

## PC GPIB PRODUCTS

## 488-USB2

### USB-to-GPIB CONTROLLER MODULE for PCs

#### DESCRIPTION

ICS's 488-USB2 is a small USB 2.0 to GPIB Controller Module that converts any PC with a USB port into a full-function IEEE 488.2 Bus Controller. The 488-USB2 performs all of the basic IEEE 488.1 functions such as talker, listener and system controller. Its IEEE-488.2 controller routines make it fully compliant with the IEEE 488.2 specification and saves you programming time. The 488-USB2 includes ICS's new 488.2V3 Driver which supports up to sixteen GPIB controllers and runs on all Windows 32-bit operating systems. The 488-USB2 is an easy and high performance way to add GPIB control to a PC and run automated test programs.

#### Hardware

ICS's 488-USB2 GPIB Controller Module plugs into any computer's USB port and provides a high speed GPIB interface for controlling GPIB and HP-IB devices. The 488-USB2 is a USB 2.0 compatible device and works with both USB 1.1 and USB 2.0 ports. ICS's 488-USB2 achieves data transfer rates of more than 1 Mbytes per second and the module's GPIB data transceiver risetimes do not cause transceiver lockup in older GPIB devices. The 488-USB2 Module has RDY, TALK and LSTN LEDs to assist in troubleshooting GPIB bus problems. The 488-USB2's small size, RoHS construction and replaceable cable makes it ideal for all PCs including laptop computers and portable applications.

#### Driver Library

ICS's new 488.2V3 multi-controller Driver Library supports the National Instruments' style 488.1 'ib' and 488.2 command sets with its own GPIB-32.DLL. It is command compatible with GPIB Controllers from National Instruments, Measurement Computing, CEC, and others. ICS's 488.2V3 Driver supports C, C#, Visual Basic 6, Visual Basic.NET(2005 and 2008) and Delphi 2007 programs that make GPIB-32.DLL calls.

ICS's 488.2V3 Driver is also compatible with National Instruments' VISA and Agilent's VISA and SICL libraries. This industry standard compatibility lets the 488-USB2 run LabVIEW and LabWindows/CVI, VEE, MATLAB, TestPoint and other programs that make VISA calls.



488-USB2 GPIB Controller Module

#### ICS Explorer Program

The 488-USB2 also includes ICS's new Explorer program which automatically configures your Controllers then locates and displays all compatible GPIB Controllers and Devices in your system. ICS's Explorer can display up to 16 GPIB Controllers and their instruments.

From the main window you can examine every device, link to the Configuration and Communicate with Instrument forms or verify the software installation. The Configure form lets you quickly view and change the Controller's settings. The Communicate with Instrument form lets you interactively control any GPIB device from the computer keyboard without having to write a program. The Communicate form is ideal for testing the 488-USB2 Module, for exercising GPIB devices or for trying out device commands before using them in a program.

#### GPIB AnyWhere™ Software

The 488-USB2 also includes a license for ICS's GPIB AnyWhere™ software that lets you control your GPIB instruments from anywhere over the Internet or over an in-house network. GPIB AnyWhere™ adds a service to the host PC with the GPIB Controller and a client application to your desktop so that you can remotely control any GPIB devices connected to the host computer from your desktop. GPIB AnyWhere can control ICS controllers or ICS compatible controllers that install a GPIB-32.DLL on the host computer.

- Converts any PC with a USB port into a GPIB Controller. *USB1.1 and USB2.0 compatible.*
- Fast >1 Mbytes/second data transfer rate. *Reduces test time.*
- 32-bit WIN 2K/XP/Vista/7 Compatible Drivers with NI 488.2 style commands. *Vista and .NET ready now.*
- Multi-controller driver. *Mix up to 16 PCI, PXI or USB GPIB Controllers.*
- Includes ICS's new Explorer program. *Find, configure and control instruments in one program.*
- Includes GPIB AnyWhere *Lets you control your GPIB devices from a remote computer or over the Internet.*
- Works with NI and Agilent VISA libraries. *Supports all major test programs*

CE Approved

RoHS Compliant



7034 Commerce Circle  
Pleasanton, CA 94588  
Phone: 925.416.1000  
Fax: 925.416.0105  
Web: [www.icselect.com](http://www.icselect.com)

# 488-USB2 Specifications

## GPIB Capabilities

### IEEE 488.1 Capabilities:

The 488-USB2 meets IEEE-STD-488.1 with the following capabilities:

- AH1, SH1, C1, C2, C3, C4, and C9
- E2 Drivers incorporate power up/down protection and signal filtering.

