

TMS

series

SIGNUM SYSTEMS CORPORATION

Chameleon/JDSnet for TMS320 Processors

Installation Instructions

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SIGNUM
S Y S T E M S
11992 CHALLENGER COURT
MOORPARK, CA 93021, U.S.A
PHONE 805 • 523 • 9774
WWW.SIGNUM.COM

Purpose

This document describes the Chameleon Debugger installation process for use with the JDSNet emulator for Texas Instrument's TMS320 DSPs, including the C54, C5x, C3x, VC33, and C2xx processors. Also covered here are the installation procedures for the XDS510 emulator and EVM boards.

1. Insert the *Development Tools for Microsoft Windows* CD into your CD-ROM drive. From the Master Setup screen, select Chameleon Debugger and double-click the TMS320 microprocessor that matches your target.



FIGURE 1 Chameleon Master Setup window.

2. If you intend to use a parallel port with Windows NT 4.0, please select YES in the following dialog box to provide Chameleon with the necessary driver.

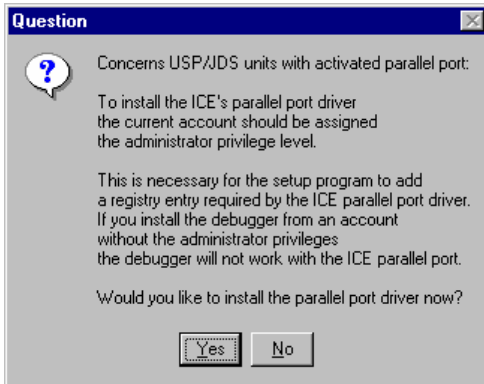


FIGURE 2 Installing the parallel port driver.

3. Complete the installation process, start Chameleon and click the Add Target button in the System Configuration window.



FIGURE 3 System Configuration window.

4. The Target Selection window (shown later) appears. Click the Enter a Key button and type the license key from the Product User License Certificate.

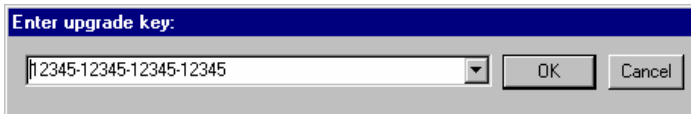


FIGURE 4 Unlocking Chameleon Debugger. (The upgrade key shown in the illustration is fictitious.)

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5. In the Target selection dialog box, select TMS320Cxx (Texas Instruments) as the CPU Family and choose the appropriate Emulator/API.

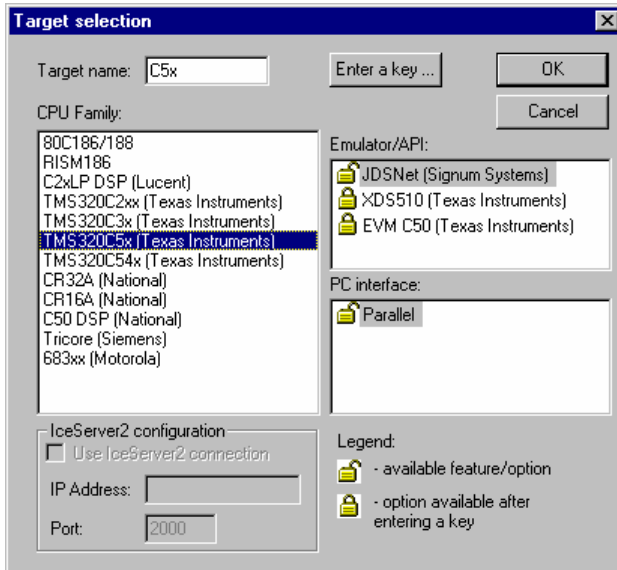


FIGURE 5 Target Selection window.

6. Select the communication port through which the emulator is connected to your computer.

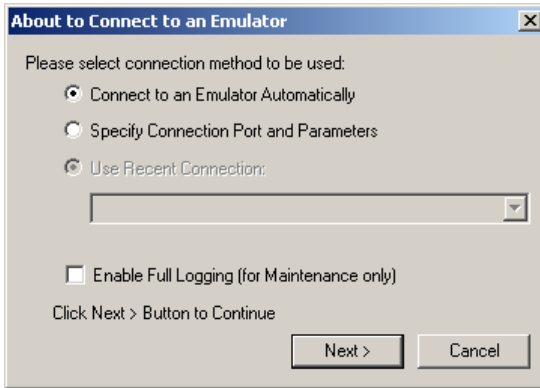


FIGURE 6 Choosing the emulator-PC communication port. The automatic method is hassle-free. If you need greater control over the connection, choose the “Specify Connection Port and Parameters” option.

Note: When working with the XDS510/EVM board, the debugger prompts you for the board's address in the C5xDS Configuration dialog box (Figure 7). The box appears after you have selected the CPU model in step 7.

