FlashPro4 Device Programmer Quickstart Guide

This quickstart guide applies only to the FlashPro4 device programmer.

Kit Contents

Quantity	Description
1	FlashPro4 programmer standalone unit
1	USB A to mini-B USB cable
1	FlashPro4 10-pin ribbon cable

Software Installation

If you are already using Microsemi's Libero® Integrated Design Environment (IDE) and Libero System-on-Chip (SoC), you have the FlashPro software installed as part of Libero IDE. If you are using the FlashPro4 device programmer for standalone programming or on a dedicated machine, download and install the latest release of the FlashPro software from the Microsemi website. The installation will guide you through the setup. Complete the software installation before connecting the FlashPro4 device programmer to your PC.

Note: Libero IDE v8.6 SP1 or FlashPro v8.6 SP1 are the minimum versions required to run FlashPro4.

Software releases: http://www.microsemi.com/products/fpga-soc/design-resources/programming/flashpro#software

Hardware Installation

After installing the software successfully, connect one end of the USB cable to the FlashPro4 device programmer and the other end to your PC's USB port. The Found Hardware Wizard will open twice. Use the wizard to install the driver automatically (recommended). If the Found Hardware Wizard cannot find the drivers automatically, then ensure you have properly installed the FlashPro software prior to installing the hardware. If the drivers still cannot be installed automatically, then install them from a list or specific location (advanced).

If FlashPro was installed as part of the Libero IDE default installation, the drivers are located at *C:/Libero/Designer/Drivers/Manual*. For a standalone FlashPro default installation, the drivers are located at *C:/Microsemi/FlashPro/Drivers/Manual*. Microsemi recommends the automatic driver installation.

Note: FlashPro4 uses pin 4 of the JTAG connector whereas FlashPro3 had no connection to this pin. FlashPro4 pin 4 of the JTAG header is a PROG_MODE output drive signal. PROG_MODE toggles between programming and normal operation. The PROG_MODE signal is intended to drive an N or P Channel MOSFET to control the output of a voltage regulator between the programming voltage of 1.5 V and normal operation voltage of 1.2 V. This is required for ProASIC®3L, IGLOO® V2, and IGLOO PLUS V2 devices because, although they can operate at 1.2 V, they must be programmed with a VCC core voltage of 1.5 V. Refer to AC357: FlashPro5 Backward Compatibility with FlashPro3 and Using FlashPro4 PROG_MODE for 1.5 V Programming of ProASIC3L, IGLOOV2, and IGLOO PLUS V2 Devices for more information.

Figure 1 • **Pin Assignments**

```
TCK     │ 1   2 │ GND
TDO    ┌┤ 3   4 │ PROG_MODE
TMS    └┤ 5   6 │ VJTAG
VPUMP ──┤ 7   8 │ TRST
TDI     │ 9  10 │ GND
```
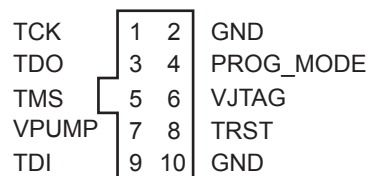
Pin 4 on FlashPro4 programmers MUST NOT be connected or used for anything other than its intended purpose.

Common Issues

If the On LED does not light up after FlashPro4 driver installation, the driver might not be installed correctly and you must troubleshoot the installation. For more information, refer to the FlashPro Software and Hardware Installation Guide and the "Known Issues and Workarounds" section of the FlashPro software release notes: http://www.microsemi.com/products/fpga-soc/design-resources/programming/flashpro#software.

FlashPro4 may not operate correctly if pin 4 of the JTAG connector is improperly used. See the note information on page 1.

Documentation Resources

Refer to the FlashPro software page for further information:

http://www.microsemi.com/products/fpga-soc/design-resources/programming/flashpro#documents

Technical Support and Contacts

Technical support is available online at www.microsemi.com/soc/support and by email at soc_tech@microsemi.com.

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