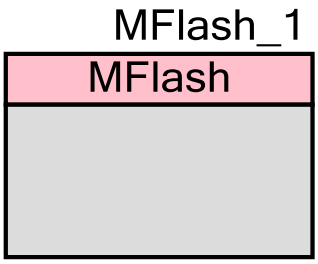
Main Flash (PDL_MFlash)

1.0



Features

- Erasing data by-sector or by all-sector collectively
- Writing data by byte or by half words (16 bits)
- CPU mode
- ROM writer mode

General Description

The Peripheral Driver Library (PDL) Main Flash (PDL_MFlash) component provides support for working with Main Flash.

This component uses firmware drivers from the PDL_MFlash module, which is automatically added to your project after a successful build.

When to Use a PDL_MFlash Component

Before using the Main Flash operation APIs, make sure the code is operated in RAM area.

Quick Start

1. In an empty schematic file, drag a PDL_MFlash component from the Component Catalog FMx/System/Memory/Main Flash folder onto your schematic. The placed instance takes the name MFlash_1.
2. There is no need to open Configure dialog. This component doesn't provide any parameters.
3. Build the project to verify the correctness of your design. This will add the required PDL modules to the Workspace Explorer and generate configuration data for the MFlash_1 instance.
4. In the *main.c* file, initialize the peripheral and start the application.

```
MFlash_WriteData16Bit_Fm0Type3CrAndSecureArea((uint16_t*)0x100004,(uint16_t
*)&i, 1);/* Write flash in CR data area */
MFlash_SectorErase((uint16_t*)sector);
```

5. Build and program the device.

Component Usage

After a successful build, firmware drivers from the PDL_MFlash module, are added to your project in the pdl/drivers/flash folder. Pass the generated data structures to the associated PDL functions in your application initialization code to configure the peripheral.

Generated Data

The PDL_MFlash component doesn't populate any peripheral initialization data structure(s).

Once the component is initialized, the application code should use the peripheral functions provided in the referenced PDL files. Refer to the PDL documentation for the list of provided API functions. To access this document, right-click on the component symbol on the schematic and choose "**Open API Documentation…**" option in the drop-down menu.

Data in RAM

The generated data may be placed in flash memory (const) or RAM. The former is the more memory-efficient choice if you do not wish to modify the configuration data at run-time. Under the **Built-In** tab of the Configure dialog, set the parameter CONST_CONFIG to make your selection. The default option is to place the data in flash.

Code Examples and Application Notes

There are numerous code examples that include schematics and example code available online at the Cypress Code Examples web page.

Cypress also provides a number of application notes describing how FMx devices can be integrated into your design. You can access the Cypress Application Notes search web page at www.cypress.com/appnotes.

Resources

The PDL_MFlash component uses the Main Flash (MFlash) peripheral block.

References

- FM0+ Family of 32-bit ARM® Cortex®-M0+ Microcontrollers Peripheral Manuals
- Cypress FM0+ Family of 32-bit ARM® Cortex®-M0+ Microcontrollers

Component Changes

This section lists the major changes in the component from the previous version.

Version	Description of Changes	Reason for Changes / Impact
1.0.a	Minor datasheet edits.	
1.0	Initial Version	