

Debugger

series

SIGNUM SYSTEMS CORPORATION

Chameleon Debugger for Multi-Target Systems

Installation Instructions

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Purpose *This document describes the Chameleon Debugger software installation process for multi-target emulation systems employing two or more Signum JTAGjet emulators with USB interface.*

Requirements

To build a multi-target emulation and debug system, you need

1. Two or more JTAGjet emulators, each connected to a separate target board via a JTAG cable and appropriate adapter.
2. A separate USB port for each emulator.
3. Preparation for a “clean” installation of the debugger, which includes
 - making sure that none of the emulators is attached to an USB port or target board,
 - removing all previously installed versions of Chameleon Debugger,
 - removing the installation folder (typically, Signum\Chameleon),
 - determining the correct installation order for CPU-specific versions of the debugger, as described below.

Installation Order

A multi-target version of Chameleon Debugger is created by installing CPU-specific (single-target) instances of the debugger one over another in a common folder. The order in which this merging is performed is all-important. Start with the oldest version of the debugger and continue in

ascending order until you install the debugger with the highest version number (Figure 1).

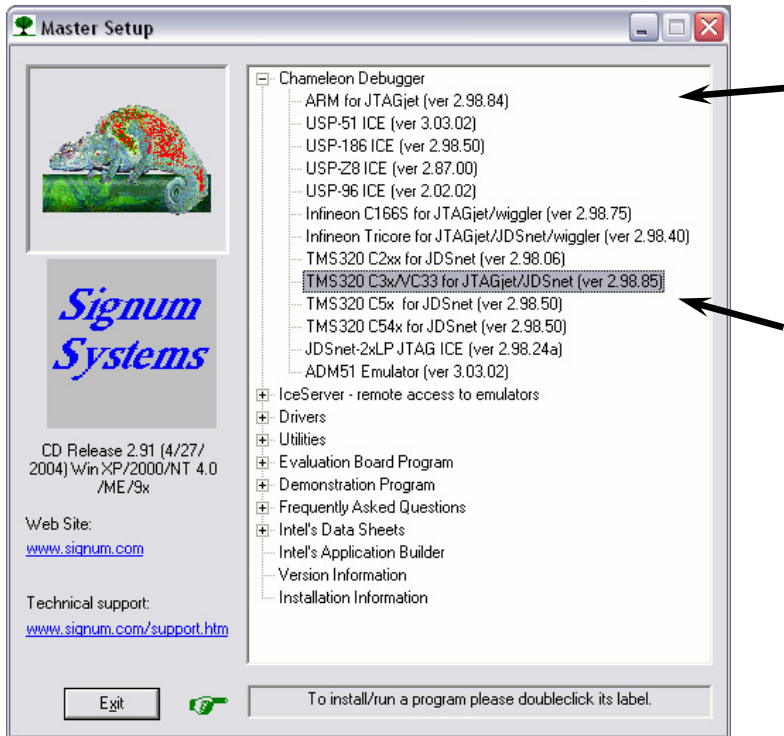


FIGURE 1 Merge versions of Chameleon in ascending order of version numbers. For instance, with CD Release 2.91 shown here, to create a heterogeneous multi-target environment for the ARM and VC33 processors, first install the “ARM for JTAGjet” debugger, and then the “TMS320 C3x/VC33” debugger. (ARM version 2.98.84 is lower than VC33 version 2.98.85.)

Installation Procedure

1. Merge the current versions of Chameleon Debugger for your individual target processors, as described in section *Installation Order* above. For details,

please refer to *Installation Instructions* for CPU-specific versions of Chameleon. Do not launch or configure any of the intermediate versions of the debugger. When prompted, confirm the intent to overwrite an older version with a newer one (Figure 2).

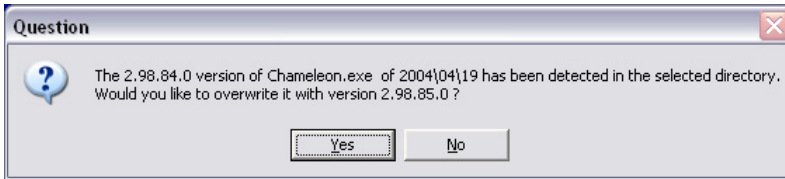


FIGURE 2 Overwriting an older version of the debugger.

2. Launch Chameleon Debugger.
3. Select View > System Configuration > Software License > Enter Key and enter the 20-digit Software License Key for the multi-target option.

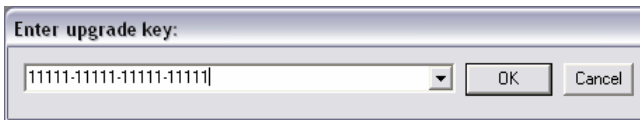


FIGURE 3 Entering the Software License Key. (The key shown here is fictitious; the real one comes with your documentation package or needs to be requested from Signum Systems.)

4. Repeat step 3 for all the targets, using the appropriate Software License Key for each individual target processor.
5. For every target:
 - Assign (logically) an emulator to the target and connect it to a USB port.

Note: In multi-target systems, the debugger must unambiguously identify the USB channel through which it is to ‘talk’ to a particular target. Consequently, it is imperative to always connect the same emulator-target pair to the USB port that was used when the system was installed.

