Core MCU Framework Overview

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What is Core MCU Framework?

The Core MCU Framework is a specialized software platform designed for developing applications that run on microcontroller units (MCUs).

The goal of Core MCU Framework is to make it easy to move between various MCU processor platforms.

Portability Across Different MCUs

One of the primary challenges in embedded systems development is dealing with the heterogeneity of hardware. Different MCUs have their own sets of instructions, peripherals, and memory architectures. Core MCU Framework aims to abstract these differences so that developers can write code that is portable across various MCU processors. This means you can take a program designed for one MCU and adapt it to another with minimal changes.

Simplified Development Process

Core MCU Framework provides a collection of libraries and tools that simplify common tasks in embedded systems programming.

For example, Core MCU Framework offer standardized libraries for handling I/O operations, timers, interrupts, and other peripherals common to MCUs. This can significantly speed up the development process and reduce the learning curve when moving between different MCUs.

Consistent API

A uniform application programming interface (API) across various MCUs allows developers to apply the same code structure and calls, regardless of the underlying hardware. Core MCU Framework's consistent API ensures that developers don't need to relearn command sets or libraries when switching MCUs, thus saving time and reducing errors.

License

Core MCU Framework is free for non-commerical use.

This means, if you are a hobbyist or just want to play around with Core MCU Framework, you may do so.

However, if you are selling a product, making money from something using it – we need to talk. I think it is only fair to get a cut, so I can support my hobbies and create more cool stuff. Don't you think so?

Core MCU Framework Software License Agreement

1. Definitions

- **"Framework"** refers to the Core MCU Framework, which is a specialized software platform designed for developing applications that run on microcontroller units (MCUs).
- **"Licensee"** refers to any individual or entity that uses the Framework.
- **"Commercial Use"** involves any use of the Framework in a commercial activity where the primary intention is revenue generation.

2. Grant of License

- **Non-Commercial License**: The Framework is available free of charge for non-commercial use by hobbyists, students, and developers for educational or personal projects. This license allows you to use, modify, and distribute the Framework in non-commercial settings.
- **Commercial Use License**: Use of the Framework in any commercial activity requires a separate license agreement. Interested parties should contact the Licensor to negotiate terms suitable for commercial distribution and support.

3. Portability and API Consistency

- The Framework is designed to abstract the differences across various MCUs, providing a consistent API that enhances portability and simplifies the development process. This includes standardized libraries for I/O operations, timers, interrupts, and other peripherals.

4. Restrictions

- You may not use the Framework for any commercial purposes without a separate licensing agreement.
- You shall not misrepresent the origin or ownership of the Framework.

- Modifying or extending the Framework for commercial use without the proper commercial license is strictly prohibited.

5. Rights of the Licensor

- The Licensor reserves the right to update the terms of this license and the Framework itself at any time. Notifications of such updates will be provided to all active users.

6. Limitation of Liability

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7. Termination

- This License is effective until terminated. The License will terminate immediately without notice from the Licensor if you fail to comply with any provision of this License. Upon termination, you must cease all use of the Framework and destroy all copies, full or partial, of the Framework.

8. Miscellaneous

- This License constitutes the entire agreement between the parties relating to the use of the Framework and supersedes all prior or contemporaneous understandings regarding such subject matter. No amendment to or modification of this License will be binding unless in writing and signed by the Licensor.

Versions

Core MCU Framework – Version is based on the specific MCU device you're working with.

Core8-16F – Designed for PIC16 Series Devices – Compatible with:

- PIC16F15313
- PIC16F15323
- PIC16F15324
- PIC16F15325

Core8-18F – Designed for PIC18 Series Devices – Compatible with:

- PIC18F2xQ84

Releases

Core8-16F Releases

Date	Version	Notes
2024/09/09	1.0.0	Initial Version
2024/09/24	1.0.1	Added HAL Interfaces

Core8-18F Releases

Date	Version	Notes
2024/10/11	1.0.0	Initial Version - Beta

Core MCU Framework – Download

The Core MCU Framework Versions, along with drivers can be found in my Github Repo.

[Core MCU Framework Download – Link](#)