usb²Demon™

The usb²Demon is a BDM/JTAG interface used in the design, debug, and programming of microprocessor and microcontroller based embedded systems. One side of the usb²Demon interfaces to a USB 1.1 or USB 2.0 port of a host PC and the other side connects to an OCD (On-Chip Debug) port on the target system. As with all Macraigor interface devices, the usb²Demon can simultaneously debug up to 255 devices on a single scan chain. In addition, up to 16 usb²Demons can be connected to a single host machine.

The usb²Demon is designed to be a major upgrade from the Wiggler series of OCD connections and, for many targets, is also significantly faster than a Raven. It supports configurable JTAG/BDM clock rates up tp 20 MHz .

The usb2Demon is currently supported on Windows XP thru Windows 7 (32 & 64 bit), Red Hat Enterprise Linux 32/64 4 - 6, Fedora 32/64 6 - 14, Ubuntu 32/64 9.4 - 10.10 Meego 1.1

List Price: $750

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Complete JTAG Debug Support

Supported Debuggers and Tools

The usb²Demon is fully compatible with all of Macraigor's software tools, including our free OCD Commander debugger, free GNU toolkit distributions, OCD Flash Programmer application, and our production line test tools.

In addition, several commercial third-party debuggers can interface to the usb²Demon. A partial list of our debugger partners includes:

- Accelerated Technology/ Mentor Graphics
- Allant (ARM)
- Arc (Metaware)
- Altium
- DDC-I
- Green Hills Software
- IAR Systems
- Intel
- Metrowerks
- Microcross
- Microsoft
- Paradigm Systems
- Red Hat
- Viosoft

For a complete list of compatible debuggers, please visit our web site.

Theory of Operation

The usb²Demon operates as a converter between the target JTAG/BDM signals and host debugging commands. Power is supplied by the USB interface so that no external supply is necessary. The buffers that interface to the target OCD signals are powered by the target itself, allowing the usb²Demon to automatically match target voltages between 5.0 V and 2.2 V.

Supported Processors

Alchemy:	AU1000, AU1100, AU1200, AU15xx
AMCC:	PPC405, PPC440, PPC460, AM821x1
AMD:	SC520, AU1000, AU1100, AU15x0, AM32
ARM:	7TDMI, 710T, 720T, 740T, 9TDMI, 920T, 922T, 940T, 946T, 1136J-S, ARM1176, ARM11MP, Cortex M3, Cortex A8, Cortex A9, Cortex M4
Broadcom:	BCM7115
Cirrus Logic:	CS7xxx, CS89712
Freescale:	MC9328MX1, 683xx, MPC603e, MPC8xx, MPC5xx, MPC5554, MPC740, MPC745, MPC750, MPC755, MPC8240, MPC8245, MPC8247/8248, MPC8250, MPC8255, MPC8260, MPC8264/65/66, MPC8270/71/72, MPC8280, MPC8540, MPC8560, MPC8541, MPC8555 iMX23/iMX25/iMX27/iMX28/iMX35/iMX50/iMX51/iMX53/ iMX6
IBM:	PPC603e, PPC740, PPC750
Intel Atom® Technology:	N270, CE41xx, CE42xx, D4xx, N4xx Z5xx, E6xx, Puma6
Intel XScale® Technology:	PXA21x, PXA25x, PXA26x, PXA27x, IOP3xx, IXC1100, IXP42x, IXP46x, IXP24xx, IXP28xx, 80200, 80219, 8032x, 8033x
Intrinsity:	FASTMATH
MIPS:	4Kc/p/m/e, MIPS32 14K, MIPS32 24K
Microchip:	PIC32
Net Silicon:	NetARM+10, NetARM+40, NetARM+50, NS7520, NS9750, NS9750, NS9775
Phillips:	PR1900
Qualcomm:	MSM8660, APQ8060a, APQ8074
Sharp:	LH7A4xx, 7952x
TI:	OMAP35x, OMAP4430, AM335x

For a more complete and up to date list of supported processors, please visit our web site.

Macraigor Systems LLC

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Macraigor Systems is a leading supplier of BDM/JTAG connection solutions for on-chip debugging of 32 and 64-bit embedded microprocessors. Macraigor Systems' solutions are designed for price-sensitive customers. These solutions include a suite of software tools that supports Windows 9x, NT, ME, XP, Linux and Solaris host systems. Macraigor Systems supports all major embedded microprocessor architectures, including AMD, ARM, Atom, ColdFire, CPU32 Series, PowerPC, MIPS and the XScale microarchitecture.