

Computer Solutions Ltd



**Your One-Stop Shop For
Embedded Development Tools**

www.computer-solutions.co.uk

At Computer Solutions Ltd we pride ourselves on our wide range of embedded development tools and excellent customer service - we must be doing something right as we have now been going for over 27 years. We have a technical web site with a web shop for speedy ordering and we keep many of our products in stock for same day shipment (subject to payment terms). We sell to customers throughout the world and are happy to discuss your technical requirements by telephone and email.

Product Range

- ✓ BDM/JTAG Debuggers & Programmers
- ✓ CAN Interfaces & Software
- ✓ USB Protocol Analysers
- ✓ Compilers, Assemblers & Simulators
- ✓ Development Boards & Kits
- ✓ Real Time Executives
- ✓ C Libraries - Disk and USB File Systems
USB and TCP/IP Stacks
- ✓ Universal Programmers
- ✓ In-Circuit Emulators
- ✓ Logic Analysers
- ✓ Digital Storage Oscilloscopes
- ✓ RS232 Sniffers

Embedded development support for all
these CPUs and more:

**ARM, ColdFire, PowerPC
68HC08, 68HC12, 68HC16
PIC 12-17, 18, 24-33 dsPIC
Z180, MIPS, 8051
68K, x86, H8S, XScale
M16C, AVR, MSP430**

FEATURED PRODUCT

MicroNet - TCP/IP for ALL

Designed to be compact enough to supply TCP/IP support for limited 8 bit systems where memory is a scarce resource, it is equally at home on the latest 32 bit CPUs such as ARM and ColdFire particularly their single chip variants.

Able to run standalone or under an RTOS it provides support for the latest generation of Ethernet, wireless or PPP linked embedded systems. With support for the most popular protocols such as FTP, Emails in and out and SNMP, it greatly simplifies the task of creating networks of intelligent sensors. A Web Server on the outstations allow them to be set up or tested using familiar Web Browser technology.

BDM/JTAG Debuggers & Programmers

P&E Microcomputers Inc

Low cost interfaces for Freescale (Motorola) 8, 16 and 32 bit processors are complimented by Windows software for high level debugging, flash programming, GCC compilers and development boards. PC based or standalone production testing and programming tools to interface to ATE are also available.



Abatron AB

Abatron's high performance tools interface the PC via Ethernet to the BDM/JTAG port of the micro under development. They provide drivers that operate under popular compilers and debuggers such as GCC/GDB, ARM, IAR, Metrowerks, Tasking, MetaWare, Accelerated Technology, Microtec, WindRiver and Jbed. In addition they have Windows Flash programmers and C++ drivers for linking to production ATE systems.



Embest Info&Tech Corporation

Embest specialise in low cost support for the ARM processor including Ethernet, USB and parallel port JTAG interfaces. Their software development environment controls the ARM via JTAG and includes a fully integrated copy of GCC and a flash programmer. In addition, they have a wide variety of ARM based single board computers and evaluation boards that are supplied with lots of example software.



CAN Interfaces & Software

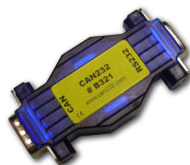
Peak-Systems Technik GmbH

Their range of CAN and LIN Interfaces with their supporting software can be used to connect a PC to a CAN or LIN network either to allow the PC to control the network or to act as a test and diagnostic station logging CAN messages. Interfaces are available for USB, PC (PCMCIA), Parallel Ports, ISA, PCI or PC/104 boards. Modules are also available that act as interfaces between analog and digital signals and the CAN bus. CANopen, Lab View and Linux drivers are also supported.



Lawicel AB

The Lawicel interfaces provide a simple and lowest cost RS232 connection to a CAN-network. It is also available as a DIP package to CAN enable your own designs.



USB Protocol Analysers

Ellisys

Ellisys is a leading supplier of cutting edge USB Analysers from low cost USB 1 through to USB 2 High Speed and Microsoft Class protocols to Wireless USB and Ultra wide band Protocol Analysers. Their products help hardware, firmware, software and test engineers to debug and test their USB interfaces, drivers and applications.



FEATURED PRODUCT

Abatron BDI/JTAG Interface

For GNU Debugging:

Abatron have recently released new GDB interfaces for the following:



Power QUICC I, II & III inc MPC8641

ARM 11, XScale (up to 4 cores)

MIPS 32 (incl 24K & multi core) & MIPS 64

Power PC 4xx & 74xx

All use Ethernet links for fast download and include flash programming. These join the ARM7/9, 68K, ColdFire, M-CORE & PPC cores already supported.

For Flash Programming:

Abatron's bdiPro will program internal Flash and EEPROM as well as most types of external Flash. Because of its high speed design and Ethernet interface it can program Flash parts at up to 170K Bytes/sec (depending on the chip).

- High-speed flash memory programming via BDM/JTAG
- Programs on board and all popular embedded flash memories
- Configurable program sequences for target system initialisation
- 8, 16 and 32 bit programming modes
- Memory load, dump, edit and verify functions
- For HC12 supports independent programming of internal flash memory for automatic production
- Windows user interface gives easy operation.
- A C API is also available to allow flash programming to be integrated into your ATE.

Compilers, Assemblers & Simulators

Hi-Tech Software

HI-TECH Are well known for their low cost C Compilers for a wide range of micros, in particular the PIC 12-16, 18 and now the 24/30 dsPIC. They have a Windows IDE, Simulator, Debugger and code generation wizard for many of the most popular micros.

