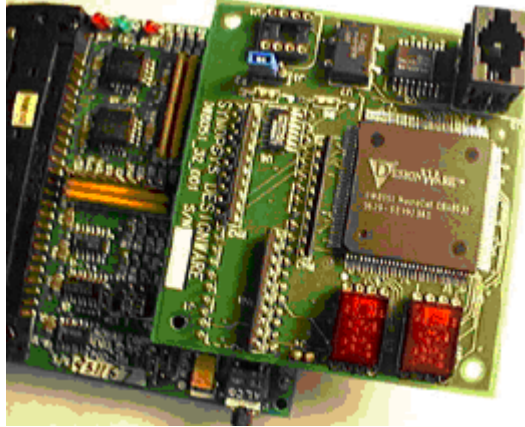




Synopsys DW8051 MacroCell Support

Nohau supports Synopsys DW8051 MacroCell using the EMUL51 hardware and software.



POD-31A with Synopsys DW8051 MacroCell Evaluation Module

Synopsys DW8051 MacroCell Overview

The DesignWare® DW8051 MacroCell is a parameterizable, synthesizable, binary compatible 8051 soft core, configurable to implement 803x/805x variants. It provides a total solution for building low-cost, high performance embedded control systems on an Application Specific Integrated Circuit (ASIC). The DW8051 is fully integrated with Synopsys synthesis tools and comes with a complete development environment in either VHDL or Verilog. An encrypted form of the DW8051 is now available at no extra charge to all customers who own a Synopsys DW foundation library license. For more information call 1-877-4BEST-IP , or view the datasheet on the internet at <http://www.synopsys.com/dw/ipdir.php?c=DW8051>.

Required Software:

- EMUL51-PC DOS Version 6.1C (or later), or *Windows* Version 2.0M (or later).

Required hardware:

- EMUL51-PC/EA board. Any memory size is OK. Same or higher speed is necessary.
- POD-31A type pod, such as POD-C32HF-42, POD-C154HF-42 or POD-C320-25. See EMUL51-PC price list. Same or higher speed is necessary.
- Any EMUL51 trace board is OK. Same or higher speed is necessary.

Hardware configuration:

- Emulator board must have COM1.47 EPROM (for Dallas 520/530). Jumper DAL must be in and jumper RWEN must be out.
- Pod must have jumper ALE in N (normal), jumper TXD/FMC in FMC, Jumpers RD/ and WE/ can be in NON-GATED, RD ENABLE (RE) and WE ENABLE (WE) can be out if no MOVX is used.

How to Connect Target ASIC 8051 Pins to the 40-Pin Connector of the Pod:

- 1 Remove processor from pod.
- 2 Connect target AD0 through AD7 to top or bottom of pod pins 39 through 32.
- 3 Connect target A8 through A15 to top or bottom of pod pins 21 through 28.
- 4 Connect target ALE to top or bottom of pod pin 30.
- 5 Connect target PSEN/ to top of pod pin 29. Bottom is OK, PSEN is non-gated.
- 6 Connect target GND to top of pod pin 20. This connection should be with short and heavy wire.
- 7 Connect target processor RESET to top of pod pin 9. Processor RESET must be disconnected from target system RESET.
- 8 Connect target system RESET if available to bottom of pod pin 9.
- 9 If external data RAM is used, connect WR/ and RD/ to top or bottom of pod pins 16 and 17.
- 10 Pins 1 through 8 and 10 through 15 can be used for trace of other signals.

Software Configuration:

- Windows: Configure for DW8051.
- DOS: Use -pdw8051 for processor parameter. (Example EMUL51 -pdw8051 -m128 -e110 -f64 -t100.)

