

# LSIB Serial Interface Bus

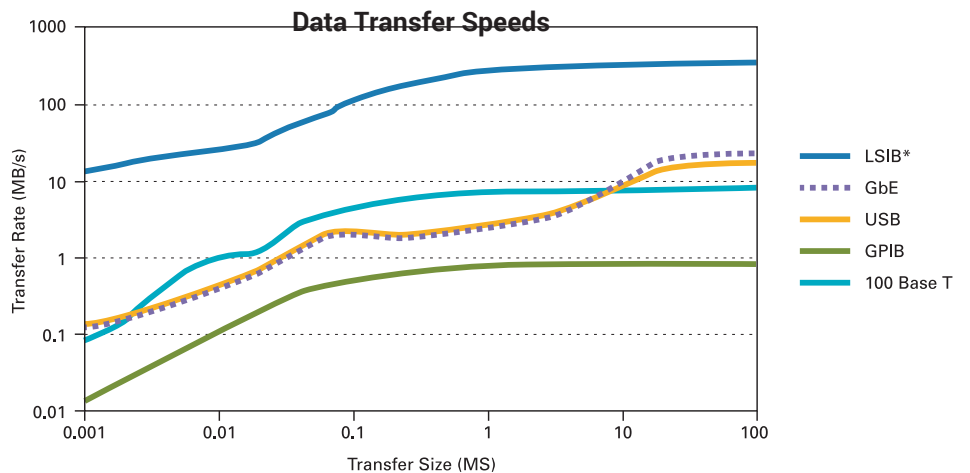
## Key Features

- Up to 325 MB/s transfer rate
- Standard x4 PCI Express® connection
- Connection options for both Desktop and Laptop computers
- 3M and 7M cable lengths to adapt to various test setups
- Compatible with remote control command set
- Bi-directional transfer
- API, client library and examples included



LSIB (Teledyne LeCroy Serial Interface Bus) is a new standard for high-speed data transfer from the oscilloscope with speeds up to 325 MB/s. Teledyne LeCroy's exclusive LSIB solution is based on the wired PCI Express standard that uses a x4 (4 lanes) bus for remote data transfer.

LSIB is geared towards users who need high-performance data transfer for use in offline data processing or storage. LSIB offers significant improvements in data transfer rate over GbE, USB, GPIB, and 100Base-T methods.



\* Measured with 16-bit data using LSIB-HOSTBOARD

# LSIB MODES

## Remote Control Mode

The remote control mode allows remote commands to be sent to the oscilloscope and data to be sent to the host PC. This is similar to modes used today, such as GPIB or LAN.

The remote control mode will support controlling the scope with the same set of commands that can be used for other remote control modes, such as GPIB, VICP and VXI.

Developers can choose to use our LSIB client library or to use NI-VISA in conjunction with the LSIB Passport.

