



## 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