



## USB Multilink Universal FX: A High-Speed, All-In-One Development Interface

*Extremely Fast & Versatile*

### Overview

P&E's **USB Multilink Universal FX** is the **high-speed** version of P&E's "universal" USB Multilink debug probes. It combines support for many of NXP's 8-/16-/32-bit architectures with support for ARM® Cortex® devices from several manufacturers, including NXP's Kinetis and LPC (see below). It includes all the features of the USB Multilink Universal, plus these additional benefits:

- **Lightning fast! Up to 10X faster communications speed than the USB Multilink Universal\***
- **Can provide power to the target MCU**
- **I/O line clamping for added protection**
- **Supports additional devices (e.g., HC16, 683xx, Power MPC5xx/8xx)**

\*The exceptional performance increases seen with the USB Multilink Universal FX are limited to synchronous architectures: Kinetis, S32, MPC5xxx, Coldfire V2-V4, DSC, HC16/683xx.

### Supports NXP & Multiple ARM Cortex Manufacturers

#### NXP 8-/16-/32-bit devices:

- |  |                              |
|--|------------------------------|
| • Kinetis®                                 | • HC(S)12(X)                 |
| • S32                                      | • S12Z                       |
| • LPC                                      | • HCS08                      |
| • MPC5xxx (& STMicro SPC5)                 | • RS08                       |
| • ColdFire® +/-V1                          | • MAC7xxx                    |
| • ColdFire V2/3/4                          | • Power MPC5xx/8xx (FX only) |
| • DSC                                      | • 68HC16 (FX only)           |
| • <a href="#">ARM Cortex-based devices</a> | • 683xx (FX only)            |

### Applications

- Development/Prototyping

### Hardware Features

- Very high-speed, hassle-free USB 2.0 communications interface
- Can provide power to target MCU
- Draws power directly from the USB port – no external power supply needed
- Multi-voltage support for targets ranging from 1.6 to 5.25 Volts
- I/O line clamping for added protection
- Includes ribbon cables for supported architectures
- Compact size

The USB Multilink Universal FX is an easy-to-use debug and programming interface which allows the PC to communicate with a target processor through a high-speed USB interface to the PC. It controls

the microprocessor by accessing the debug port of the target. The Multilink is able to accommodate communications with a variety of MCUs by featuring multiple headers, which can be accessed by simply flipping open the plastic case. Ribbon cables for the supported MCUs are conveniently included.

### Development Solutions

The USB Multilink Universal FX's exceptional speed and reliability make it ideal for development. It is natively supported by recent versions of CodeWarrior® (10.x), Kinetis Design Studio, LPCXpresso, current P&E software applications, and toolchains from many NXP partners including Keil, Cosmic, and Green Hills (check with vendor for device compatibility).

