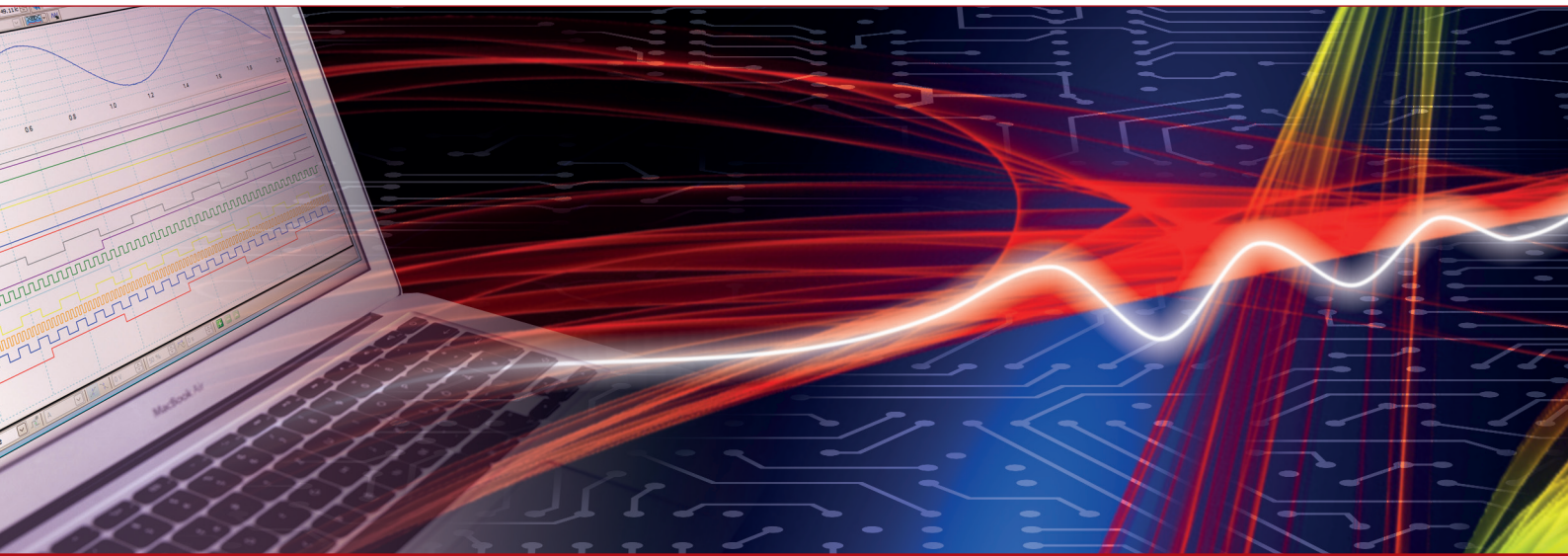


## Product Datasheet - Technical Specifications



More information in our Web-Shop at ► [www.meilhaus.com](http://www.meilhaus.com) and in our download section.

### Your contact

Technical and commercial sales, price information,  
quotations, demo/test equipment, consulting:

Tel.: **+49 - 81 41 - 52 71-0**

FAX: **+49 - 81 41 - 52 71-129**

E-Mail: [sales@meilhaus.com](mailto:sales@meilhaus.com)

Downloads:

[www.meilhaus.com/en/infos/download.htm](http://www.meilhaus.com/en/infos/download.htm)

**Meilhaus Electronic GmbH**  
Am Sonnenlicht 2  
82239 Alling/Germany

Tel.	<b>+49 - 81 41 - 52 71-0</b>
Fax	<b>+49 - 81 41 - 52 71-129</b>
E-Mail	<a href="mailto:sales@meilhaus.com">sales@meilhaus.com</a>

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## 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 IEEE 488.2 specification and saves you programming time. The model 488-USB2 includes ICS's 488.2V4 Driver which supports 32 and 64-bit versions of Windows operating systems from XP up to and including Windows 10. 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 2.0 or 3.0 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 USB 1.1, 2.0 and and USB 3.0 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-USB2 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 488.2V4 multi-controller Driver Library provides real 32-bit (x86) and 64-bit (x64) support for ICS GPIB Controllers on all Windows XP, Vista, Windows 7,8 and Windows 10 PCs. 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**

ICS's 488.2V4 Driver supports 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, Keithley, CEC, and others.

ICS's 488.2V4 Driver supports C, C++, C#, Visual Basic 6, and Visual Basic.NET programs that make GPIB-32.DLL calls. The 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 and 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 GPIBkybd'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.*
- 488.2V4 Driver supports 32 and 64-bit Windows XP to Windows 10 operating systems 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

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 (14.2-16.3)  
 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 mfg drivers  
 #with MATLAB Instrument Toolkit

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, Windows 7, 8 and Windows 10 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 for 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

**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

System Requirements

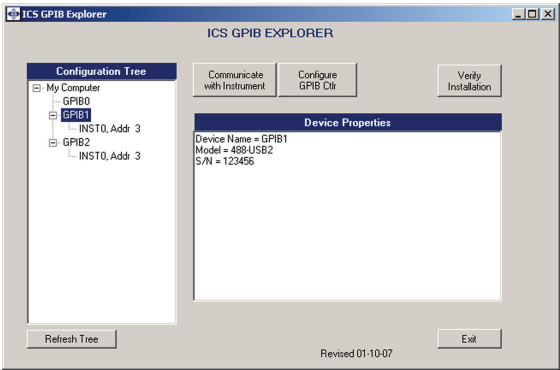
Intel type PC with a powered USB 1.1, 2.0 or 3.0 port.  
 Windows XP thru Windows 10 with the latest Service Packs.  
 50 Mbytes of free Hard Disk space.  
 .NET Framework 2.0 or later for ICS Explorer.

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 male 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

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