- Establish communication between Chameleon and the emulator either automatically (Figure 4) or manually (Figure 5).

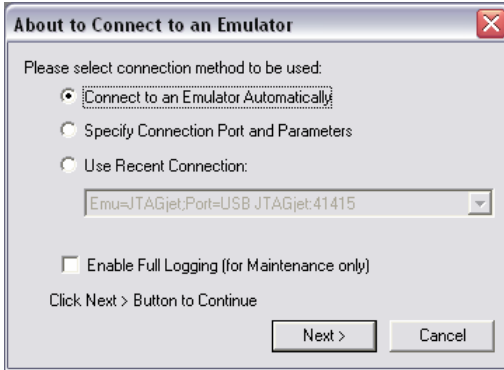


FIGURE 4 Connecting an emulator to the computer automatically. Make sure that only one unconfigured emulator is added to the system (attached to a USB port) at a time.

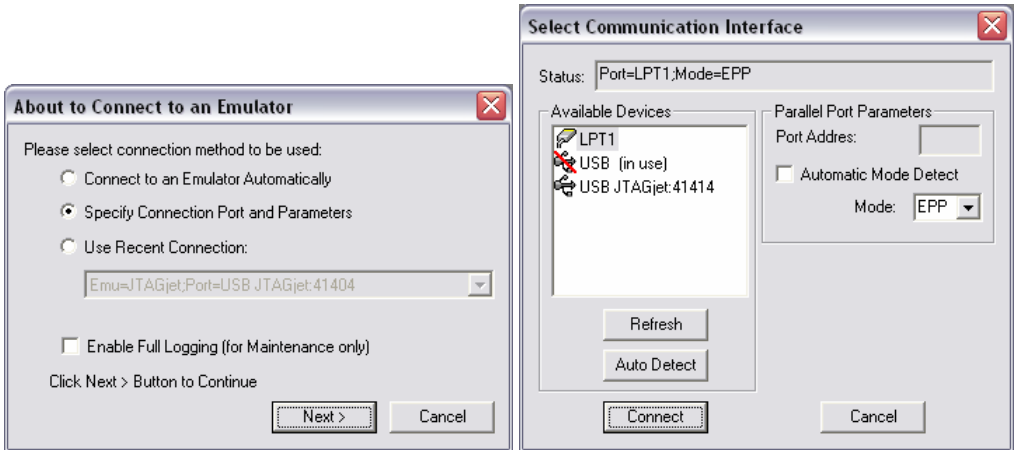


FIGURE 5 Connecting an emulator to the computer manually. Select the USB channel marked with the serial number of the emulator that is physically connected to the intended target. Note the “USB (in use)” symbol appearing when another emulator is attached to one of the USB ports.

- Connect the emulator to its target and power the target board.

- Add the appropriate target in Chameleon and configure the debugger, as described in the *Installation Instructions* for that target (usually, starting with step 3 of the installation procedure).

Multi-Target Environment

The debugger is ready to work with your heterogeneous multi-target system. Its full functionality is applicable to the currently selected processor. To switch to another processor, click anywhere in a Chameleon window associated with that processor, or use the Current Target drop-down list on the debugger's toolbar (Figure 6).

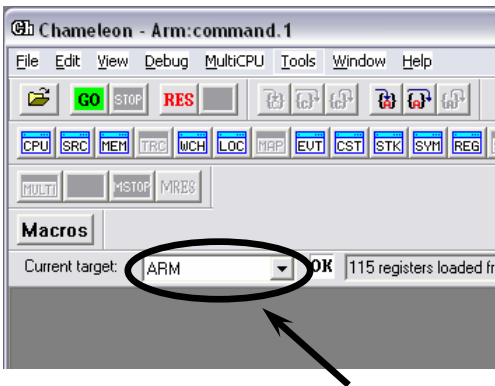


FIGURE 6 Selecting the active (“current”) target processor.

As Chameleon preserves its configuration between sessions, the debugger will resume the multi-target setup when restarted.¹ To verify that setup, select View > System Configuration and make sure that the desired targets are active (Figure 7).

¹ See also the Note in step 5 of the installation procedure.

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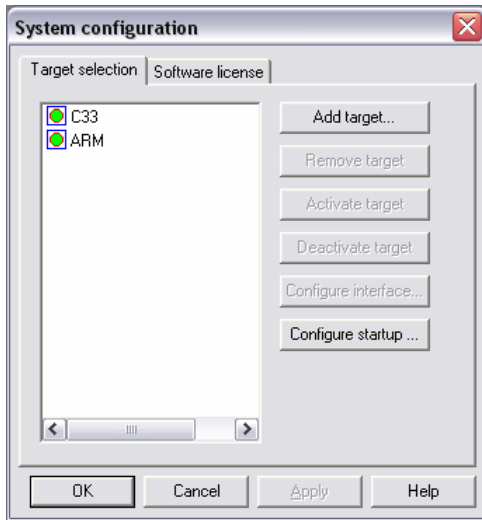


FIGURE 7 Verifying multi-target configuration. This particular system consists of an ARM and VC33 processors.



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