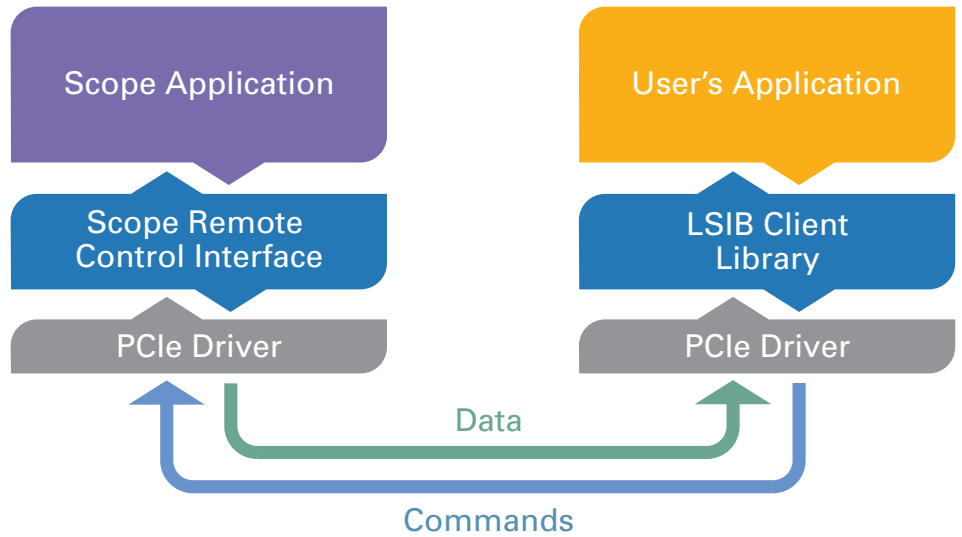
## Export Mode

Export mode allows data to be read out of the oscilloscope synchronously with the trigger at rates up to 325 MB/s using the LSIB-HOSTBOARD or 170 MB/s<sup>1</sup> using the LSIB-HOSTCARD. Remote control may be performed in parallel over any port.

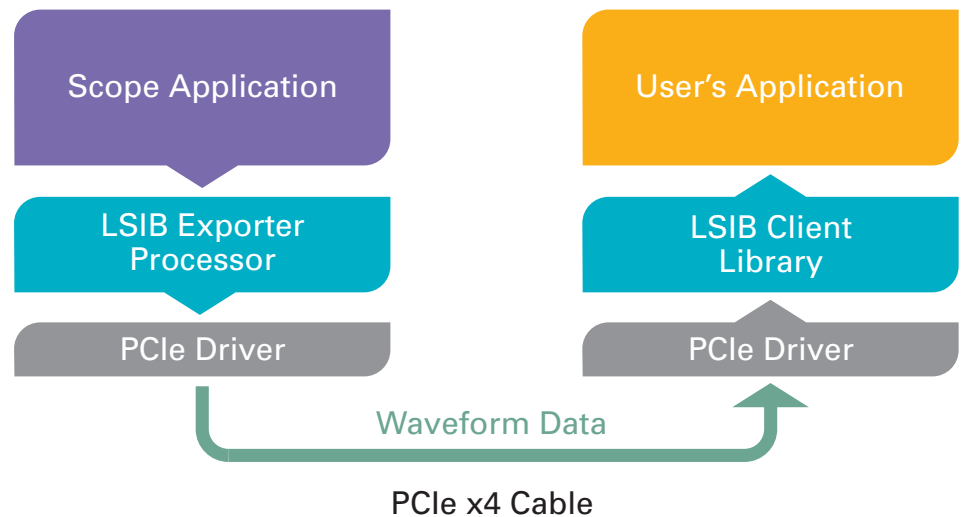
The remote control mode can also be used simultaneously with Export mode on a separate software “port” number.

<sup>1</sup> The lower data rate on LSIB-HOSTCARD is due to the limitation of Express Card to x1 lane.

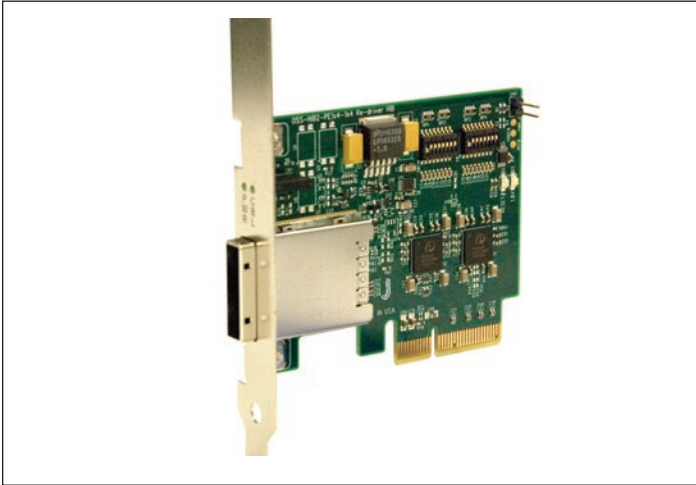
## LSIB Mode 1: Remote Control



## LSIB Mode 2: Export Mode



# SPECIFICATIONS



## PCIe x4 Host Adaptor (LSIB-HOSTBOARD)

The LSIB-HOSTBOARD fits into the x4 PCIe slot of a desktop computer. The x4 connector mates with the standard x4 PCIe connection.

