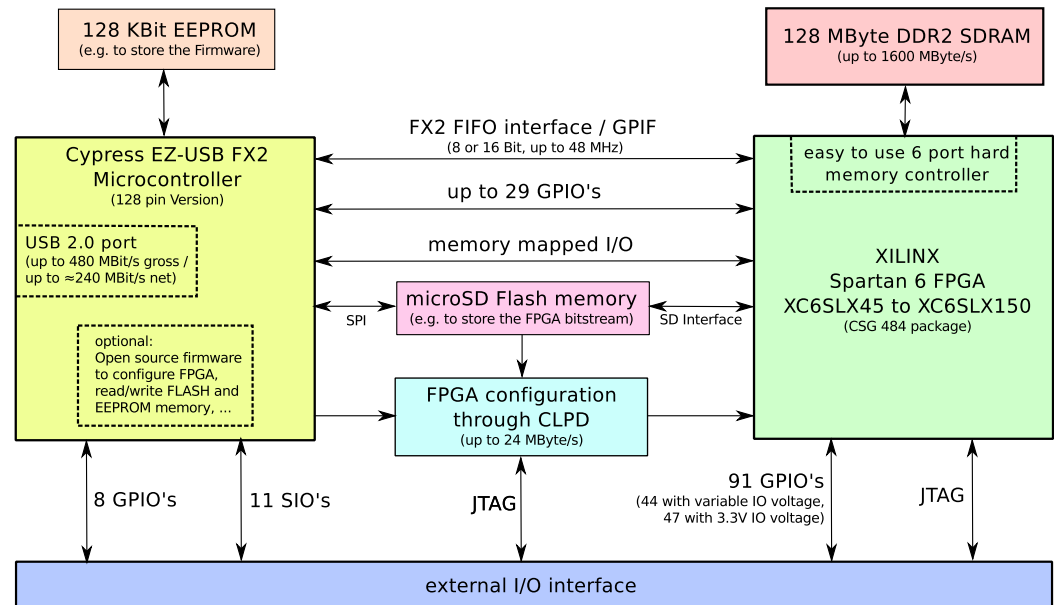


Features

- Xilinx Spartan 6 XC6SLX45 - XC6SLX150 FPGA
- USB 2.0 interface through Cypress EZ-USB FX2 Microcontroller
- 99 General Purpose I/O's (GPIO's): 91 from FPGA + 8 from EZ-USB
- 15 special I/O's (JTAG, serial ports, I₂C, interrupts, timers)
- 128 MByte DDR2 SDRAM:
 - Up to 400 MHz clock frequency, 6 Bit bus width
 - Up to 1600 MByte/s data rate
 - Easy to use 6 port hard memory controller (examples in SDK)
- MicroSD socket: allows FPGA configuration from Flash memory
- Fast FPGA configuration through CPLD: 24 MByte/s via USB, up to 2.5 MByte/s from Flash
- 128 Kbit EEPROM memory (can be used to store the firmware)
- 2 Kbit MAC-EEPROM: contains a unique non erasable MAC-address
- Heat sink for high performance applications
- FPGA configuration via USB (No JTAG adapters required)

Block diagram



Variants

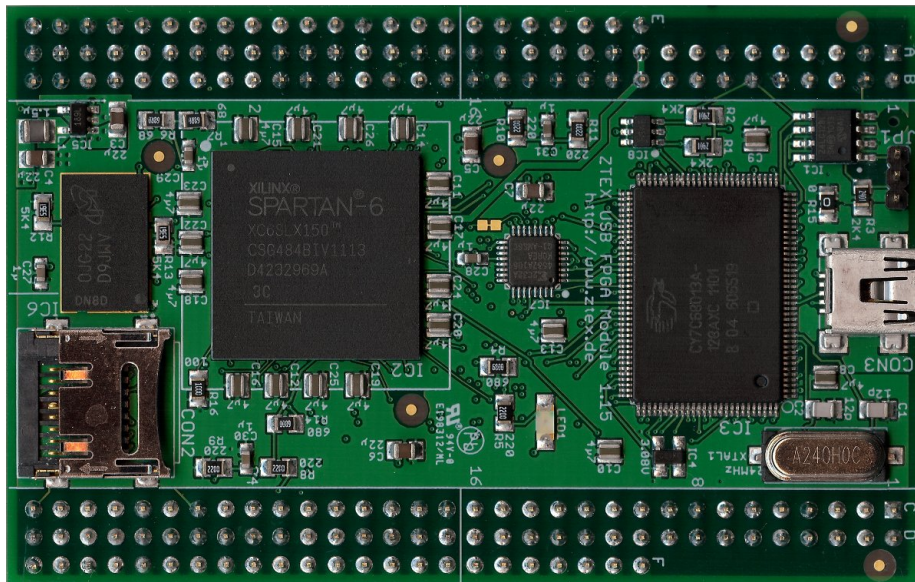
Variant	FPGA	Speed grade (larger is faster)	Stock type
1.15a	XC6SLX45	2	Yes
1.15b	XC6SLX75	3	Yes
1.15c	XC6SLX100	3	No
1.15d	XC6SLX150	3	Yes

Other variants are available on request.

SDK and Examples

An Open Source Firmware Development Kit with platform independent host software API is available for the USB-FPGA Module 1.15. The SDK package contains a lot of examples which can be used as starting point for own applications.