### IEEE 488.2 Capabilities:

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

### GPIB Handshake Rate and Timing

- Data transfer > 1 Mbytes/sec
- Short command ≈ 9 ms
- Short query ≈ 18 ms
- Times dependent upon test device

## USB Specifications

### Device Type:

USB 2.0 High-speed device  
Bus Powered

### Compatibility:

USB 1.1 and USB 2.0 compatible

## Test Programs Compatibility

488-USB2 and 488.2V3 driver support:

- Agilent Vee ( 3.1 thru 6.0)
- CEC Testpoint with VISA
- Labview (5.1 thru 8.2)
- MathWorks MATLAB\* with VISA
- Tektronix WaveStar
- Transera HTBasic
- Codegear Borland Delphi 2007

Notes: \*with MATLAB Instrument Toolkit

**For more information call  
1-800-952-4499**

## Software Capabilities

ICS's new 488.2V3 Driver provides the following capabilities:

### Supported WIN32 Operating Systems

Windows 2K, 2003 Server, XP and Vista 32-bit

### Commands

Full NI 488.1 and 488.2 command sets except for Parallel Poll, Pass Control and device operation.

### Number of Controllers

16, any mix of the following ICS Controllers: 488-USB, 488-USB2, 488-LPCI, 488-PXI and the Model 1105.

### Windows Supported Languages:

- Microsoft Visual C/C++
- Microsoft Visual Basic 6
- Microsoft Visual Studio 2005  
Visual Basic.NET and C/C#
- Microsoft Visual Studio 2008 Express  
Visual Basic.NET

### Included Utility Programs

ICS Explorer - Performs automatic Controller configuration after driver installation and finds all GPIB devices. Provides Configure, Communicate with Instrument and Installation Verification capabilities.

GPIBkybd - Find and controls GPIB devices.

Configure - Manual Controller configuration.

## System Requirements

Intel type PC with a USB 1.1 or USB 2.0 powered USB port.

Windows 2K/XP/Vista/7 32-bit systems with the latest upgrades.

20 Mbytes of free Hard Disk space.

.NET Framework 2.0 or later for ICS Explorer.

## Physical

### Size

3.75 in x 2.45 in x 1.0 in plus jackscrews  
(9.53 cm x 6.22 cm x 2.54 cm)

### Indicators

PWR, TALK and LSTN LEDs

Construction      RoHS Compliant

### Temperature

Operating      0 °C to +55 °C  
Storage      -20 °C to + 80 °C

Humidity      5-95% RH non-condensing

Shock/Vibration      Normal handling

### Connectors

GPIB      GPIB 24 pin ribbon with metric studs.

Power      USB powered  
300 mA maximum

RFI/EMI      CE, FCC Class A  
ED89/336/EEC  
EN55022:2003,  
EN55024:2003

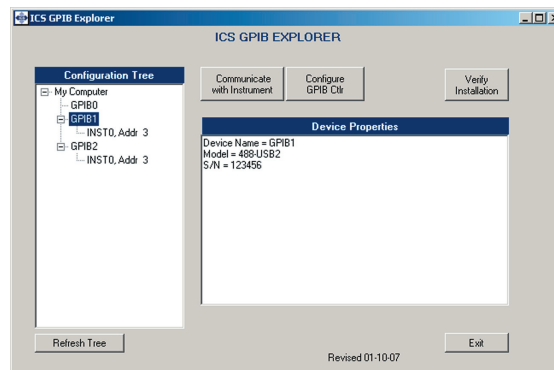
Safety      EN6100-6-2/4:2001

## Included Accessories

Instruction Manual with complete programming instructions and command definitions.

USB 2.0 Cable, 6 foot long.

Support CD with ICS 488.2V3 Driver, command libraries, example programs, ICS Explorer and GPIB AnyWhere™ program.



ICS Explorer Program

LabView, LabWindows are trademarks of National Instruments, Austin, TX.  
VEE is a trademark of Agilent Technologies, Palo Alto, CA.  
GPIB AnyWhere is a trademark of ICS Electronics, Pleasanton, CA.

## ORDERING INFORMATION

488.2 USB Controller Module with a complete Instruction Manual, 488.2V3 Driver Libraries and ICS Explorer Program      488-USB2

IEEE 488 Bus Cables from 0.5 to 20 meters long

See separate data sheet

## Part Number