### Specifications

#### Form Factor

- x4 PCIe add-in card

#### Front Panel Connectors

- One PCIe x4 cable connector

#### Front Panel Indicators

- Power On / Cable Present LEDs

#### Dimension (H x L)

- 2.7" H x 3.4" L (68 mm x 86 mm)

#### Power Consumption

- 3 W (typical)
- 3.3 V @ 1 A

#### Environmental – Operating

- Temperature: 0 to 50 °C (32 to 122 °F)
- Humidity: 10 to 90% non-condensing
- Shock: 30 g acceleration peak (11 ms pulse)
- Vibration: 5–17 Hz 0.5" double amplitude displacement; 7–2000 Hz, 1.5 g acceleration, no cable connected

#### Agency Compliance

- UL60950, FCC Class A, CE safety and emissions

#### Maximum Transfer Rate

- 325 MB/s (typical)



## ExpressCard PCIe Host Interface Board (LSIB-HOSTCARD)

The LSIB-HOSTCARD adds high-speed PCI Express expansion capabilities to laptops. The Express card connects directly to the oscilloscope interface with either the 3 or 7 meter cable.

### Specifications

#### Form Factor

- Express Card 34 with connector extension
- External Interface: One x4 PCI Express cable connected as x1
- Connector: Molex I-pass 75586-0010
- EMI/Retention: Molex I-Pass 74540-0040

#### Front Panel Indicators

- Cable Present Indicator (Green)
- Power Only (Red)

#### Dimension (H x L)

- 1.34" H x 4.83" L (34 mm x 122.6 mm)

#### Power Consumption

- 3 W typical
- 3.3 V @ 1 A

#### Environmental – Operating

- Temperature: 0 to 55 °C (32 to 131 °F)
- Humidity: 10 to 90% non-condensing
- Shock: 30 g acceleration peak (11 ms pulse) no cable connected
- Vibration: 5–17 Hz 0.5" double amplitude displacement; 7–2000 Hz, 1.5 g acceleration, no cable connected

