JTAGjet-ARM DSP & OMAP Emulator

JTAGjet Features

- Super fast code downloads of **over 1 MByte/sec**
- Supports all **ARM7** and **ARM9** based devices from Atmel, Sharp, Cirrus, Philips, ST Micro, Samsung, OKI, Lucent, Altera, TI and others
- Supports all Texas Instruments **DSPs**: TMS320C6000, C5000, C2000, C20x, C5x and VC33 families
- Supports all **OMAP** devices (ARM & DSP on one chip)
- Supports Infineon C166S, **XC16x** and **TriCore** families
- Fast **USB 2.0** or Printer Port (LPT) connection to host PC
- Small, portable and **inexpensive.** Prices start from **$1,500**
- Compatible with **ARM Ltd**. ADS and AXD debuggers and compilers
- Compatible with **IAR** EWARM debugger and compiler
- Compatible with Mentor Graphics **XRAY** ARM debugger and compiler
- Compatible with **GNU** compilers and debuggers for ARM
- Compatible with **Green Hills** Software ARM compiler and debugger
- Compatible with **Palm** Universal Debugger for OMAP
- Compatible with Code Composer and **Code Composer Studio**
- Includes **Chameleon** Debugger for ARM7 and ARM9
- Auto Adaptive emulation clock or manual setting from 1 kHz to **30 MHz**
- Power-up and external Reset handling
- Easy JTAG chain diagnostics that perform **device detection**, and show no power, no clock or broken JTAG connections
- Automatic processor **initialization** on power-up and Reset (memory mapping, peripheral setting, MMU, WD disable etc.)
- Virtual-to-physical address mapping support for ARM cores with **MMU** (essential for WinCE, PalmOS, OSE or Linux operating systems)
- **Flash programming** support for on-chip and off-chip memory
- **Remote debugging** and emulator sharing over LAN with an optional ICE-Server software
- **Auto-sensing** JTAG voltage and detachable target headers to accommodate various JTAG pinout standards
- Replaces old **Multi-ICE** and **XDS510** class emulators (no software or target changes are necessary) and preserves the investment made in tools, software and training
- Real-time embedded trace (**ETM**) support for ARM cores (soon)
- Windows 98, NT, ME, 2000 & XP compatible

PC Host Interface (USB2.0 or LPT)

JTAGjet is a small, palm-sized emulator based on the JTAG boundary scan port. It is equipped with either USB 2.0 port that runs at **480 Mb/sec** or LPT printer port which supports the EPP, Bi-directional, and Standard modes. JTAGjet USB 2.0 emulator is fully compatible with the older USB 1.1 ports at slower speeds.

JTAG Interface

Unlike other JTAG emulators, JTAGjet supports many different JTAG pinouts and headers. To accommodate the constantly evolving JTAG world, JTAGjet features small, detachable adapters that may be replaced to fit different target boards.

Building on its 22 years of experience in making emulators for embedded controllers, Signum Systems equipped JTAGjet with many features often neglected in JTAG debuggers.

Understanding the importance of being able to debug the power-on/off and Reset conditions, JTAGjet will gracefully handle them as well as automatically adapt to the JTAG clock frequency (1 kHz to 30 MHz) and JTAG voltage, perform automatic device detection and inform of missing clock or broken JTAG chain.

Target Board Support

Since many ARM and DSP target boards do not power-up to a ready to use condition, JTAGjet includes macro files that automatically configure many popular ARM and DSP boards to a usable stage without the need to write any startup initialization code. This feature alone saves countless hours in the mundane task of initializing the target board before the first program can be downloaded.

Compiler and Debugger Support

Since there is a wide choice of debuggers, compilers and RTOS available for the embedded designer, JTAGjet is not going to limit the choices.

Unlike JTAG emulators from SW tools and silicon vendors, JTAGjet is compatible with many different processors and well over a dozen major C compilers and Debuggers making it the most versatile JTAG tool available on the market today.

Chameleon Debugger

For a limited time, each JTAGjet emulator for ARM is bundled with a **FREE Chameleon Debugger for ARM7 and ARM9** cores which offers an integrated **Flash Programmer** GUI, macros for automated board initialization and testing, fly-over variable pop-ups in source window, drag-and-drop between windows, Graphical Event Triggering and hundreds of other features requested by thousands of users over the last **22 years**.

Chameleon Debugger is a high-end, full-featured, Multi-Core Debugger that handles single or multi-CPU debugging nice and easy. Chameleon Debugger is currently available for C3x, C5x, C2000, C5000, ARM7, ARM9, 8051, C166, 186 and TriCore processor families. For more information on Chameleon visit www.signum.com / jtagjet.htm.

