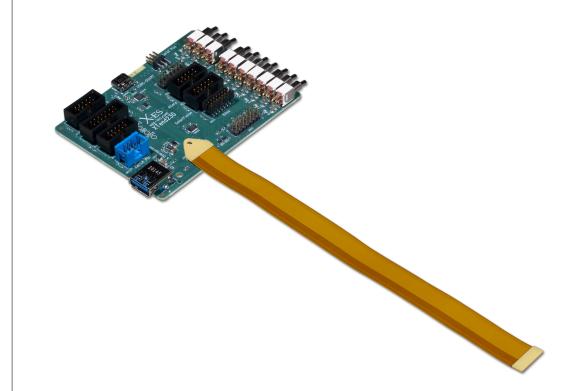
## XTend230

## Development Module for Programming and Diagnostic Interfaces



## XTend230

The XTend230 is a debug module intended for low-level development with select X-ES products. The debug module provides access to interfaces normally not exposed by the module's main connector. Access to any of these interfaces depends on the host card supporting the interface, and so some host cards may not implement access to all the I/O available on the XTend230.

The XTend230 provides headers for AMD (formerly Xilinx), SmartFusion, Altera, and ASSET JTAG interfaces to the host modules, allowing the the native programmer to be used regardless of the device on the host. A DediProg header allows programming and accessing the host's SPI flash, and an Aardvark header allows for access to the host's I<sup>2</sup>C interface. A PDI header allows for programming or debugging a Microchip microcontroller, and an LPC/eSPI header allows access to those interfaces on Intel® products.

A USB 2/3 connector allows a USB flash drive to be installed during programming or testing. There are seven switches available for various purposes depending on what the host card has implemented. Each of these switches has a corresponding green LED for level indication and may be used by the host for JTAG configuration or special device write protection. There are three additional switches hardcoded for board reset, NVM write protect, and flash swap. Near these switches is a red LED used to indicate the host reset status and a green LED to indicate the host's power supplies as functional and nominal.

The XTend230's USB-C port provides access to a USB-to-UART chip, allowing communication with two debug UART ports for the host.



"Fast, Flexible, Customer-Focused Embedded Solutions" **Extreme Engineering Solutions** 

9901 Silicon Prairie Parkway • Verona, WI 53593 Phone: 608.833.1155 • Fax: 608.827.6171 sales@xes-inc.com • https://www.xes-inc.com

- AMD (formerly Xilinx), SmartFusion, Altera, and ASSET JTAG headers
- DediProg SF100 header
- LPC/eSPI header
- Aardvark header
- Atmel/Microchip PDI header
- > USB 2/3 connector
- Seven LEDs and toggle switches for general purpose
- Dedicated switches for reset, NVM write protect, and flash swap
- USB-to-dual UART bridge

## I/O Breakout

- AMD (formerly Xilinx), SmartFusion, Altera, and ASSET JTAG headers
- DediProg SF100 header
- LPC/eSPI header
- Aardvark header
- Atmel/Microchip PDI header
- USB 2/3 connector
- Seven LEDs and toggle switches for general purpose
- Dedicated switches for reset, NVM write protect, and flash swap
- USB-to-dual UART bridge

