TinyFPGA AX2 Board

DEV-14828

The TinyFPGA AX2 board is a bare-bones breakout board for the XO2-1200 field-programmable gate array (FPGA). Though small, the AX2 is an incredibly powerful board with 18 user IOs (21 with JTAGEN), 64 kilobits of dedicated RAM, 64 kilobits of user flash memory, and a PLL in addition to the features of the A1. The power of the TinyFPGA AX2 allows you to do things that are not possible with traditional microcontrollers. While microcontroller boards have a fixed set of peripheral devices on-board, TinyFPGA boards can implement the exact peripheral devices needed to get the job done!

The full potential of programmable logic devices allows for even more ambitious projects than custom microcontroller peripherals: augment a retro-computer with new capabilities, recreate your fvorite old-school computer, or design your own. The TinyFPGA AX2 has been designed from the ground up to be as cost effective as possible. As such, it does not include a built-in USB interface as that would increase the cost and complexity too much. Instead it relies on JTAG programmers. To program the TinyFPGA A2, you can use the inexpensive TinyFPGA Programmer. The official Lattice JTAG programming cable and other FTDI2232-based programmers will work as well if you already have one.

Whether you are a hobbyist looking to expand your capabilities, a professional prototyping a new product, or a student learning the ropes of digital design, the TinyFPGA BX can help you on your way.

Features

- Dimensions: 1.2in x 0.7in
- XO2-1200 FPGA
- Low power 3.3 volt operation
- 18 user IOs (21 with JTAGEN)
- 1200 4-input look-up tables
- 10 kilobits distributed RAM
- 64 kilobits dedicated RAM
- 64 kilobits user flash memory
- 1 SPI Hard-IP
- 2 I^{2}C Hard-IPs
- 1 PLL Hard-IP
- Built-in flash configuration memory programmable via JTAG