the workstation is a standard USB 3.0 port, eliminating the need for a desktop computer with an available peripheral card slot for a traditional frame grabber. As a result, system designers can reduce system size, cost, and power consumption by using computing platforms with smaller form factors, such as laptops, embedded computers, and single-board computers.

Pleora's HDSDI-U3 External Frame Grabbers help systems manufacturers and integrators to leverage the performance attributes of USB 3.0, including high-bandwidth, power over cable, and plug-and-play usability. The HDSDI-U3 complies fully with the USB3 Vision and GenICam™ standards, ensuring interoperability with third-party equipment in multi-vendor environments.

Features

- Transmits video from HD-SDI equipment over USB 3.0, with low, predictable latency
- Plugs into a wide range of computing platforms without needing a PCI/PCIe frame grabber
- Compact and low power
- Mountable enclosure
- 120 MB frame buffer
- Record and playback functionality
- USB3 Vision and GenICam compatible
- Power, control, and video over the same USB 3.0 cable
- Bundled with Pleora's feature-rich eBUS™ SDK application toolkit

Compatibility

- HD-SDI and SD-SDI

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Video Connectivity Solutions

iPORT External Frame Grabber	· Highly reliable, approaching 3 Gb/s data transfer rate with low, end-to-end latency
eBUS SDK	· eBUS Universal Pro driver · Sample applications · Documentation
USB3 Vision and GenICam	· Fully compatible firmware load · Guarantees delivery of all packets · Comprehensive data transfer diagnostics

Video Formats

Video Input	· SMPTE ST 292-1:2011 · SMPTE ST 296:2012 · SMPTE ST 274:2008 · SMPTE ST 259:2008 (Level C, 270 Mb/s) · Automatic format selection
Video Delivery	· Mono · YCbCr 4:2:2 · 8, 10 bits

Features

USB 3.0 based	· Connection to low-cost, easy-to-use equipment · USB3 Vision 1.0 compliant
Record/Playback	· Advanced image acquisition
Frame Buffer	· 120 MB
Programmable Logic Controller (industrial model only)	· Integrated with GPIO · Trigger and timing control
Loop-Through Output (industrial model only)	· SD-SDI and HDSDI Video · Equalized and retimed with cable driver
GPIO (industrial model only)	· 3 TTL inputs · 1 TTL output
Serial Port (industrial model only)	· 1 RS-485

Connectors

Video	· 75Ω BNC input · 75Ω BNC loop-through output (industrial model only)
USB	· 10-Pin USB 3.0 micro-B Receptacle with locking screws
Power In	· USB powered

Characteristics

Size (L x W x H)	· 83mm x 127mm x 30mm
Operating temperature	· 0° C to 45°C · -20°C to 65°C (industrial model only)
Storage temperature	· -40°C to 85°C
Power consumption	· TBD

Ordering Information

903-0015	· iPORT HDSDI-U3 External Frame Grabber
903-0017	· iPORT HDSDI-U3 kit including HDSDI-U3, USB 3.0 cable, and eBUS SDK USB stick
903-0016	· iPORT HDSDI-U3-IND External Frame Grabber (industrial use), SDI video loop-through, RS-485 serial port, GPIO, and extended operating temperature range
903-0018	· iPORT HDSDI-U3-IND kit including HDSDI-U3-IND, USB 3.0 cable, and eBUS SDK USB stick
909-1102	· Surface and wall mount bracket for iPORT HDSDI-U3 and iPORT HDSDI-U3-IND