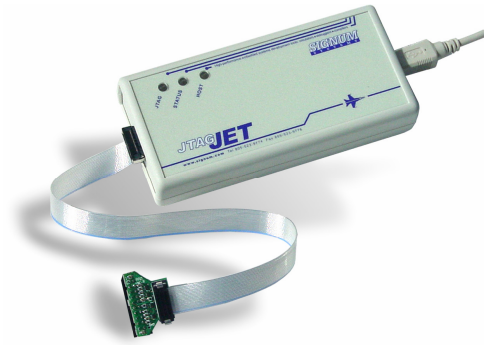
JTAGjet Emulators
for Freescale ARM Devices
Kinetis, i.MX and MAC7100 series



JTAGjet™ is a small, universal In-Circuit Debugger that connects to targets via the JTAG port. It is equipped with USB 2.0 high-speed port and on-board FPGA to achieve download speeds of up to 2MBytes/sec. **JTAGjet-Trace™** has the same features as JTAGjet but contains ETM and PTM real-time trace capture logic with up to 18 MBytes of memory.

Complete Freescale ARM Support

JTAGjet supports all **ARM7, ARM9, ARM11 and Cortex-M0/M1/M3/M4, Cortex-R4 and Cortex-A8/A9** based devices from all manufacturers. All Freescale ARM & Cortex based devices are supported.

❑ **Cortex-A8**	**i.MX50, i.MX51, i.MX53**
❑ **Cortex-M4**	**Kinetis K10, K20, K30, K40, K60**
❑ **ARM11**	**i.MX31, i.MX35, i.MX37**
❑ **ARM9**	**i.MX1, i.MXL, i.MXS, i.MX2x series**
❑ **ARM7**	**MAC7100 series**

Chameleon Debugger™ Included

JTAGjet emulators come with **Chameleon Debugger** which allows debugging of **embedded Linux** boot codes, kernels, kernel drivers as well as other RTOS and non-RTOS based applications.

Multi-Core Debugging

Chameleon is designed to debug Multi-Core devices as well as Multi-CPU boards on the same debug screen with breakpoint, stop and go synchronization.

Compatible with All Major IDEs

- ❑ **ARM Ltd ADS & RV**
- ❑ **Eclipse CDT**
- ❑ **eSOL eBinder**
- ❑ **Freescale CodeWarrior**
- ❑ **GNU GDB**
- ❑ **GHS Multi**
- ❑ **IAR EWARM**
- ❑ **Keil RealView MDK-ARM**
- ❑ **Mentor Graphics EDGE**
- ❑ **Signum Chameleon included**

Flash Programmer

GUI **Flash Programmer** is included for all CFI compliant **NOR** flash devices and all **on-chip** internal flash in the Kinetis and MC7100 MCUs. **Batch mode** flashing utility is available for **NAND**, **NOR, SPI** and on-chip flash 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.

Auto-sensing JTAG voltage

JTAGjet supports detachable target headers to accommodate various JTAG pinout standards and voltages between 1.6V and 5V.

Chameleon Debugger Features

- ❑ **Multi-Core, Multi-CPU and Multi-Emulator debugging**
- ❑ Compatible with all major **ARM C/C++ compilers**
- ❑ **Embedded Linux debugging** without the need for Ethernet or serial ports (console and TCP/IP over JTAG)
- ❑ Supports Embedded Trace Buffer (**ETB)**
- ❑ **Code Coverage Analyzer** with source tagging and reports
- ❑ **Code Profiler** to identify where the CPU spends most time
- ❑ Support for all **on-chip breakpoints**, triggers and filtering
- ❑ Automatic **processor initialization** on power-up or reset (memory mapping, peripheral setting, MMU, WD disable etc.)
- ❑ **Macros** for automated board initialization and testing
- ❑ Fly-over variable pop-ups in source window
- ❑ **Registers Window** with bit-fields and descriptions
- ❑ **Virtual-to-physical address mapping** support for ARM cores with **MMU**
- ❑ **Drag-and-drop** values between windows
- ❑ On-chip and off-chip **Flash Programmer** (GUI and batch mode)
- ❑ **Windows 7**, Vista and XP compatible (**32 & 64-bit** versions)

JTAGjet Features

- ❑ Supports all **ARM7, ARM9, ARM11 and Cortex-M/R/A devices**
- ❑ USB 2.0 (480Mb/s) port with on-board FPGA allows super fast code downloads to RAM at up to **2MBytes/sec**
- ❑ Programmable JTAG clock up to **30MHz**
- ❑ **Active JTAG** probes to support the **ARM-20**, **Cortex-20** and **Cortex-10** headers in JTAG and Serial Debug Modes (**SWD**)
- ❑ Support for JTAG voltages from **1.6V to 5V**

