
Source Code Examples from Adesto's Third Party Vendor: Sensor Maestros

Overview

Adesto works with a third party vendor, Sensor Maestros that provides Open Source Code Examples, and a "Porting Guide," to Adesto's customers. All documentation, source code files, API Software, the "Porting Guide," and html documentation are at the site:

<https://github.com/sensormaestros/AdestoSerialMemory>

Firmware Drivers and API Source Code:

Through the third party vendor Sensor Maestros, Adesto has written and tested Native Low-level Flash Firmware Drivers, and Application Program Interface (API) Software Routines for the Silicon Labs EFM32 Leopard Gecko Starter Kit (EFM32LG-STK3600).

Adesto offers this open software source code examples and documentation free of charge.

This source code can be used as a proven example, to simplify the task of porting Adesto Flash Firmware drivers to other platforms (MCUs or SDKs).

- Native Low-level Flash Firmware Drivers
- Application Program Interface (API) Software Routines (EFM32)
- Code written in C, fully documented with Doxygen
- "Porting Guide" Included
- Open software, available at no cost

Functions Included in the API Software Routines:

- Read Device ID data.
- Read a block of data from Flash, including the optional auto-address-increment feature.
- Erase a block, where the block size is adjustable over the range from a minimum size, to the entire part (chip erase).
- Program a block, with a series of sequential numbers, where the block size is adjustable over a range from a minimum, to the entire part.

- Verify data written, to confirm the contents of the Flash match the MCU SRAM buffer data.
- Read-Modify-Write: read one Page/Sector, change some (20Bytes) of the data, and write the whole Page/Sector back to the Flash.
- Active Ready/Busy Interrupt; allows the MCU to enter power-down mode during Flash Program/Erase operations.

The Native Low-level Flash Firmware Drivers support all the Adesto SPI Flash Commands and Addressing sequences necessary to perform all the above functions.

These Source Code Examples are complemented by notes on each of the modules to assist users wishing to port them to their own platform.

Adesto also provides a written “Guide to porting existing Native Low-level Flash Firmware Drivers to other (MCU) platforms.” This document highlights the areas of code that need to be modified and flags items the Firmware Engineer needs to know to make the porting process as quick and painless as possible.

Adesto Memory IC Products currently supported by the Source Code Examples include:

AT25SF041
AT25XE021A
AT25XE041B
AT45DB081E
AT45DB641E
RM25C256DS

Summary:

Adesto works with third-party vendor Sensor Maestros to provide system-level firmware support to bring our customers’ projects to market faster, at a lower cost, and with optimized realization.

About Adesto Technologies

Adesto Technologies (NASDAQ:IOTS) is a leading provider of application-specific, ultra-low power non-volatile memory products. The company has designed and built a portfolio of innovative products with intelligent features to conserve energy and enhance performance including Fusion Serial Flash, DataFlash®, EcoXiP™ and products based on Conductive Bridging RAM (CBRAM®) technology. CBRAM® is a breakthrough technology platform that enables 100 times less energy consumption than today’s memory technologies without sacrificing speed and performance. Adesto is focused on delivering differentiated solutions and helping its customers usher in the era of the Internet of Things.