#### Agency Compliance

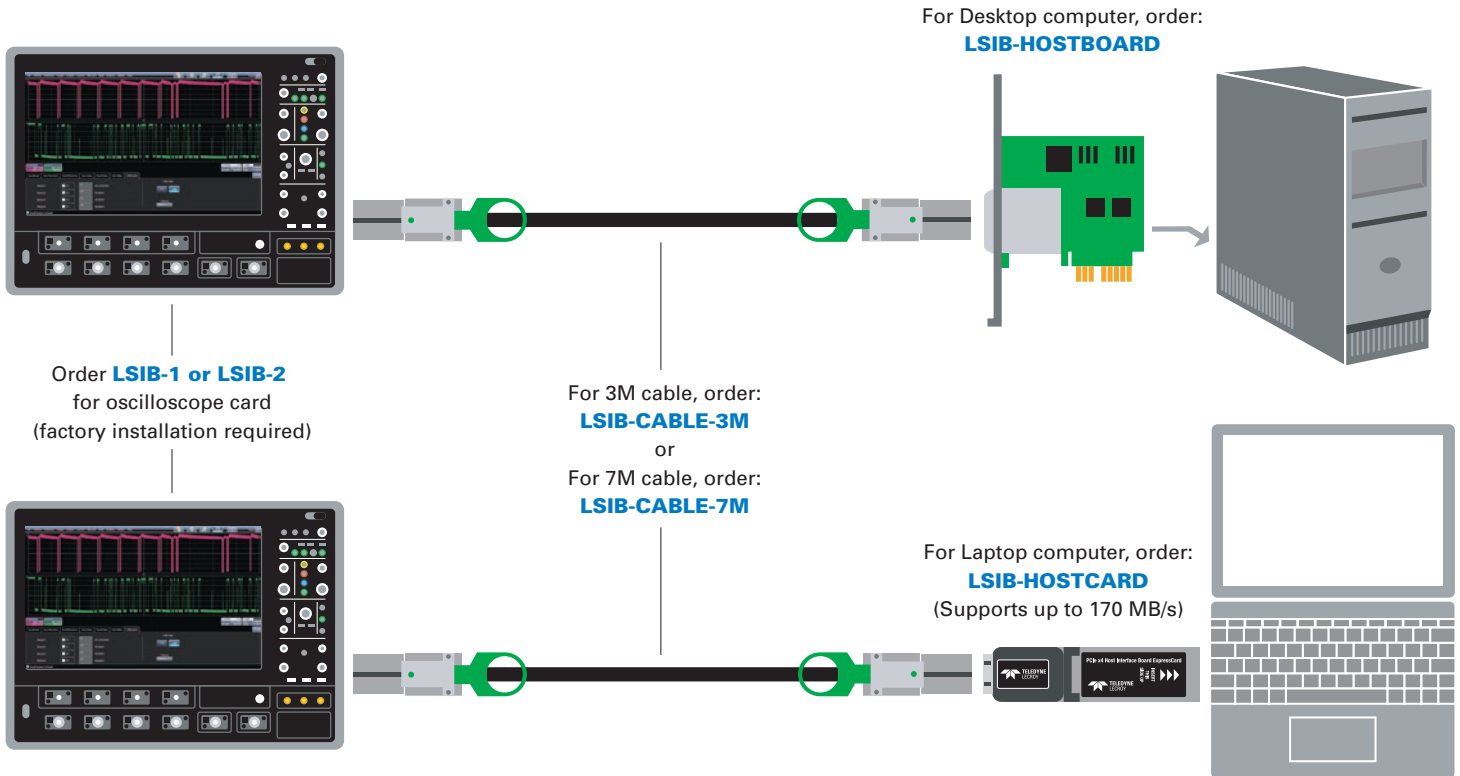
- UL60950, FCC Class B, CE safety and emissions

#### Maximum Transfer Rate

- 170 MB/s (typical)

# ORDERING INFORMATION

## LSIB Configuration Diagram



### Oscilloscope Compatibility

LSIB-1 can only be used on WavePro®/SDA/DDA 7 Zi/Zi-A, and WaveMaster®/SDA/DDA 8 Zi/Zi-A oscilloscopes  
LSIB-2 can only be used on a LabMaster MCM-Zi Master Control Module

### PC Minimum Requirements

#### Operating System

Windows® Vista® x86, Windows® Vista® x64, Windows® XP, or certain versions of Linux

#### PC

Motherboard that supports PCIe x4

#### Notebook

34 Form Factor ExpressCard Slot

## Ordering Information

### Product Description

### Product Code

#### High-speed Digitizer Output

High-speed PCIe Gen1 x4 Digitizer Output for 7 and 8 Zi/Zi-A models	LSIB-1
High-speed PCIe Gen1 x4 digitizer output for LabMaster MCM-Zi Master Control Module	LSIB-2
PCI Express x4 Host Interface Board for Desktop PC	LSIB-HOSTBOARD
PCI Express x1 ExpressCard Host Interface for Laptop ExpressCard Slot	LSIB-HOSTCARD
PCI Express x4 3-meter Cable with x4 Cable Connectors Included	LSIB-CABLE-3M
PCI Express x4 7-meter Cable with x4 Cable Connectors Included	LSIB-CABLE-7M

### Customer Service

Teledyne LeCroy oscilloscopes and probes are designed, built, and tested to ensure high reliability. In the unlikely event you experience difficulties, our digital oscilloscopes are fully warranted for three years and our probes are warranted for one year.

This warranty includes:

- No charge for return shipping
- Long-term 7-year support
- Upgrade to latest software at no charge



1-800-5-LeCroy  
teledynelecroy.com

Local sales offices are located throughout the world.  
Visit our website to find the most convenient location.