JTAGjet-Trace Features

- ❑ Up to **400 Ms/s** trace acquisition which supports the latest Cortex-MRA devices at up **to 1.6GHz** CPU clocks
- ❑ Supports Embedded Trace Macrocell™ (**ETM**) and Program Trace Macrocell™ (**PTM**) ports which allow data variables and program flow tracing in real-time
- ❑ Trace clock timing **calibration** eliminates problems with trace data and clock skew
- ❑ Available with up to **18Mbytes** trace memory
- ❑ 56-bit time stamp with CPU cycle accuracy down to 5 ns
- ❑ Easy access to all ETM/PTM 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 trace connector

SIGNUM SYSTEMS
1211 Flynn Rd., #104, Camarillo, CA 93012
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Fax: (805) 383-3685
Web: www.signum.com

For more details see: **www.signum.com/freescale.htm**

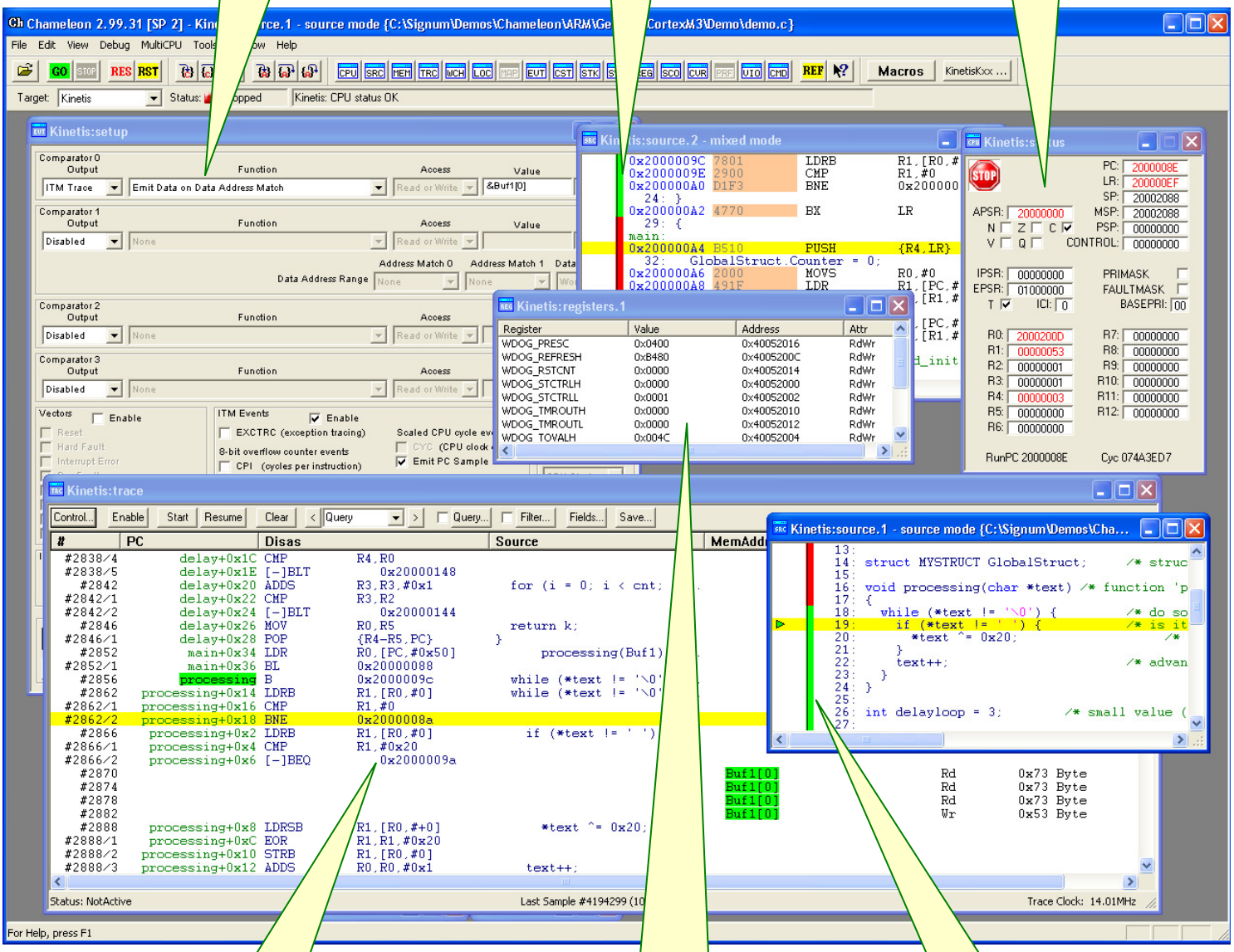
Chameleon Debugger Connected to Kinetis

Screen Example

Complex Events window setup (Data Value and ITM tracing)

Mixed mode disassembly with coverage markings

CPU status window with CPU registers, RunPC and cycle count



Trace window with data value tracing and function coloring

Peripheral registers window. Registers from WDOG group shown

Source window with code coverage markings

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