IAR

IAR Embedded Workbench provides a completely integrated C/C++ Windows environment for development of a wide range of 8, 16 & 32 bit micros including a project manager, editor, build tools and the C-SPY® debugger. Their range of Kickstart packages include and evaluation board with compiler and debugger at very low costs.

COSMIC Software Ltd

Specialise in compilers for Freescale (Motorola) 8 and 32 bit CPUs and the ST10/166 range. Their debugger ZAP can either work with a simulator or for those CPUs which have Background Debug Modes (08, 12, 16, CPU32) they will link to a target board via one of our BDM cables.

Keil

Keil is the market leader for the 8051 with support for hundreds of chips including the extended addressing Dallas, Philips and Analogue variants. They also produce good ARM, 16x and 251 compilers.

Avocet Systems, Inc

Suppliers of C Compilers, Simulators and Assemblers for many years, their range spans from Z8 to 68K.

Development Boards & Kits

We offer development boards and kits including free GCC compiler and debugger from a number of different manufacturers:



Embest Info&Tech Corporation

Produce a range of boards for ARM CPUs from Atmel, NXP (Philips), Samsung, ST Micro, Cirrus and XScale.

P&E Microcomputers Inc

Offer boards for Freescale's ColdFire, 68HC08 and 68HC(S)12.

IAR

Produce a range of Kickstart Development Kits with C compilers and debugger for ARM & MSP430.

ISYSTEM

Offer boards with JTAG interfaces and free development software for ARM and PPC Nexus.

Universal Programmers

HiLo System Research Co Ltd

A range of universal programmers capable of programming PAL/GAL/EPROM/EEPROM/Flash Memory/FPGA's etc with anything up to 300 pins from over 135 manufacturers. Portable, with fast USB downloading and prices starting at under £700 (€1050). They have gang adapters for the most common FLASH memories, Micros and FPGA.



FEATURED TECHNOLOGY



If you need your application to talk to a PC then increasingly the way to go is USB. But unlike the good old parallel or serial cables these interfaces are far from simple here is a quick summary of some terms you might encounter.

USB1 - The original USB standard provides a fast Master/Slave interface using a star topology supporting up to 127 devices. The PC is the Master. Transfer rates are Low Speed 1.5 Mbits/sec and Full Speed 12 Mbits/sec with 5 metres the max length.

USB2 - some minor variations from USB1 but most products now say they conform to USB 2, although few of them actually implement its High Speed data transfer mode with 480 Mbits/sec throughput.

USB Device - Most on chip interfaces provide this support allowing your Embedded system to connect to the USB as a Device.

USB Host - The Master for the transaction - may be a PC but your application will have to be Master if you want to plug a USB memory stick into it. Until recently few on chip interfaces were Host capable.

USB Software - Once the basic USB hardware is provided, it may be possible (depending on the application, the interface and the level of manufacturer's support) to program simple data transfers at both the Device (Target) and the Host (PC) ends by setting up USB pipes. We recommend the JUNGO package for developing the PC end of these links and one of the USB software stacks for the Target end.

Microsoft Classes - In order to simplify the connection of USB Devices, Microsoft have defined a number of standard protocols (called Classes) that Windows software supports. By using these Classes (available as options within the USB stacks) your device will be able to link to the PC using the standard PC software calls as:

- Mouse, keyboard - Human Interface Device (HID) Class
- File based - Mass Storage Class
- Serial links - Communication Class
- Printing device - Printer Class

In-Circuit Emulators

iSYSTEM AG

iSYSTEM manufacture a range of 8, 16, 32 bit ICE and BDM Emulators, all utilising the same powerful user interface - winIDEA Their emulators are designed using the latest FPGA technology which makes them among the most economical ICE on the market today.



Real Time Executives & C Libraries & Stacks

CMX Systems Inc

CMX produce small and fast real-time middleware for embedded systems. These include real-time operating systems (RTOS), TCP/IP stacks suitable for 8, 16 and 32 bit CPUs, USB stacks, Flash File Systems and CANopen drivers.

EBSnet, Inc.

EBSnet products provide cost-effective solutions by offering RTOS and CPU independent software protocols that enhance the capabilities of cutting edge embedded devices. These include high performance IPv4 and IPv6 TCP/IP stacks and embedded file systems that will control Terabyte disk systems.

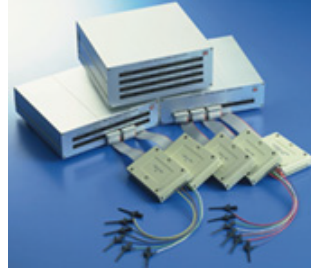
Micro Digital Inc

Micro Digital produce SMX®, a no-royalty, modular, multitasking RTOS for high end embedded systems. It is characterized by high performance, ease of use, and integration with popular development tool suites. Board support packages are available for many of the most popular ARM, PPC and ColdFire CPUs with full support for TCP/IP, USB and graphical display interfaces.

Logic Analysers & Digital Storage Oscilloscopes

Link Instruments Inc

They supply Logic Analysers, Digital Storage Oscilloscopes and Frequency Analysers small enough to fit in your pocket and ideal for use with laptop in the field. Also available are bench Logic Analysers with speeds of up to 500MHz capable of logging from 40 to 160 channels.



RS232 Sniffer

Paladin Software Inc

Their StreamTeam software simplifies collecting and analysing RS232 communications. Data can be selectively stored to disk and then displayed, searched and reviewed.

Computer Solutions Ltd

1a New Haw Road
Addlestone, Surrey
KT15 2BZ, UK

Tel: +44(0)1932 829460

Fax: +44(0)1932 840603

sales@computer-solutions.co.uk

www.computer-solutions.co.uk