JTAGjet COMPATIBILITY MATRIX

Devices			Tool Vendor	Tool Name	C Compiler	De-bugger
ARM family						
ARM7TDMI cores	ARM922T cores	ARM710T cores	• ARM Ltd.	ADS and AXD	✓	✓
ARM940T cores	ARM720T cores	ARM946E cores	• Signum Systems	Chameleon Debugger		✓
ARM740T cores	ARM966E cores	ARM9TDMI cores	• Green Hills Software	Multi 2000	✓	✓
ARM1020E cores	ARM920T cores	ARM1022E cores	• IAR	Embedded Workbench	✓	✓
AT91 (Atmel)	ML67xxxx (OKI)	BlueStreak (Sharp)	• Mentor Graphics	XRAY	✓	✓
Maverick (Cirrus Logic)	DragonBall MX/M1 (Motorola)	LPC210x (Philips)	• Palm Software	Palm Universal Debugger	✓	✓
TMS470 (TI)	Excalibur (Altera)	S3C2410 Samsung	• GNU	GCC, GDB, DDD and others	✓	✓
			• Texas Instruments	Code Composer Studio 2.xx	✓	✓
OMAP family						
OMAP 5910	OMAP 1510	OMAP 310	• Texas Instruments	Code Composer Studio 2.xx	✓	✓
OMAP 710	OMAP 1610	TMS320DSC21	• Palm Software	Palm Universal Debugger	✓	✓
TMS320DM270	TMS320DM310	TMS320DSC25	• Signum Systems	Chameleon Debugger		✓
			• Mentor Graphics	XRAY	✓	✓
			• ARM Ltd.	ADS and AXD	✓	✓
TMS320C6000 family						
TMS320C6201	TMS320C6202	TMS320C6211B	• Texas Instruments	Code Composer Studio 2.xx	✓	✓
TMS320C6203B	TMS320C6204	TMS320C6205				
TMS320C6701	TMS320C6711	TMS320C6711B				
TMS3206713	TMS320C6414	TMS320C6415				
TMS320C6416						
TMS320C5000 family						
TMS320C5407	TMS320C5401	TMS320C5409	• Texas Instruments	Code Composer Studio 2.xx	✓	✓
TMS320C5409A	TMS320C5402	TMS320C541	• Signum Systems	Chameleon Debugger		✓
TMS320C5403	TMS320C5410,	5410A				
TMS320C5404	TMS320C5416	TMS320C5406				
TMS320C542	TMS320C5420	TMS320C5421				
TMS320C543	TMS320C5440	TMS320C5441				
TMS320C5444	TMS320C545	TMS320C546				
TMS320C548	TMS320C549	TMS320C5502				
TMS320C5509	TMS320C5510	TMS3205560				
TMS320C5561	TMS320C5470	TMS320C5471				
TMS320C2000 family						
TMS320F240	TMS320F241	TMS320LC2406A	• Texas Instruments	Code Composer Studio 2.xx	✓	✓
TMS320C242	TMS320F243	TMS320Lx2401A	• Signum Systems	Chameleon Debugger		✓
TMS320Lx2402A	TMS320LC2404A	TMS320LF2403A				
TMS320L2407A	TMS320LF2406A	TMS320F2812				
TMS320F2810	. . . and newer					
TMS320VC33, 5x and 20x families						
TMS320VC33	TMS320C20x	TMS320C5x	• Texas Instruments	Code Composer 4.1	✓	✓
			• Signum Systems	Chameleon Debugger		✓
Infineon C166 & TriCore						
XC161	XC164	XC167	• Signum Systems	Chameleon Debugger		✓
C166S (Synopsys)	TC11IB	TC1765/1775	• Green Hills Software	Multi-2000	✓	✓
TC1920	TC10GP	PXB4225	• TASKING	Cross-View	✓	✓
			• GNU	GCC	✓	

Ordering Information		LPT	USB2
JTAGjet-ARM	JTAGjet for ARM cores	$ 1,500	$ 1,800
JTAGjet-OMAP	JTAGjet for OMAP	$ 1,800	$ 2,100
JTAGjet-CCS	JTAGjet for DSPs & CCS2.x	$ 1,500	$ 1,800
JTAGjet-TMS	JTAGjet for VC33, 20x & 5x DSPs	$ 1,500	$ 1,800
JTAGjet-166	JTAGjet for C166S & XC16x	$ 1,500	$ 1,800
JTAGjet-TC	JTAGjet for TriCore	$ 1,800	$ 2,100

Ordering Information		
CHDEB-ARM	Chameleon Debugger for ARM	$ 450/free
CHDEB-C5000	Chameleon Debugger for C5000	$ 450
CHDEB-C2000	Chameleon Debugger for C2000	$ 450
CHDEB-C3x	Chameleon Debugger for C30-33	$ 950
CHDEB-166	Chameleon Debugger for C16x	$ 950
CHDEB-TC	Chameleon Debugger for TriCore	$ 950