

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 controller functions such as talker, listener and system controller. Its IEEE-488.2 controller routines make it fully compliant with the IEEE488.2 specification and saves you programming time. The model 488-USB2 includes ICS's new 488.2V4 Driver which supports 32 and 64-bit versions of Windows XP, Vista and Windows 7 operating systems. The 488-USB2 is an easy and most economical way to add fast GPIB control to a PC and to run automated test programs.

Hardware

The 488-USB2 GPIB Controller Module plugs into any powered 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 directly drives up to 14 GPIB devices. The module's GPIB data transceiver risetimes are guaranteed to not cause transceiver lockup in older GPIB devices.

The 488-USB2 Module is housed in a rugged, shielded plastic case with easy finger sized jack-screws and a replaceable cable. The 488-USB is CE approved and RoHS compliant.

RDY, TALK and LSTN LEDs show the controller activity and assist in troubleshooting GPIB bus problems. The 488-USB2's small size and quality construction makes it ideal for all PCs and portable applications.

Driver Library

ICS's new 488.2V4 multi-controller Driver Library provides full 32-bit (x86) and 64-bit (x64) support for ICS GPIB Controllers on all Windows XP, Vista and Windows 7. ICS's true 64-bit DLL handles the full 64-bit address space. ICS's 32-bit 488.2V3 Driver provides 488-USB2 support on Windows 2K and Windows Server 2003.



488-USB2 GPIB Controller Module

Both drivers fully support the National Instruments' style 488.1 'ib' and 488.2 command sets. ICS's GPIB-32.DLL is command compatible with GPIB Controllers from National Instruments, Measurement Computing, CEC, and others.

The drivers directly support C, C++, C#, Visual Basic 6, and Visual Basic.NET(2005, 2008 and 2010) programs that make GPIB-32.DLL calls. Included library is easily adapted to other languages like Java. The driver is also compatible with National Instruments, Agilent and Kikisui VISA. This industry standard compatibility lets the 488-USB2 run programs like LabVIEW, LabWindows/CVI, Agilent VEE, MATLAB, TestPoint, C, VB.NET and other programs that make VISA calls.

ICS Explorer Program

The 488-USB2 includes ICS's Explorer program which automatically configures your Controllers then locates and displays all compatible GPIB Controllers and Devices in your system.

From the main window you can examine every device, link to the Configuration and Communicate windows or verify the software installation. The Configure window lets you quickly view and change the Controller's settings. The Communicate window lets you interactively control any GPIB device from the computer keyboard without having to write a program. Communicate includes all of GPIB keyboard's features and is ideal for exercising GPIB devices or for trying out device commands before using them in a program.

- Converts any PC with a USB port into a GPIB Controller. *Uses any powered USB port.*
- Fast >1 Mbs transfer rate. *Reduces test time.*
- New 488.2V4 Driver supports 32 and 64-bit Windows XP, Vista and Windows 7 with a true 64-bit DLL. *Use the full 64-bit address space. No thunk DLLs.*
- NI 'ib' and '488.2' command compatible. *Runs LabVIEW, MATLAB and other programs with NI calls without changes.*
- Works with Agilent, NI and Kikisui VISA libraries. *Supports all major VISA libraries and test programs.*
- ICS's Explorer auto configures your controller. *Find, configure and control instruments in one program.*
- WIN 2K and WIN 2003 support with 488.2V3 Driver. *Full legacy support.*

CE Approved

RoHS Compliant



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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 C12
- 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
- Times dependent upon test device

USB Specifications

Device Type:

USB 2.0 High-speed, bus powered device

Compatibility:

USB 1.1 and USB 2.0 compatible

Programs Compatibility

488-USB2 and 488.2V4 driver support:

- Agilent IO Library (14.2-16.0)
- Aligent Vee (3.1 thru 8.0)
- Agilent SICL
- CEC Testpoint* with VISA
- Codegear Borland Delphi 2007
- Labview (8.6.1, 2009 and 2010)
- MathWorks MATLAB# with VISA
- Tektronix WaveStar

Notes: *with optional mfrg drivers
#with MATLAB Instrument Toolkit

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

Software Capabilities

ICS's new 488.2V4 Driver provides the following Controller capabilities: C1-C4 and C12.

Supported Windows Operating Systems

32 and 64-bit XP, Vista and Windows 7 with true 32 and 64-bit DLLs that support the full 32/64 bit address ranges.

Commands

All NI 488.1 and 488.2 commands except for the following obsolete commands: ibevent, ibist, ibloc for a board, ibtct, parallel poll, pass control and device mode.

Number of Controllers

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

Windows Supported Languages:

Microsoft Studio 6 Visual Basic and C/C++/C#
Microsoft Visual Studio 2005, 2008 and 2010
Visual Basic.NET and C/C++/C#

Supplied Headers and Library Files

C/C++/C# and Visual Basic files for Visual Studio 6 and Visual Studio.NET (2005/2008/2010).

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.

VISAkybd - Finds and controls GPIB devices with a VISA library

488.2V3 Driver

Similar support for Windows 2K and WIN 2003.

System Requirements

- Intel type PC with a powered USB port.
- Windows XP/Vista/7 with the latest Service Packs.
- 50 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

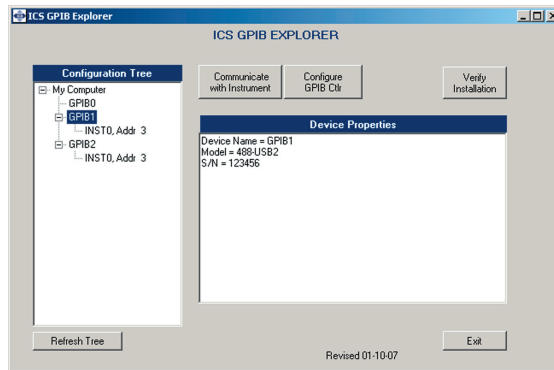
EN6100-6-2/4:2001

Included Accessories

Instruction Manual with complete programming instructions and command definitions.

USB 2.0 Cable, 6 foot long.

Support CD with ICS 488.2V3 and 488.2V4 Driver, command libraries, example programs, ICS Explorer, and VISAkybd programs.



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, 488.2V4 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