

LPROG USB-JTAG XILINX FPGA PROGRAMMER

OVERVIEW:

LPROG is a compact, low cost programmer for Xilinx FPGA devices. LPROG connects to USB port on a host machine using USB C type cable. It connects to LPROG programmer using USB C type cable. The LPROG derives 5V supply from host USB port for internal circuit operation. No external power supply is needed. LPROG connects to target system using a 14 pin ribbon cable with standard JTAG interface. LPROG takes VREF supply input from JTAG port for IO voltage compatibility. VREF can vary from 1.8V to 5V. JTAG port also has a soft reset pin which is used to reset the processor core of Zynq series FPGA devices. A 14 pin, 2mm pitch box header from Molex is expected to be used on FPGA device platforms for FRC cable compatibility. Alternately flying leads are provided for non-standard connections of Compatible JTAG programming connector.

DESCRIPTION:

This section illustrates how to connect and use LPROG with Xilinx tools.

- Device Driver Installation
 - All Xilinx tools mentioned above support LPROG and no additional driver installation needed.
- Establishing Connection:
 1. Generate Bitstream: Create the bit file and connect the LPROG programmer to the PC and target board.
 2. Open Hardware Manager: Go to "PROGRAM AND DEBUG" in the flow navigator and select "Open Hardware Manager".
 3. Open Target: Select "Open Target" and choose "Auto-connect".
 4. Program Device: Click "Program device," select the device, confirm the part number, and verify the bit file path.

FEATURES :

- USB host connectivity
- 14 pin standard JTAG connector
- 1.8V to 5V JTAG interface
- A Soft Reset pin support (Zynq Devices)
- Compatibility with Xilinx tools

SUPPORTED TARGETED DEVICES

The LPROG supports following Xilinx devices:

- Spartan series
- Zynq-7000
- CoolRunner/CoolRunner-II CPLDs
- Third-party BPI PROMs
- Xilinx Platform Flash ISP configuration PROMs

SOFTWARE COMPATIBILITY :

LPROG is compatible with the following Xilinx design tools:

- Vivado 2014.1+ To Vivado 2017.1+ Onwards
- ISE 14.1+
- ChipScope PRO Analyzer
- Vitis (SDK)

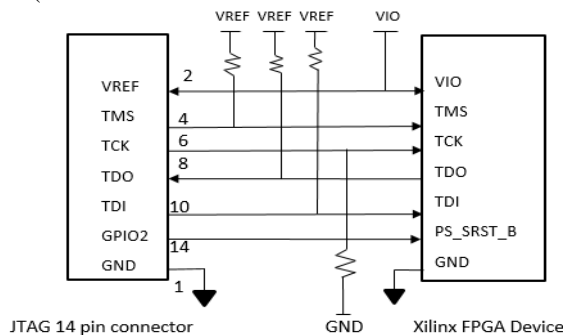
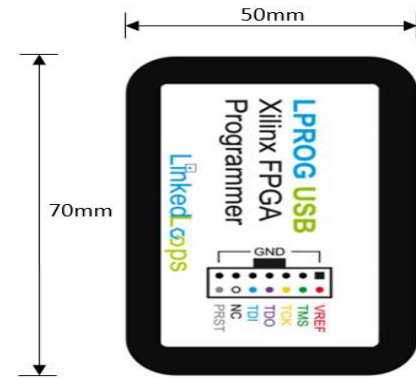


Fig : LPROG-FPGA Connectivity schematic

ORDER PACKAGE LIST:

- LPROG Programmer (7 pins) Adapter
- USB A-C Type Cable
- 14 pin 2mm Pitch IDC Cable Connector

TOP VIEW



SIDE VIEW

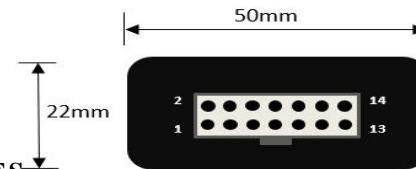


Fig : LPROG Xilinx Programmer Snap

Pin No.	Function	Pin No.	Function
1	GND	2	Vref
3	GND	4	TMS
5	GND	6	TCK
7	GND	8	TDO
9	GND	10	TDI
11	GND	12	NC
13	GND	14	PS SRST B

Fig : Pin List