Overview

This whitepaper discusses the benefits in upgrading your design to use the latest QuickUSB Library.

Why Upgrade?

The best reason for upgrading to the latest QuickUSB Library is to have access to all the new features and bug fixes added in the release. Additionally, version 2.15.1 of the library has added full support for both Linux and Mac, including asynchronous data transfers. The Windows driver has been completely rewritten, increasing system stability and performance over the older Windows driver. A new Linux kernel driver has been introduced that allows QuickUSB to achieve astonishing data rates compared to the older libusb implementation. All three platforms are now capable of 20-30 MB/s sustained data rates and higher.

Two new data APIs have been added to the QuickUSB Library: The Asynchronous Data API and the Streaming Data API. These APIs make it easier to issue asynchronous data requests and set up continuous streaming data transfers to reach maximum data throughput with minimal effort. The APIs allow you to specify callback routines to allow your program to know exactly when a data request has completed and begin processing the data. Additionally, the APIs may be internally multithreaded by the QuickUSB Library allowing your software to take advantage of multi-processor and multi-core systems without having to manually create and managed your own worker threads.

What Has Changed?

There have been a lot of feature additions and bug fixes in the v2.15.1 release. The most notable changes are:

- Full support for Windows, Linux, and Mac
- New Asynchronous and Streaming Data APIs
- Deprecation of older asynchronous API functions (Still available in Windows but not in Linux and Mac)
- Created a new QuickUSB Customizer application that allows you to customize the USB VID, USB strings, and serial number for QuickUSB devices, as well as perform firmware programming to streamline production runs QuickUSB hardware with a single utility.
- A firmware timeout mechanism that allows subsequent data transfers after a prior request times out without requiring the QuickUSB device to be power-cycled
- Enhanced .NET support and a new C# QuickUSB Diagnostics application
- Faster SPI, FPGA configuration, and EEPROM configuration
- Added support for Python

Please see the QuickUSB Revision History document for a detailed list.

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