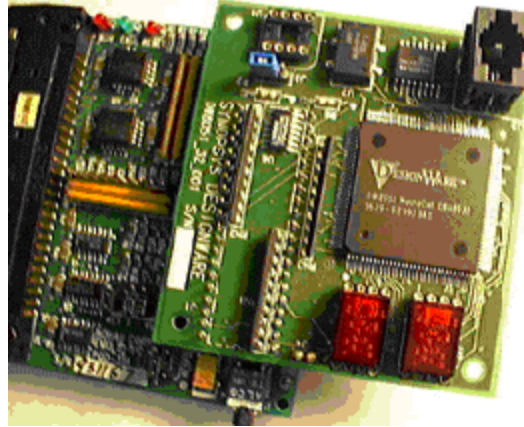




## Synopsys DW8051 MacroCell Support

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/products/designware/8051\\_ds.html/](http://www.synopsys.com/products/designware/8051_ds.html/).

#### **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.