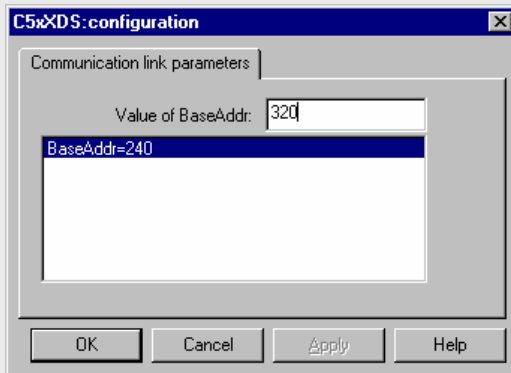


FIGURE 7 Specifying the address for the XDS510/EVM board.

7. Specify the CPU model you want to emulate:

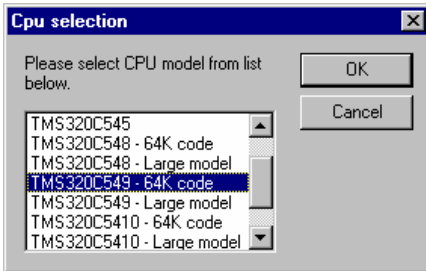


FIGURE 8 Selecting the target CPU.

8. The Configuration dialog box appears (Figure 9).

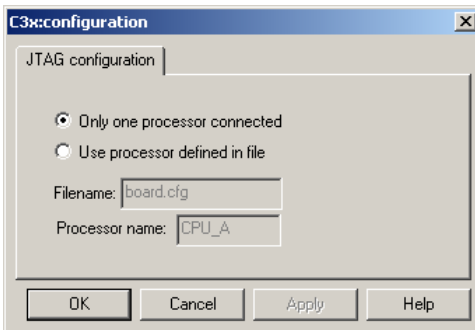


FIGURE 9

Define the devices in the JTAG daisy chain using the following options.

Only one processor connected Select this option if there is only one device in the chain.

Use processors defined in file If there are multiple devices in the chain, it is necessary to create an ASCII JTAG configuration file that specifies the symbolic names, types and/or the length of the instruction registers. The file name is arbitrary, but the extension must be .cfg. Each line in the .cfg file—except for comment lines—refers to a separate device:

NAME1 *TYPE1*
NAME2 *TYPE2*
.
.
.

where

NAME is a unique name identifying the device, e.g., "CPU_A",
including the double quotes.

TYPE is the type of the device, such as TI320C5xx, TI320C5x,
or TI320C2xx. Non-DSP devices should be bypassed.
Specify their type as BYPASS and append the length of
the instruction register in a two-digit format. For
example, BYPASS2e denotes a bypassed device with a
46-bit (2e hex) instruction register.

Lines that begin with the semicolon are treated as comments and are ignored.
The order in which the JTAG devices are specified in the configuration file is
important. The first line corresponds to the device closest to the TDO, the
second corresponds to the next device in the chain, and so on. The last line
describes the device on the TDI side of the chain.

An example of the JTAG configuration file is shown below.

```
;*****  
;* JTAG configuration file  
;*****  
"PAL2" BYPASS2e  
"CPU_A" TI320C5xx  
"PAL1" BYPASS05
```

Filename Specifies the JTAG configuration file. The
file must reside in the directory where

Chameleon Debugger was installed, normally, C:\Signum\Chameleon.

Processor name Specifies the name of the JTAG device being emulated.

9. Connect the JDSNet emulator to the selected parallel port and to the target device. Turn the emulator on, and then turn the target device on. However, if you are using the XDS510, the XDS510 JTAG/MPSD probe must be connected to the target already turned on. Click OK to connect Chameleon Debugger to the emulator. The initial screen should look like this:

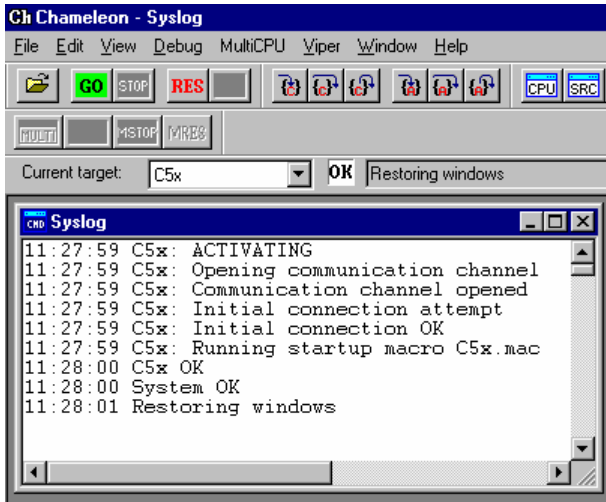


FIGURE 10 The initial Chameleon Debugger screen after establishing connection between the emulator and the target device.

