USB/LPCI/LPCIe-3488A

High-Performance IEEE-488 GPIB Interface for USB/PCI/PCI Express

USB-3488A

LPCI-3488A

Introduction

The IEEE-488 standard, also known as GPIB, is a bus interface that connects instruments with a computer to form an ATE system. Today, GPIB is still the most popular interface between computer and instruments. ADLINK's USB-3488A, LPCI-3488A and LPCIe-3488A controller interface cards are fully compatible with the IEEE-488.2 instrumentation control and communication standard and are capable of controlling up to 14 stand-alone instruments via IEEE-488 cables (Figure 1)*. The USB-3488A, LPCI-3488A and LPCIe-3488A are designed to meet the requirements of high performance and maximum programming portability.

With APIs that are compatible with NI-488.2* driver software and VISA support, the USB-3488A, LPCI-3488A and LPCIe-3488A offer the best compatibility with your existing applications and instrument drivers. ADLINK has also implemented GPIB interface on our PXI/PXIe controller product line. (Please refer to page 1-5 ~ 1-10)

ADLINK's LPCI-3488A with low-profile PCI form factor, supports both 3.3 V and 5 V PCI buses and can be adapted to most industrial and desktop computers. A built-in FIFO between the GPIB bus and PCI controller buffers GPIB read/write operations. The maximum GPIB transfer rates of LPCI-3488A and USB-3488A up to 1.5 MB/s. (Figure 2)

*Devices can be connected in linear or star configuration, or a combination of the two topologies.

Features

- **Fully compatible with the IEEE-488 standard**
- **Support 32-bit 3.3 V or 5 V PCI bus (LPCI-3488A)**
- **Up to 1.5 MB/s data transfer rates (USB-3488A and LPCI-3488A)**
- **Built-in FIFO for read/write operations**
- **Provide APIs compatible with NI-488.2 driver software***
- **Support industrial-standard VISA library**
- **Interactive utility for testing and diagnostics**

USB-3488A

- **USB 2.0 compatible**
- **2 M USB cable attached for instrument connection**
- **No external power required**
- **Easy GPIB connectively for laptops**

Supported Operating System

- Windows XP, Windows 7/8 x64/x86

Driver and SDK

- Visual Studio.NET/BCB
- LabVIEW™*
- MATLAB®*

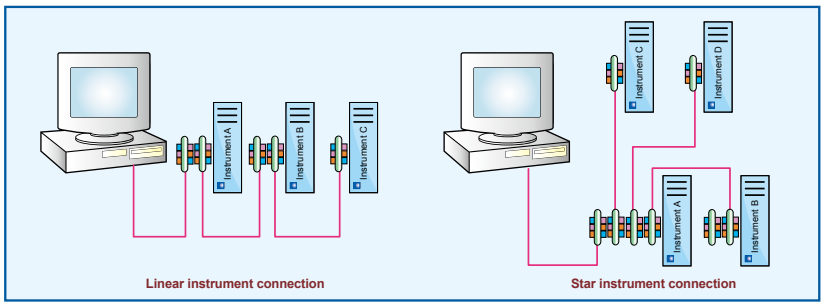

Figure 1.

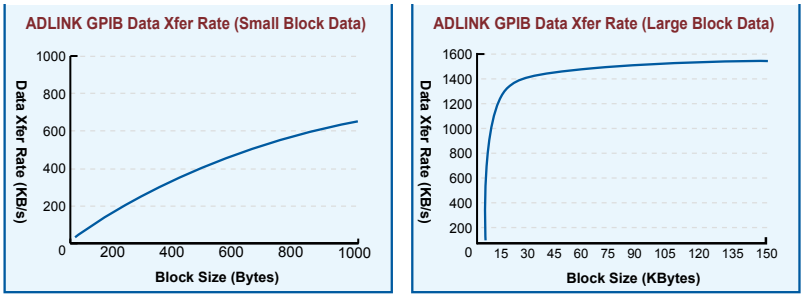

Figure 2.

Fully Compatible with Your Existing Applications

ADLINK GPIB interface cards are delivered with complete software support, including a driver API that is fully binary compatible with NI-488.2* driver software. All programs based on GPIB-32.DLL can be executed with USB-3488A, LPCI-3488A and LPCIe-3488A without any modification. VISA library is also supported to ensure compatibility with applications utilizing VISA. The ADLINK USB-3488A, LPCI-3488A and LPCIe-3488A thus provide "Plug and Play" compatibility with all your existing applications.

Three Steps to Start Your Application with ADLINK GPIB

(1) Install AD-GPIB driver
(2) Install ADLINK GPIB hardware
(3) Execute the existing GPIB applications (compatible with NI-488.2)

Specifications

GPIB Bus Specifications	• Up to 14 instruments connected
	• Maximum 1.5 MB/s data transfer rate (USB-3488A and LCPI-3488A) Maximum 1.2 MB/s data transfer rate (LPCIe-3488A)
	• Cable length -2 meters between each instrument (suggested) -20 meters total cable length
	• Data transfer mode: 8 bits parallel
	• Handshake: 3 wire handshake, reception of each data byte is acknowledged
Certifications	• EMC/EMI: CE, FCC Class A
Software Compatibility	• Visual Studio.NET/BCB
	• LabVIEW™*
	• MATLAB®*
External Indicators (USB-3488A)	• Ready : Green for active device
	• Active : Blinking amber for data transferring
General Specifications	• Operating temperature : 0°C to 55°C (32°F to 131°F)
	• Storage temperature : -20°C to +80°C (-4°F to 176°F)
	• Relative humidity : 5% to 95%, non-condensing
	• Power requirements
	• LPCI-3488A: +5 V — 250 mA (typical), 300 mA (maximum)
	• USB-3488A: +5 V — 190 mA (typical), 500 mA (maximum)
Dimensions (not including connectors) :	• LPCI-3488A: 120 mm x 64 mm (4.68" x 2.49")
	• USB-3488A: 81.7 mm (L) x 66.1 mm (W) x 27.8 mm (H) (3.2" x 2.57" x 1.1")
I/O Connectors	• GPIB: IEEE-488 standard 24 pin
	• USB: USB standard series A plug (USB-3488A)

Ordering Information

- **USB-3488A**
  High-Performance IEEE-488 GPIB interface for USB
- **LPCI-3488A**
  High-Performance IEEE-488 GPIB interface card for low-profile PCI bus
- **LPCIe-3488A**
  High-Performance IEEE-488 GPIB interface card for low-profile PCI Express bus
- **ACL-IEEE488-1**
  IEEE-488 standard cable, 1 meter length
- **ACL-IEEE488-2**
  IEEE-488 standard cable, 2 meter length
- **ACL-IEEE488-4**
  IEEE-488 standard cable, 4 meter length