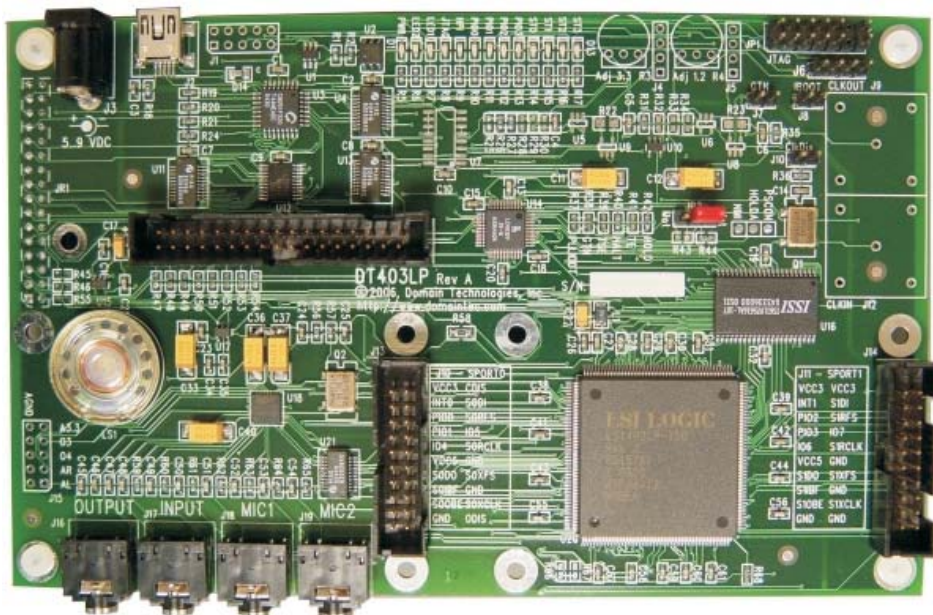


DT403LP - Evaluation Board

Featuring the ZSP 403LP

DT403LP Features:

- ZSP 403LP
- 128K Words External SRAM
- 32-pin Host Port Connector
- 34-pin Host Port Connector
- 2 20-pin serial ports with SPORT pinout
- 4 LED outputs controlled via PIO
- 4 LED outputs controlled via EMI and PLD
- Integrated USB Controller with JTAG, 8-bit HPI
- Status LEDs for USB Controller
- Audio Codec with Stereo In/Out and 2 Mic Inputs
- Integrated Speaker
- JTAG Header for External Emulator

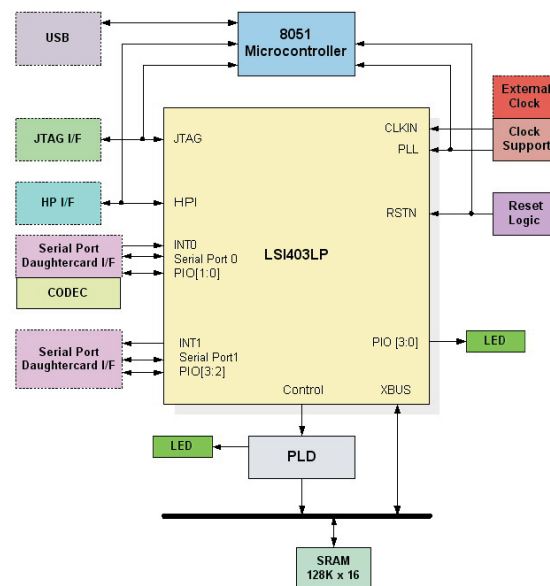


Overview:

Improve the efficiency of your embedded software development for the ZSP400 core with the DT403LP. Evaluate the ZSP 403LP chip and use the provided software application to manipulate the on board audio codec. The board features an on board audio codec, integrated JTAG emulator, 128K words of SRAM, and an interface to the HPI-USB or host processor mother board.

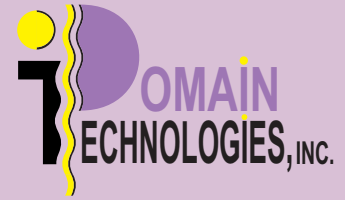
Product Description:

The DT403LP board is 6.4 inches by 4 inches in size and designed around the ZSP 403LP chip (208-pin PQFP). It has an integrated JTAG emulator, but can be used with an external JTAG emulator. The evaluation board has 8 individual LEDs which can be used for status information or debugging; 4 are controlled via PIO and 4 controlled via EMI and PLD. An integrated USB controller with 8-bit HPI interface is on board, making it possible to load programs and start/stop the ZSP 403LP by simply plugging a USB cable into the board. The evaluation board has an integrated 16-bit stereo codec which is disabled when any adapter board is plugged into SPORT0. The DT403LP features both a 32-pin Host Port Interface as well as a 34-pin Host Port Interface; only one interface can be active at a time.



