JTAGjet Emulator
for TI DaVinci, OMAP, TMS470,
DM, C6000, C5000 & C2000 DSPs

JTAGjet™ is a small, universal In-Circuit Debugger that connects to targets via a JTAG port. It is equipped with USB 2.0 port and runs at 480 Mb/sec. JTAGjet-Trace has the same features as JTAGjet but contains the ARM ETM real-time trace capture with up to 18 MBytes of memory.

Windows and Linux Support

JTAGjet is compatible with Linux and Windows workstations, making it an ideal tool for development of embedded Linux, WinCE and other RTOS based applications.

Concurrent Debugging

One of the unique JTAGjet features is that it may be used with TI CCS and all major ARM debuggers concurrently, providing a true multi-core, multi-debug development system and replacing the XDS510 and XDS560 emulators.

Support for DSP, DaVinci, TMS470 & 570

JTAGjet supports all Texas Instruments DSP, ARM7, ARM9, ARM11 and Cortex based devices.

Compatible with All Major IDEs

- **ARM Ltd ADS** & **RealView**
- **Eclipse**
- **eSOL eBinder**
- **GNU GDB**
- **GHS Multi**
- **IAR EWARM**
- **Keil RealView MDK-ARM**
- **Mentor Graphics EDGE**
- **TI Code Composer Studio**
- **Signum Chameleon**

Smart Flash Programmer

JTAGjet comes with a Flash Programmer that can recognize the type and geometry of the device and automatically configure the proper algorithm. Hundreds of NOR & NAND Flash devices are supported as well as any on-chip internal Flash in theTMS470, TMS570 and C2000 devices.

JTAG Chain Device Detection

JTAGjet automatically detects all devices on the JTAG chain to properly configure the debugger. It also detects target power and target resets. That is why it is perfect for debugging the power-on/off and reset conditions, informing user about the state of target at all times.

Programmable and Adaptive JTAG Clock

JTAGjet supports ARM cores with Adaptive Clock and can vary the JTAG clock frequency from 1 kHz (for slow FPGA prototypes) to 30 MHz for faster downloads and quicker Flash programming.

Auto-sensing JTAG voltage

JTAGjet supports detachable target headers to accommodate various JTAG pinout standards and voltages between 1.8V and 5V.

JTAGjet Features

- Compatible with CCS 3.x/4.x and all major ARM debuggers
- Replaces the older XDS510 and XDS560 DSP emulators
- Concurrent multi-core debugging with CCS and other debuggers
- Super fast code downloads of up to **1 MBytes/sec**
- Optional real-time trace for devices with **ETM** port
- Optional real-time trace display for devices with **ETB**
- Fully compatible with **FLASH470** programming utility
- On-chip and off-chip **Flash Programmer** (GUI or API)
- Supports **GSM, GPRS, CDMA** cell phones based on ARM cores
- Automatic **processor initialization** on power-up or reset (memory mapping, peripheral setting, MMU, WD disable etc.)
- Optional, fully isolated JTAG probe
- Active JTAG probes to support the TI-14, cTI-20, ARM-20, ARM-14, Mictor-38 and Cortex pin debug headers
- Windows 7, XP and Vista compatible.

JTAGjet-Trace Features

- Up to 400 Ms/s trace acquisition (400 MHz maximum CPU speed)
- Supports all ARM7, ARM9, OMAP and DM devices equipped with the Embedded Trace Macrocell (ETM) logic that allows PC execution and data variables tracing in real-time.
- Auto adjusting timing eliminates problems with data and clock skew
- Available with 2M and 4M frames deep trace buffer
- 56-bit time stamp with CPU cycle accuracy down to 5 ns
- Easy access to all ETM modes, triggers and trace filtering
- Small form factor - fits in the palm of your hand
- Quiet operation – no fans, no external heat sinks
- Only one connection to target – both JTAG and trace are taken from one ETM connector
- Includes ETM to JTAG adapter for targets with plain JTAG port

Chameleon Debugger™ for ARM

Each JTAGjet-OMAP, DaVinci, TMS470 and TMS570 emulator is bundled with Chameleon Debugger™ for ARM. Chameleon Debugger is a high-end, full-featured, **multi-core debugger** which features 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 time saving debug features. It is available as an option on other JTAGjet models.

