

PC GPIB PRODUCTS

DESCRIPTION

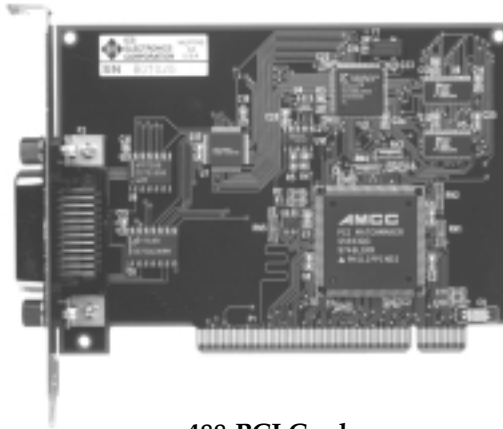
ICS's 488-PCI is an enhanced GPIB Controller Card that converts any PC with a PCI bus into a full-functioning IEEE 488.2 Bus Controller. The 488-PCI card lets Windows or DOS compatible programs control GPIB devices and perform data acquisition tasks. The 488-PCI performs all of the basic IEEE 488.1 functions and its IEEE-488.2 controller routines make it compatible with the new IEEE 488.2 specification. The 488-PCI card is a Plug & Play card that is fully compatible with Windows 95/98/NT/2K and XP operating systems.

Hardware

The 488-PCI GPIB Controller Card plugs into the computer's PCI bus and provides a GPIB interface for controlling GPIB and HP-IB devices and for reading data. An on card FIFO and controller chip enable the 488-PCI to transfer data over the GPIB bus at rates in excess of 1 megabyte per second. A low cost board, the 488-PCILt, transfers data at rates > 300 kbytes per second without the FIFO. The cards' data transceiver risetimes do not cause lockup in older GPIB devices. The 488-PCI cards are Plug & Play compatible and do not require the user to set any switches or jumpers during installation.

Software

The 488-PCI's included 488.2 Driver supports Windows 95, 98, NT, 2K and XP programming languages as well as Windows 3.1 and DOS languages. The 488.2 Driver includes National Instruments compatible 488.2 and 488 'ib' Command Sets plus ICS's 488-PC2 Command Set. Use the NI 488.2/488 Command Sets to run any of the many GPIB programs written with the NI commands including Agilent Technologies' VEE, National Instruments' LabVIEW and CEC's Testpoint.



488-PCI Card

Example programs are provided for Visual C++ and Visual Basic. The 16-bit DLL includes libraries that support most of the older DOS programming languages. Use ICS's 488-PC2 Command Set to adapt existing 488-PC2 programs to newer PCs.

Keyboard Controller Program

The 488-PCI's software also includes ICS's Keyboard Controller program for Windows which provides interactive control of GPIB devices from the computer keyboard without having to write a program. The Keyboard Controller program is ideal for testing the 488-PCI Card, for exercising GPIB devices or for trying out device commands before using them in a program.


Ease of Installation

ICS's 488-PCI Card is very easy to install. First run the software installation program to load the driver. Next, install the card in a vacant PCI slot. When power is reapplied, the Windows operating system automatically locates the card and makes it available to your program.

488-PCI

HI-SPEED GPIB CONTROLLER CARD for PCI BUS COMPUTERS

- Converts any PC with a PCI bus into a GPIB Bus Controller.
Lets Pentium PCs control GPIB and HP-IB Devices.
- GPIB data transfer rate > 1 Mbytes/second.
Fast data transfer speeds up data capture.
- 32-bit WIN 95/98/NT/2K/XP Compatible Drivers with ICS and NI style commands.
Provides 488.2 support for all Windows compatible programming languages.
- NI 488.2 style Commands run VEE, LabVIEW, etc.
Runs major application programs.
- 488-PC2 Commands run older 488-PC2 programs.
Adapts existing software to portable PCs.
- Includes ICS's GPIB Keyboard Controller program for interactive control of GPIB devices.
Lets you try out commands and control instruments without writing a program.
- Windows Plug&Play.
Easy, foolproof installation.

