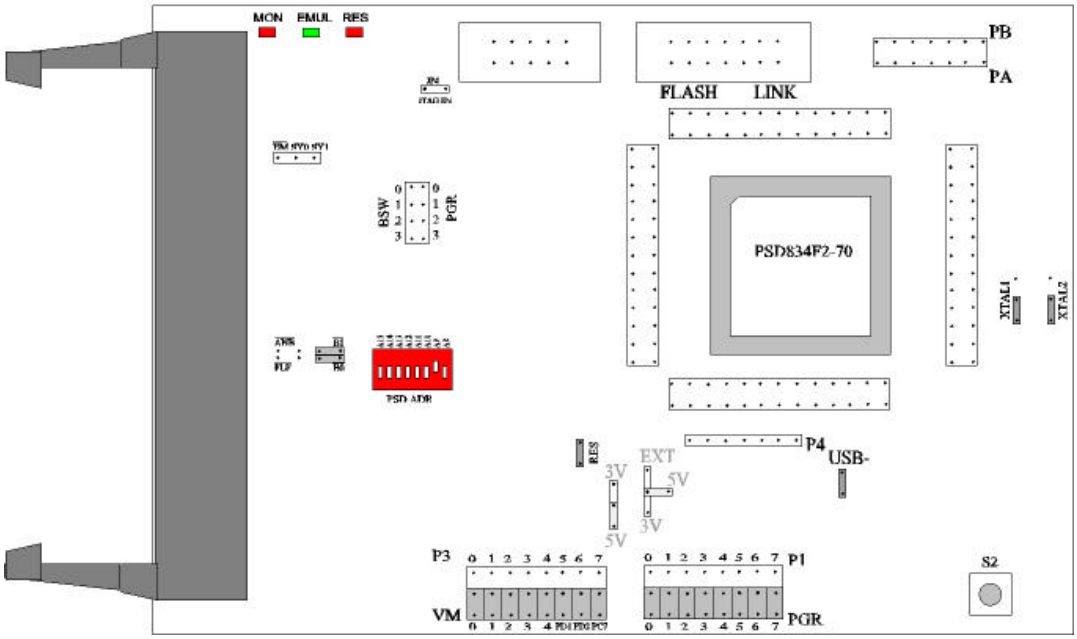
This document covers both the POD-ST3000 and the EA256-BSW emulator board. This system is designed to emulate the ST-Microelectronics µPSD3200 microcontroller.

POD-ST3000
Jumpers & Headers



POD board information and setup:

The pod has three LEDs, named MON, EMUL, RES:

- MON – is red, and means that the system is in monitor mode. In monitor mode, the processor is executing code that is internal to the emulator. This code is not user code, and is used to communicate with the host PC, to set up breakpoints, etc.

- EMUL – is green, and means that the system is in emulation mode. In emulation mode, the processor is executing the user's code from the emulation RAM or the targets PROM depending on the mapping in the emulator software.

- RES – is red, and means that the microcontroller RESET pin is LOW (active state).

This pod is equipped with a micro "DIP" switch that is labeled with **PSD ADR** you must set this jumper to match the address of the **CSIOP** that you have configured your project for, (sets the upper byte of the address).

The board has three jumpers for power and crystal connection to the emulation chip:

- PWR – is used to select power for the processor. Power should be supplied from the emulator and the jumper should be in either the **5v** or **3v** position depending on the type of microcontroller installed in the pod. With the power jumper in the left two pins, **EXT** position, then the power will come from the target system. The other jumper is for the PSD logic Vcc supply, both of these jumpers should be set to the same setting.

- XTAL – determines if the crystal or clock is taken from the target system or the on pod crystal**.** The jumpers should be in the top two positions for crystal to be supplied from the pod or the **INT** position. If the jumpers are in lower positions, **EXT** position, then the crystal/clock is supplied from the target system.

If you use an external clock, note that XTAL1 is an input and XTAL2 is left open.

All jumpers for PWR should be in the **5v** or **3v** position depending on the type of PSD device that you have installed and XTAL should be in the **INT, "internal"** position when no target is connected to the pod board.

RST connects the target RESET pin to the emulator. If the target system has a watchdog, it will probably interfere with the emulation and **RST** should then be removed.

The **USB** jumper must be installed in you are going to run the pod in **stand-alone** mode without a target otherwise the USB controller will keep resetting the micro, making the emulator unusable. Remove this jumper if you are installed on a target system that is designed to use the USB interface, otherwise leave the jumper installed.

Some other headers are labeled P4 (Port 4), PB (Port B), and PA (Port A) are available for monitoring via oscilloscope or other devices.

JP4 – is for future design operations to enable JTAG programming from the Emulator. This jumper should remain out.

BSW – header is for monitoring the bank bits for the FS0 … FS8 regions, or they can be connected to the PGR bits on the connector next to them if you wish to emulate the PSD portion of the memory using emulation RAM.

PGR – header for bits 0 through 3 of the PAGE register.

$\overline{\text{ANB}}$ / B1 and are to select between the bank switch bit 1 or the TRACE non-latched output signal when condition that is setup occurs.

$\overline{\text{FLF}}$ / B0 and are to select between the bank switch bit 1 or the TRACE latched output signal when condition that is setup occurs.

$\overline{\text{EM}}$ – this pin goes low when you start the emulator running code at full speed.

SY0 and **SY1** – these pins are general purpose inputs to the emulator and trace logic, and can be used to trigger on or break emulation.

Emulator board information and setup:

The emulation of the ST-Microelectronics µPSD3200 uses the EMUL51-PC/EA256-BSW emulator board. The figure below shows the correct settings for the emulator board, using default I/O address of 110, to correctly work with the POD-ST3000.

The emulator board must have COM 1.51 and be using software with a build date of 10/18/02 or newer to work correctly.