XMOS

AN02019: Using Device Firmware Upgrade (DFU) in USB Audio (README)

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vendor
> XMOS

version
> 1.0.0

scope
> General Use

description
> DFU in USB Audio applications

category
> Audio

keywords
> USB Audio, USB, DFU, Boot, Flash

hardware
> XK-AUDIO-316-MC

1 Overview

This application note describes the Device Firmware Upgrade (DFU) process for a *XMOS* USB Audio reference applications.

The DFU implementation in these applications is compliant with version 1.1 of the Universal Serial Bus Device Class Specification for Device Firmware Upgrade.

The information in this note relates to all applications in the USB Audio reference design download (`sw_usb_audio`). However, for convenience and demonstration, this note also includes a DFU capable USB audio applications for the *XK-AUDIO-316-MC* board.

On building, two applications binaries are produced: A factory image that the device should be flashed with initially and an upgrade image that is used for demonstrating the DFU operation. The factory and upgrade images differ in their *bcdDevice* version. This allows the user to quickly verify the success of the upgrade process by checking the *bcdVersion* number of the device enumerated post upgrade.

2   Key features

▶ Description of preparing factory and upgrade images

▶ Description of DFU via: * Thesycon TL-USBDFU * A small custom DFU codebase (*xmosdfu*) * dfu-util

3   Known issues

▶ None

4   Required tools

▶ XMOS XTC Tools: 15.3.0

5   Required libraries (dependencies)

▶ lib_adat

▶ lib_board_support

▶ lib_dsp

▶ lib_i2c

▶ lib_locks

▶ lib_logging

▶ lib_mic_array

▶ lib_spdif

▶ lib_sw_pll

▶ lib_xassert

▶ lib_xua

▶ lib_xud

6   Related notes

▶ None

7   Support

This package is supported by XMOS Ltd. Issues can be raised against the software at http://www.xmos.com/support