 Approved



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488-PCI: SPECIFICATIONS

GPIB Capabilities

IEEE 488.1 Capabilities:
 The 488-PCI meets IEEE-STD-488.1 with the following capabilities:
 AH1, SH1, C1, C2, C3, C4, and C9
 E2 Drivers incorporate power up/down protection.

IEEE 488.2 Capabilities:
 Includes all required 488.2 controller protocols and the ability to monitor the bus signal lines.

GPIB Handshake Rate
 488-PCI >1 Mbytes/sec
 488-PCIIlt >300 kbytes/sec

Software Capabilities

Operating Systems
 Windows 95/98/NT/2K and XP
 Windows 3.1 and DOS

Commands
 ICS and NI command sets

Windows Supported Languages:
 Microsoft Visual C/C++
 Microsoft Visual Basic
 Borland C/C++ (16-bit)
 Borland Delphi (16-bit)

DOS compatible languages:
 Microsoft C
 Borland C
 Quick Basic
 Professional Basic

Keyboard Controller Program
 Interactively sends user inputs from the PC Keyboard to bus device, reads back device responses and executes other bus commands.

Test Programs Compatibility

488-PCI and 488.2 driver support:
 Aligent Vee (3.1 thru 6.0)
 CEC Testpoint (with CEC opt drivers)
 Labview (4.0 thru 6.1)
 MCC Software

Commands

The following table lists just the NI 488.2 Commands. Contact ICS for a complete list of supported commands.

NI 488.2 Command Set

Command	Function
AllSpoll	Serial poll all devices
DevClear	Clears a single device
DevClearList	Clears multiple devices
EnableLocal	Sets a device to local
EnableRemote	Set a device to remote mode
FindLstn	Finds all devices that can listen
FindRQS	Finds the device requesting service
PassControl	Passes control to another controller
PPoll	Parallel polls all devices
PPollConfig	Configures a device for parallel polls
PPollUnconfig	Unconfigures a device
RcvRespMsg	Reads data from a talker
ReadStatusByte	Serial poll a device
Receive	Read data from a device
ReceiveSetup	Address a device to talk
ResetSys	Initialize system
Send	Send data to a device
SendCmds	Send GPIB commands
SendDataBytes	Send data to a listener
SendIFC	Sends IFC
SendList	Send data to multiple devices
SendLLO	Local lockout all devices
SendSetup	Address devices
SetRWLS	Puts device in Remote with local lockout state
TestSRQ	Check SRQ line
TestSys	Selftest devices
Trigger	Device trigger a device
TriggerList	Trigger listed devices
WaitSRQ	Wait for SRQ

488-PC2 Compatibility

488.2 Driver supports 488-PC2 programs written with the 488-PC2 DLL.

System Requirements

Intel type PC with PCI Bus
 1 to 4 Mbytes of free Hard Disk space depending upon installed options.
 16 Mbytes or more RAM recommended

Physical

Size
 5.75 in x 3.75 in x 0.5 in incl. connectors
 (14.6 cm x 9.5 cm x 1.3 cm)

GPIB Connector
 IEEE 488 Standard 24-pin connector with metric lock studs.

Power
 5 ± 0.2 Vdc, 250 mA maximum

Included Accessories

Instruction Manual
 488.2 Driver, example programs and Keyboard Controller program on 3.25 inch disks.



GPIB KeyBoard Controller Panel

LabView is a trademark of National Instruments, Austin, TX.
 VEE is a trademark of Agilent Technologies, Palo Alto, CA.

ORDERING INFORMATION

Part Number

488.2 PCI Controller Card with 1 Mbyte/sec data rate, Manual, 488.2 Driver Libraries and Keyboard Program 488-PCI

488.2 PCI Controller Card with 300 kbyte/sec data rate, Manual, 488.2 Driver Libraries and Keyboard Program 488-PCIIlt

IEEE 488 Bus Cables from 0.5 to 10 meters long See separate data sheet