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Application Note

AS3935

How to compile the source files

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1 General Description

This application note will give the required steps and settings to successfully compile the AS3935 source files using MPLABX.

2 Generate new project

- Microchip Embedded - Standalone Project
- Select Device: PIC24FJ64GB002
- Select Tool: Select programmer (e.g. ICD3)
- Select Compiler: C30 (v3_31) [C:\MPLABC30\bin]
- Select Project Location: e.g. "D:\MyProj\", referred to as PROJECT_DIR
- Set as main project

3 Copy source files

- "LIB_DIR\ams\AS3935_Firmware_Source\AS3935\Firmware\AS3935Demoboard\src" to "PROJECT_DIR\src"
- "LIB_DIR\ams\AS3935_Firmware_Source\AS3935\Firmware\AS3935Demoboard\bootloader" to "PROJECT_DIR\bootloader"
- "LIB_DIR\ams\AS3935_Firmware_Source\common" to "PROJECT_DIR\common"

4 Add all header + source files (only from "PROJECT_DIR\src"!) to project in MPLABX

5 Add the following source files from

"PROJECT_DIR\common\firmware\microchip\src":

- bootloadable.c
- i2c_driver.c
- logger.c
- timer_driver.c
- uart_driver.c
- usb_device.c
- usb_function_generic.c
- usb_function_hid.c
- usb_hal_pic24.c
- usb_hid_stream_appl_handler.c
- usb_hid_stream_driver.c

6 Add linker file "PROJECT_DIR\src\p24FJ64GB002.gld"

7 Change project settings

- C30 - pic30-gcc - General - Include Directories:
 - o "..\common\firmware\microchip\include"
 - o "..\src"
- C30 - pic30-gcc - Optimization - optimization-level: 1 (oder s)
- Set postbuilding step: "..\common\Tools\objcopy.exe -I ihex -O binary \$(ImagePath) \$(ImageDir)\AS3935.X.\${IMAGE_TYPE}.bin"

8 Clean + Build

9 Flash Bootloader image using MPLAB IPE v2.30

Hex File: "PROJECT_DIR\bootloader\PIC24F_USB_HID_Bootloader.hex"

10 Update Firmware using AS3935 GUI (Help->Firmware Update)

- GUI: "C:\Program Files (x86)\austriamicrosystems\AS3935 Evaluation Software\AS3935.exe"
- FW File: "PROJECT_DIR\PROJECT_NAME.X\dist\default\production\AS3935.X.production.bin"
- USB HID device is detected, indicator turns green

11 Ordering & Contact Information

Ordering Code	Description
AS3935 DK	AS3935 Demo Kit Standard Board

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13 Revision Information

Initial version 1-00