JTAGjet Emulator

for Sitara, DaVinci, OMAP,

DM, C6000, C5000 & C2000 DSPs

Specifications	JTAGjet-CCS	JTAGjet-OMAP3	JTAGjet-DaVinci	JTAGjet-Trace-OMAP
Comm. Port / Speed	USB 2.0 / 480 Mbps	USB 2.0 / 480 Mbps	USB 2.0 / 480 Mbps	USB 2.0 / 480 Mbps
Current Draw	0.3A (powered by USB)	0.3A (powered by USB)	0.3A (powered by USB)	0.8A (ext. power adapter)
Dimensions (inches)	5.6L x 2.6W x 1.2H	5.6L x 2.6W x 1.2H	5.6L x 2.6W x 1.2H	5.6L x 2.6W x 1.2H
Max. JTAG / CPU Clock	30 MHz / no limit	30 MHz / no limit	30 MHz / no limit	30 MHz / 400 MHz
Probe Length	8 inch, active probe	8 inch, active probe	8 inch, active probe	6 inch, passive probe
JTAG / ETM voltage	3.3V - 5V , 1.8V - 3.3V	3.3V - 5V , 1.8V - 3.3V	3.3V - 5V , 1.8V - 3.3V	1.8V – 3.3 V
Target connection	14-pin TMS320 pinout	20-pin ARM pinout & cTI-20	14-pin TMS320 & cTI-20	38-pin Mictor ETM pinout
Debuggers supported	CCS 3.x / 4.x	eBinder, CCS 3.x/4.x, all major ARM debuggers, Linux GDB	eBinder, CCS 3.x/4.x, all major ARM debuggers, Linux GDB	eBinder, CCS 3.x/4.x and all major ARM debuggers
Targeted family support	CCS supported devices	OMAP34xx,36xx,35x, DaVinci	DaVinci, DM, OMAP, etc.	OMAP, devices with ETM port
Included in package	CCS drivers only	CCS drivers, Chameleon for ARM7/9/11/Cortex devices	CCS drivers, Chameleon ARM7/9 debugger	4M deep trace, CCS drivers, Chameleon ARM7/9/11 debugger

JTAGjet Device Compatibility

ARM Cores Supported	TI ARM Support	TI DSP Support
ARM7EJ-S	TMS470, TMS570	TMS320VC33
ARM7TDMI	DSC21, DSC25	TMS320F24x
ARM7TDMI-S	DM270, DA295	TMS320F28x
ARM710T/720T	DM310, DM320	Piccolo™
ARM740T	DM331, DM342	Delfino™
ARM9TDMI	DM350, DM355	TMS320C54xx
ARM920T/922T	DM420, DM642	TMS320C55xx
ARM926EJ	OMAP710, 730, 733	TMS320C62xx
ARM926EJ-S	OMAP750, 850	TMS320C64xx
ARM940T	OMAP1510, 161x	TMS320C67xx
ARM946E-S	OMAP1710	Sitara
ARM966E-S	OMAP5903, 05, 10, 12	
ARM968E-S	DaVinci, DM644x	
ARM11	OMAP 2410, 2420	
MPcore	OMAP34xx, 36xx	
Cortex-M3/R4/A8	OMAP35x	

NOTE: Each JTAGjet can be customized to include support for all DSP, ARM or Cortex devices listed above.

JTAGjet Configurations
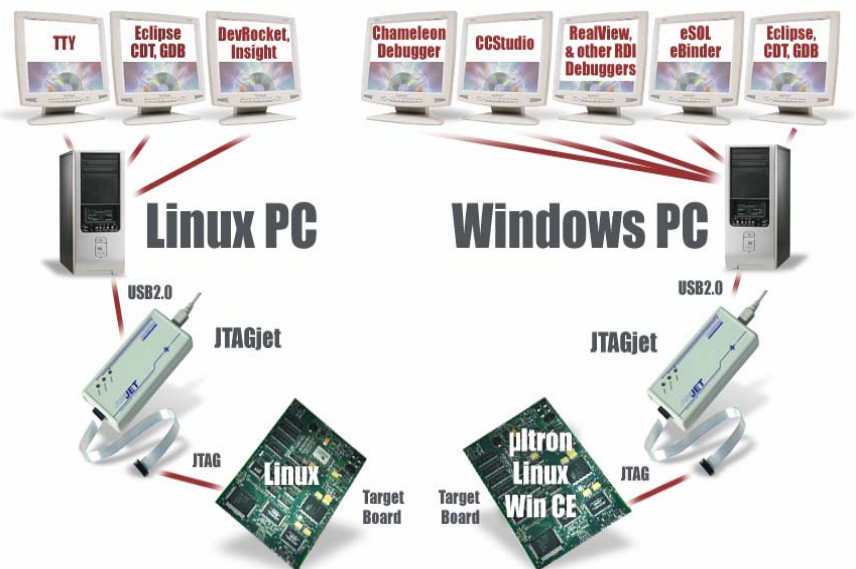
Ordering Information : Prices are good in USA & Canada only. Order on-line at www.signum.com/estore.htm

Part Number	Description	
JTAGjet-CCS	JTAGjet for OMAP, TMS470, C6000, C5000, C2000 with CCStudio drivers	
JTAGjet-OMAP	JTAGjet for OMAP, 470, C6000, C5000, C2000 with Chameleon Debugger and CCStudio drivers	
JTAGjet-DaVinci	JTAGjet for DaVinci, OMAP, DSPs & TMS470 with Chameleon Debugger and drivers for CCS & eBinder	
JTAGjet-OMAP3	JTAGjet for OMAP3, DaVinci and TMS320 DSPs with Chameleon Debugger and drivers for CCS & eBinder	
JTAGjet-470	JTAGjet for TMS470 ARM devices with Chameleon Debugger	
JTAGjet-570	JTAGjet for TMS570 (dual-core Cortex) witch Chameleon Debugger and CCS drivers	
JTAGjet-Trace-OMAP	JTAGjet for OMAP with 4M deep ETM trace memory, Chameleon Debugger and CCS drivers	

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