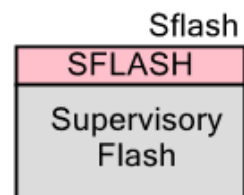


## Features

- Allows users to write to the supervisory flash portion of the PSoC, which is non-volatile and does not get rewritten during programming.
- Let's users name devices, put in constants, that should persist through firmware updates.



## General Description

The supervisory flash is section of non-volatile flash memory that is available for storing values that should persist between device resets and firmware updates. This component provides users with an API for interacting with the Sflash. Depends on MICA Common.

## Input/Output Connections

The Sflash component is a software API only, and has no hardware connections.

## Component Parameters

There are no component parameters to configure in Sflash, beyond the built-in parameters provided by Creator.

## Application Programming Interface (API)

API routines allows users to control the SFLASH from software. The default name for the component is "Sflash" which can be changed in the configure dialogue. All functions and constants are generated based on this name.

## Functions

Function	Description
<a href="#"><u>Sflash_ReadRow()</u></a>	Places the SFlash data of the specified row into the array passed in. Array must be of length Sflash_SIZE_ROW.
<a href="#"><u>Sflash_WriteRow()</u></a>	Copies the data in 'rowData' and writes it into the Supervisory Flash (SFlash) section of code. Wrapper of the Cypress function CySysSFlashWriteUserRow().
<a href="#"><u>Sflash_ReadLocalName()</u></a>	Copies the name stored in SFLASH into the array passed in.
<a href="#"><u>Sflash_WriteLocalName()</u></a>	Stores the name passed in into SFLASH.

### uint32 Sflash\_ReadRow(uint8 rowNum, uint8\* dataBuffer)

- Description:** Places the SFlash data of the specified row into the array passed in. Array must be of length Sflash\_SIZE\_ROW.
- Parameters:** **rowNum:** The row number of the SFlash to read from  
**dataBuffer:** Pointer to buffer to place data into. Must be of size Sflash\_SIZE\_ROW
- Return Value:** An error code with the results of the read procedure. Errors:  
 Sflash\_ERR\_OK: Read was successful  
 Sflash\_ERR\_INDEX\_RANGE: Invalid row number was passed in

### uint32 Sflash\_WriteRow(uint8 rowNum, const uint8\* rowData)

- Description:** Copies the data in 'rowData' and writes it into the Supervisory Flash (SFlash) section of code. Wrapper of the Cypress function CySysSFlashWriteUserRow().
- Parameters:** **rowNum:** The row number of the SFlash to write to  
**rowData:** Pointer to buffer to read from. Must be of length Sflash\_SIZE\_ROW



**Return Value:** An error code with the results of the read procedure. Errors:  
 Sflash\_ERR\_OK: Write was successful  
 <Cypress generated Error>: See CySysSFlashWriteUserRow()

### uint32 Sflash\_ReadLocalName(char\* nameArray)

**Description:** Copies the name stored in SFLASH into the array passed in.

**Parameters:** **nameArray:** Pointer to the array the name will be passed into. Must be of length Sflash\_NAME\_LEN or longer.

**Return Value:** An error code with the results of the read procedure. Errors:  
 Sflash\_ERR\_OK: Reading name was successful

### uint32 Sflash\_WriteLocalName(uint8 len, char\* nameArray)

**Description:** Stores the name passed in into SFLASH.

**Parameters:** **len:** Length of the name. Must be less than or equal to Sflash\_NAME\_LEN  
**nameArray:** Array which contains the Name - does not need to be null-terminated.

**Return Value:** An error code with the results of the read procedure. Errors:  
 Sflash\_ERR\_OK: Writing the name was successful  
 Sflash\_ERR\_INDEX\_RANGE : Name was too long to write



## Component Macros

The following is a list of macros/constants that a user may find useful for interacting with the component. A component may contain macros not listed here.

Macro Name	Description
Sflash_NUM_ROWS	Number of rows available for user data
Sflash_INDEX_ROW_NAME	Row index that contains the BLE Device Name
Sflash_NAME_LEN	Length of the name data
Sflash_NAME_ROW	Row that contains the name data
Sflash_NAME_OFFSET	Offset in the row of the name data

## Change Log

This sections lists changes to the component from previous versions

Version	Revision	Description of Changes	Reason for Changes / Impact
v1.0	ro	Initial implementation of the component and datasheet	