More Information are available at: <http://www.ztex.de/firmware-kit/index.e.html>

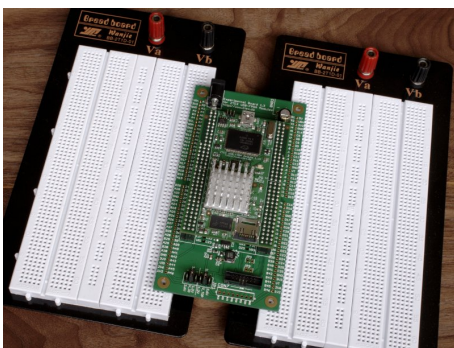
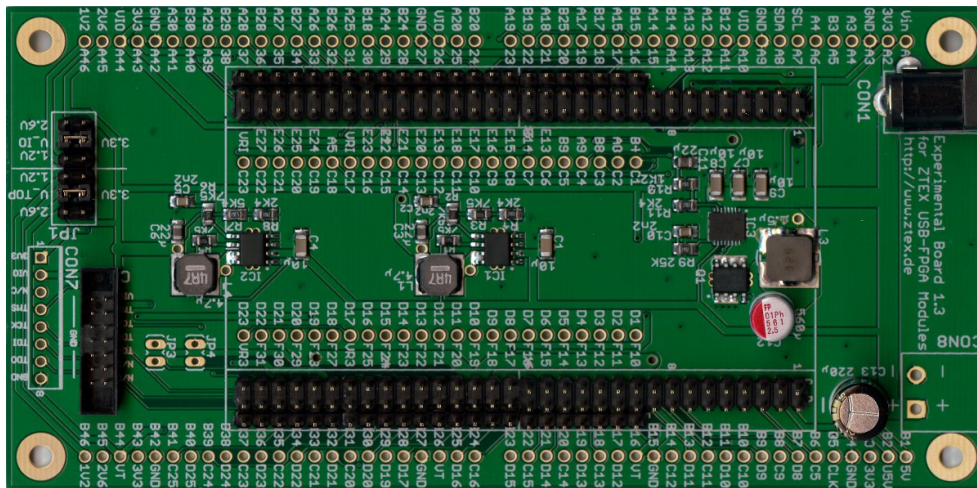


For detailed information please visit:

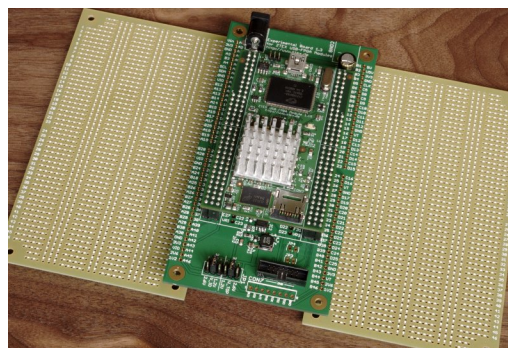
<http://www.ztex.de/usb-fpga-1/usb-fpga-1.15.e.html>

Experimental Board 1.3

- Baseboard for all USB-FPGA Modules
- Makes all I/O Ports available on a standard 2.54 mm (0.1 inch) grid
- High-efficiency switching regulators:
 - Wide input range: 4.5 V to 16 V
 - Delivers all required voltages: 1.2 V/8 A, 2.6 V/2.5 A, 3.3 V/2.5 A
 - I/O voltage VCCO_IO can be set to 3.3 V, 2.6 V, 1.2 V or external voltage
- JTAG interface for the FPGA
- Expandable using Expansion Boards and Breadboard compatible



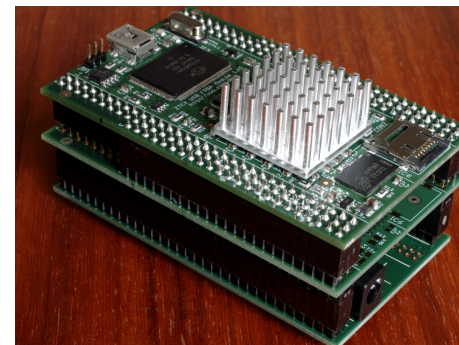
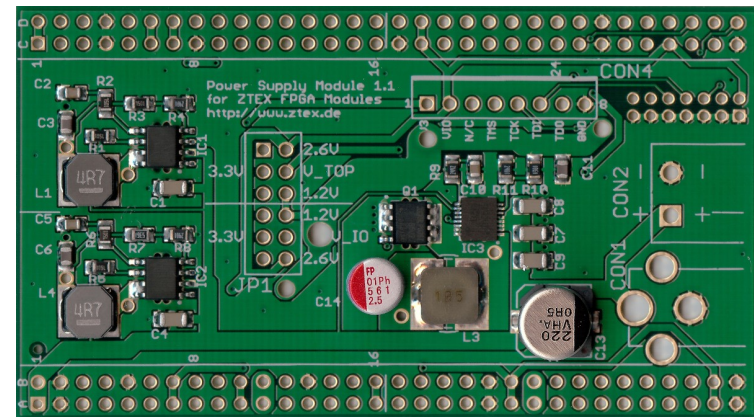
Experimental Board 1.3 and USB-FPGA Module 1.15 on two Expansion Boards



two Breadboards

Power Supply Module 1.1

- Power Supply Module for all USB-FPGA Modules
- Can be stacked to user defined circuits using stackable pin headers
- High-efficiency switching regulators:
 - Wide input range: 4.5 V to 16 V
 - Delivers all required voltages: 1.2 V/8 A, 2.6 V/2.5 A, 3.3 V/2.5 A
 - I/O voltage VCCO_IO can be set to 3.3 V, 2.6 V, 1.2 V or external voltage
- JTAG interface for the FPGA



Power Supply Module 1.1 and USB-FPGA Module 1.15 stacked on a user defined circuit

For detailed information about the Experimental Board 1.3 please visit: <http://www.ztex.de/usb-fpga-1/exp-1.3.e.html>

For more information about the Power Supply Module 1.1 please visit: <http://www.ztex.de/usb-fpga-1/pwr-1.1.e.html>