The ZSP 403LP initialization is possible only through the HPI port. After power on reset, the on board micro-controller bootstraps the ZSP 403LP through the host port with the Software Monitor code allowing the JTAG emulator to control the ZSP. The board may be powered via the USB port if the power draw is less than 300mA.

Development and Debug Tools



ZSP-USB-JTAG: JTAG Probe for ZSP Debugging

Both compact and portable, the ZSP-USB-JTAG emulator is designed to support software development on the VeriSilicon ZSP cores via a host PC USB port. In addition, the emulator supports multi-core and multi-user debugging on a network over a TCP/IP connection, as well as JTAG boundary scan operations such as testing and flash memory programming, with available software. The ZSP-

USB-JTAG emulator is powered from the USB connection, which eliminates the need for a separate power supply and also making it ideal for use with notebook computers.

ZSP-USB-JTAG, SB-USB2-ZSP Probe Features:

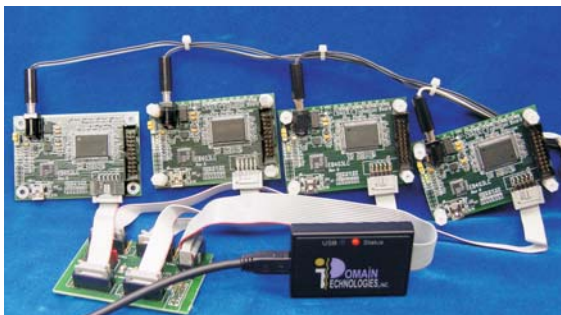
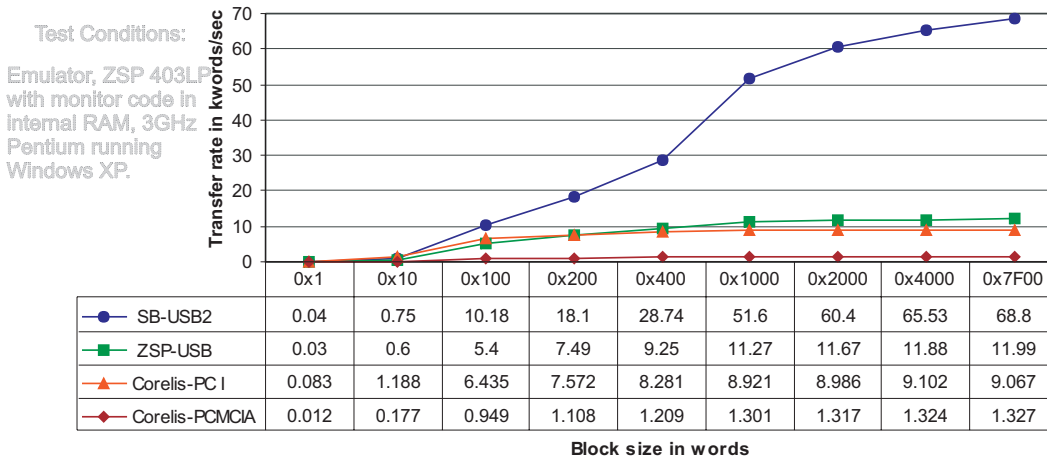
- Powered by USB port
- JTAG interface
- Integrates with:
 - ZView IDE
 - ZSP Console GDB



SB-USB2-ZSP: Fast JTAG Probe for ZSP Debugging

The SB-USB2-ZSP emulator enables efficient and productive embedded software debugging. This compact and portable probe utilizes the JTAG interfaces for debug and in-circuit testing supplied with the VeriSilicon ZSP cores. Unlimited software breakpoints

within all ranges of program memory implemented in RAM are supported. Upload and download rates are up to 5 times faster than comparable products:



ZSP-QUAD-JTAG Adaptor: Daisy-chain Devices

Utilize the handy ZSP-QUAD-JTAG adaptor when daisy-chaining multiple devices requiring simultaneous control. The ZViewIDE debugger allows each connected board's ZSP to run / halt / single step synchronously. In addition, non-ZSP JTAG

devices can be included in the scan chain; use ZViewIDE's boundary scan operation to observe the states of individual pins.

ZSP-QUAD-JTAG Features:

- 20 pin ARM cable
- 2 14x14 ribbon cables
- 2 14x10 ribbon cables featuring separate single pin and reset control connector



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