

# USB/LPCI/LPCle-3488A

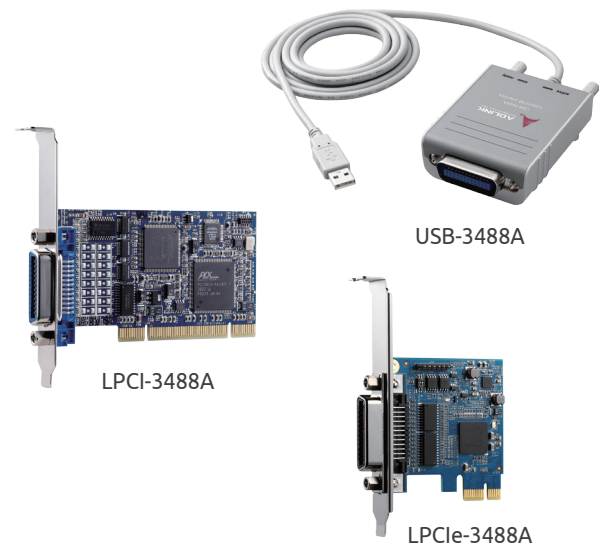
## High-Performance IEEE-488 GPIB Interface for USB/PCI/PCI Express

### 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



### 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 LPCle-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 LPCle-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 LPCle-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.

### Supported Operating System

- Windows XP, Windows 7/8 x64/x86

### Driver and SDK

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

### 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
- **LPCle-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

Product names mentioned herein are used for identification purposes only and may be trademarks and/or registered trademarks of their respective companies.

\*NI, LabVIEW, and LabWindows CVI are trademarks or registered trademarks of National Instruments Corporation or its subsidiaries in the United States and other countries.

\*MATLAB® is Copyright of the MathWorks, Inc.

## Specifications

|                                       | LPCI-3488A                                                                                                          | USB-3488A        |
|---------------------------------------|---------------------------------------------------------------------------------------------------------------------|------------------|
| GPIB Bus Specifications               | Up to 14 instruments connected                                                                                      |                  |
|                                       | Maximum 1.5 MB/s data transfer rate (USB-3488A and LCPI-3488A)<br>Maximum 1.2 MB/s data transfer rate (LPCle-3488A) |                  |
|                                       | Cable length<br>-2 meters between each instrument (suggested)<br>-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                                                                                                  |                  |
|                                       | +5 V                                                                                                                | +5 V             |
|                                       | 250 mA (typical)                                                                                                    | 190 mA (typical) |
|                                       | 300 mA (maximum)                                                                                                    | 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)                                                                         |                  |