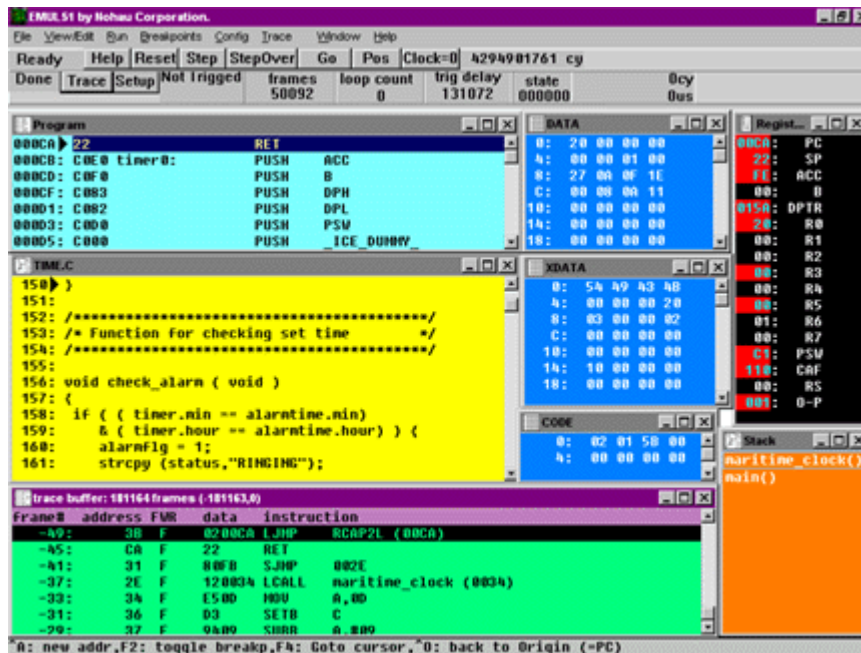
8051 Family In-Circuit Emulator

The EMUL51-PC is a high performance in-circuit emulator offering an optimized environment to develop 8051 family microcontroller hardware and software. Full emulation support for the DW8051 is provided with only 19 pins (ADDR, DATA, ALE, PSEN, RESET).

The EMUL51-PC system communicates through a standard parallel port or through direct ISA plug-in boards. The optional trace board features advanced trace functions with sophisticated trigger capabilities. The pod, which plugs into the target system, is connected with a five-foot cable to the emulator board to provide a flexible operating range.

User-Friendly Windows-based Interface

One of the key features of the EMUL51-PC is its user friendly Microsoft Windows interface. Pull-down menus, mouse support and on-line help make infrequent users feel instantly at home. More experienced users will appreciate the easy-to-use hot keys. EMUL51-PC is designed to minimize debugging time. Therefore, all information regarding the microcontroller and your application software is available right on the screen.



Ice Technology

Ph: 800-686-6428 or 650-375-0409

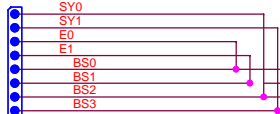
Fax: 650.375.8666

E-mail:

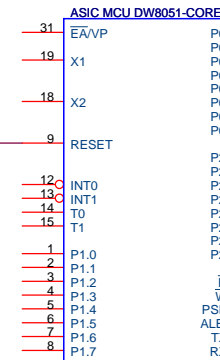
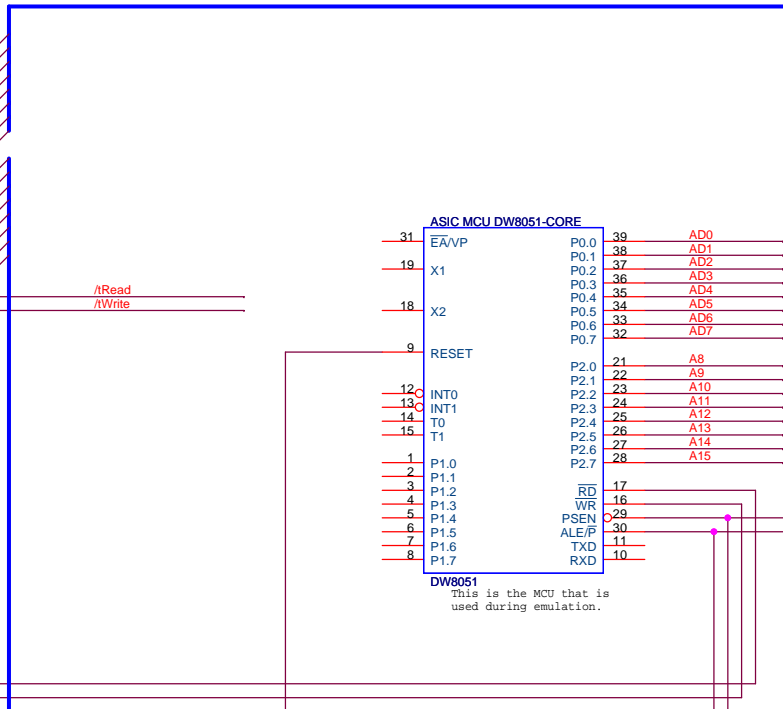
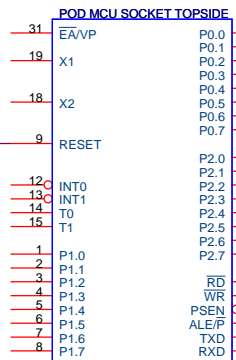
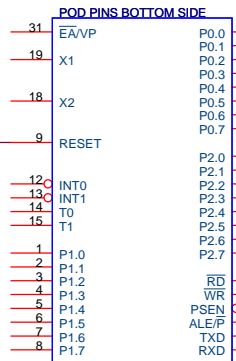
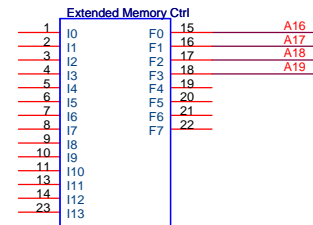
Support: support@icetech.com

Sales: sales@icetech.com

Pins on top of POD



Optional: Setup for Bank Switched Code Memory



DW8051
This is the MCU that is used during emulation.



Reset from target reset button or controller only valid while emulator is running at full speed.

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Title
DW8051 setup using POD-C320

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