USB Blaster Download Cable Is Designed For ALTERA FPGA, CPLD, Active Serial Configuration Devices And Enhanced Configuration Devices, USB 2.0 Connection To The PC And JTAG, AS, PS To The Target Device.

Description

The USB Blaster Download Cable interfaces a USB port on a host computer to an Altera® FPGA mounted on a printed circuit board. The cable sends configuration data from the PC to a standard 10-pin header connected to the FPGA. You can use the USB Blaster cable to iteratively download configuration data to a system during prototyping or to program data into the system during production.

It surrports most of the ALTERA FPGA/CPLD devices, Active Serial Configuration devices, Enhanced Configuration devices, and supports AS, PS, JTAG three download modes.

Key Features

- **Hardware Solution**
  - High speed **FT245+CPLD+244** solution, similar download speed as the original ALTERA USB Blaster, with the same operation.
  - Download speed 1-3 times faster than other schemes, such as 68013 or C8051F.
- **Performance**
  - Supports most of the ALTERA FPGA/CPLD devices, Active Serial Configuration devices, and Enhanced Configuration Devices.
  - Supports AS, PS, JTAG three download modes.
  - High-speed, stable, and internal FT245R+CPLD designed.
  - Supports 1.2-5V programming voltage.
  - Supports SignalTap II embedded logic analyzer.
  - Supports Nios II of embedded processor communication and debugging.
- **Supported Softwares**
  - Quartus II integrated development environment.
  - NIOS II IDE integrated development environment.
  - NIOS II EDS integrated development environment.
- **Supported Devices**
  Tested devices are listed below, including but not limited to:
  - CPLD: MAX3000, MAX7000A/B/S, MAX9000 and MAX II etc.
  - FPGA: Stratix, Stratix II, Cyclone, Cyclone II, CycloneIII, ACEX 1K, APEX 20K and FLEX 10K etc.
  - Active Serial Configuration Devices including: EPCS1, EPCS4, EPCS16 etc.
  - Enhanced Configuration Devices including: EPC1, EPC4 etc.
- **Connects to PC**
  - Computer connection via USB 2.0 interface.
- **Connects to target board**
  - Target board connection via JTAG, AS, PS interfaces. The figure 1, 2,and 3 below shows the header pinouts of different interfaces.
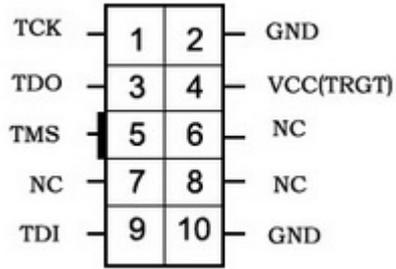
Figure 1. JTAG header pinout

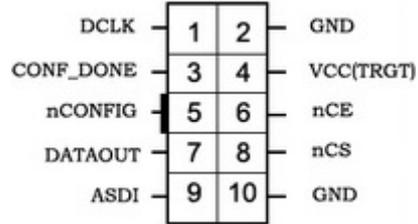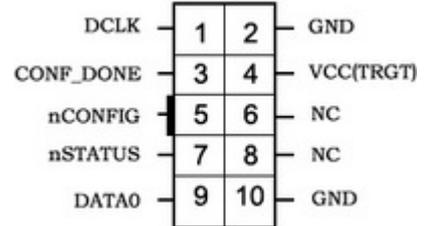|			
TCK	1	2	GND
TDO	3	4	VCC(TRGT)
TMS	5	6	NC
NC	7	8	NC
TDI	9	10	GND

Figure 2. AS header pinout

DCLK	1	2	GND
CONF_DONE	3	4	VCC(TRGT)
nCONFIG	5	6	nCE
DATAOUT	7	8	nCS
ASDI	9	10	GND

Figure 3. PS header pinout

DCLK	1	2	GND
CONF_DONE	3	4	VCC(TRGT)
nCONFIG	5	6	NC
nSTATUS	7	8	NC
DATA0	9	10	GND

LED Status

- Red LED: Power indicator
- Green LED: Signal indicator, the LED is on while downloading/programming

Downloads

Development resources: user manual, software, etc.

Wiki: www.waveshare.com/wiki/USB_Blaster_V2