GPIB-488
Software and Product Information

KEITHLEY

A GREATER MEASURE OF CONFIDENCE

Getting Started with GPIB-488

Introduction and Installation

Your interface board consists of hardware and software that fully implement the IEEE 488 standard, also known as GPIB. This document enables you to install, configure, test, and verify your installation.

Other documentation, including the *GPIB-488 Programming Reference Manual*, is available in the root directory on your software CD in Adobe Portable Document Format (PDF). To view these PDF files, you must have Adobe Acrobat Reader installed on your system. If you do not have this program, refer to the Adobe Systems Incorporated Web site, `http://www.adobe.com/products/acrobat/readstep2.html`, to download the Acrobat Reader program. There is no charge for this download.

Supported Hardware

To execute GPIB applications, you must have one of the following interface hardware models:

- KPCI-488A
- KUSB-488A

The following interface hardware models are not supported:

- KPCI-488
- KPCI-488LP
- KUSB-488

IEEE 488 Interface Boards Technical Support

Before returning any equipment for repair, call Keithley Instruments, Inc. for technical support.

An applications engineer will help you diagnose and resolve your problem over the telephone.

If a telephone resolution is not possible, the applications engineer will issue you a Return Material Authorization (RMA) number and ask you to return the equipment. Include the RMA number with any documentation regarding the equipment.

When returning for repair, include the following information:

- Your name, address, and telephone number
- The invoice or order number and date of purchase
- A description of the problem or its symptoms
- The RMA number on the outside of the package

Repackage the equipment using the original anti-static wrapping, if possible, and handle it with ground protection. Ship the equipment to:

ATTN: RMA #____
Repair Department
Keithley Instruments, Inc.
28775 Aurora Road
Cleveland, Ohio 44139
(440) 248-0400

Corporate Headquarters

For technical support in the United States, please contact the following:

Corporate Headquarters • 28775 Aurora Road • Cleveland, Ohio 44139 •
440-248-0400 • Fax: 440-248-6168 • 1-888-KEITHLEY (534-8453) •
www.keithley.com

Worldwide Support Offices

For technical support outside the United States, please contact the following:

Belgium: Sint-Pieters-Leeuw • 02-363 00 40 • Fax: 02-363 00 64 • www.keithley.nl
China: Beijing • 8610-82251886 • Fax: 8610-82251892 • www.keithley.com.cn
Finland: Helsinki • 09-5306-6560 • Fax: 09-5306-6565 • www.keithley.com
France: Saint-Aubin • 01-64 53 20 20 • Fax: 01-60 11 77 26 • www.keithley.fr
Germany: Germering • 089/84 93 07-40 • Fax: 089/84 93 07-34 • www.keithley.de
Great Britain: Theale • 0118 929 7500 • Fax: 0118 929 7519 • www.keithley.co.uk
India: Bangalore • 91-80 2212 8027 • Fax: 91-80 2212 8005 • www.keithley.com
Italy: Milano • 02-48 39 16 01 • Fax: 02-48 39 16 28 • www.keithley.it
Japan: Tokyo • 81-3-5733-7555 • Fax: 81-3-5733-7556 • www.keithley.jp
Korea: Seoul • 82-2-574-7778 • Fax: 82-2-574-7838 • www.keithley.com
Netherlands: Gorinchem • 0183-635333 • Fax: 0183-630821 • www.keithley.nl
Singapore: Singapore • 65-6747-9077 • Fax: 65-6747-2991 • www.keithley.com
Sweden: Solna • 08-509 04 600 • Fax: 08-655 26 10 • www.keithley.com
Taiwan: Hsinchu • 886-3-572-9077 • Fax: 886-3-572-9031 • www.keithley.com.tw

Warranty

Keithley Instruments, Inc. warrants this product to be free from defects in material and workmanship for a period of 1 year from date of shipment.

Keithley Instruments, Inc. warrants the following items for 90 days from the date of shipment: probes, cables, rechargeable batteries, diskettes, and documentation.

During the warranty period, we will, at our option, either repair or replace any product that proves to be defective.

To exercise this warranty, write or call your local Keithley representative, or contact Keithley headquarters in Cleveland, Ohio. You will be given prompt assistance and return instructions. Send the product, transportation prepaid, to the indicated service facility. Repairs will be made and the product returned, transportation prepaid. Repaired or replaced products are warranted for the balance of the original warranty period, or at least 90 days.

Limitation of Warranty

This warranty does not apply to defects resulting from product modification without Keithley's express written consent, or misuse of any product or part. This warranty also does not apply to fuses, software, non-rechargeable batteries, damage from battery leakage, or problems arising from normal wear or failure to follow instructions.

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No part of this book may be reproduced or transmitted in any form or by any means, electronic, optical, or mechanical, including photocopying and recording, or by any information storage and retrieval system, without permission in writing from QISI. To request such permission, please contact Keithley Instruments, Inc.

Step 1. Install the Software

Follow these steps to install the software:

1. The installer should start automatically when you insert the CD supplied with the interface card into the drive. If it does not, explore the CD drive and double-click setup.exe in the CD root directory to start the installer. You can also start the installer by selecting **Start»Run** and choosing setup.exe from the CD directory.

2. Proceed through the installer screens by clicking the **Next** button until you see the **Select Features** window, where you can choose the features to install. Click on each feature for a brief description. All features are installed by default, but you can choose not to install support for the programming features you will not use.

3. A dialog box will prompt you to reboot the system when you finish the installation. Click the **Yes** button to reboot.

Step 2. Install the Hardware

USB Devices

Follow these steps to install the hardware:

1. Remove the unit from its protective packaging. Save the anti-static bubble wrap.

   ⚠️ **Caution** Before connecting the USB card to your GPIB instruments, ensure that the instruments and PC are at the same ground potential. Failure to do so could damage the instruments, PC, or USB card.

2. Plug the USB card into an available USB port.

   USB devices are plug and play. These devices configure automatically. There is no need to power cycle your PC.

PCI Devices

Follow these steps to install the hardware:

   ⚠️ **Caution** Handle the board only by the edges. Static electric discharge can damage the integrated circuits on the board.

1. Remove the interface board from its protective packaging by grasping the metal rear panel. Save the anti-static bubble package.

2. Power off the computer.

3. Unplug the power cord.

4. Remove the computer cover.

5. Install the board in any available slot.

6. Use the screw to attach the rear panel bracket to the computer case.

7. Reinstall the computer cover.

8. Plug in the computer and power it on.

> **Note** For PCI cards in a plug-and-play operating system, the card should configure automatically if you have installed the software first. If you see a message about an unrecognized board and a prompt for a disk, insert the software CD as instructed by the operating system.

Step 3. Test the Interface

Go to **Start»Programs»Keithley Instruments»GPIB-488** and select **GPIB Diagnostic** to run the hardware test program.

This program tests and reports on the status of your IEEE 488 board(s).

Using Your Interface for Writing Custom Programs

To use your interface for custom applications, you need to write specialized software. We have made this easy by providing a simple set of high-level routines you can use with all popular programming languages.

Please refer to the installed documentation for more information.