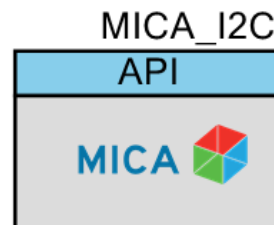


Features

- Software only API for streamlining of SCB I2C implementation



General Description

The MICA I2C API component provides a simple API for writing to, and reading from, slave devices.

Input/Output Connections

The I2C API component is software only and has no connections

Component Parameters

Double click on the I2C API component to open the Configure dialog.

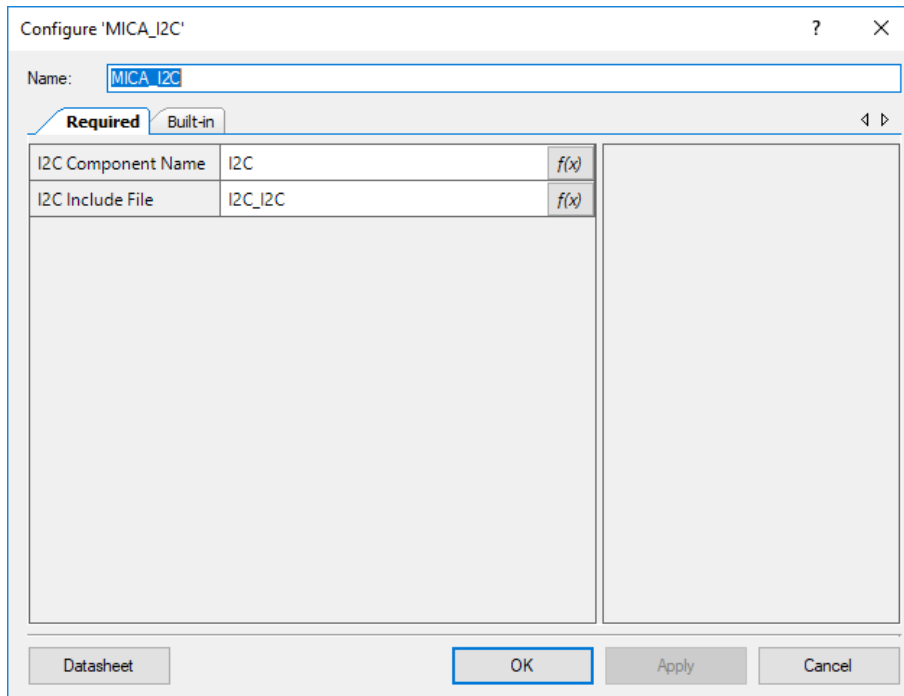
Required

I2C Component Name

Name of the SCB instance that provides the implementation of the functions called by the I2C component

I2C Include File

Name of the header file (excluding ".h") that contains the declarations for the SCB master.



Application Programming Interface (API)

API routines allows users to control the I2C API from software. The default name for the component is "MICA_I2C" which can be changed in the configure dialogue. All functions and constants are generated based on this name.

Functions

Function	Description
MICA_I2C_Write()	Writes a byte to data to a given register of the target I2C slave.
MICA_I2C_Read()	Reads a given register of the target I2C device and places that value into the pointer passed in.



uint32 MICA_I2C_Write(uint8 deviceAddr, uint8 regAddr, uint8 val)

- Description:** Writes a byte to data to a given register of the target I2C slave.
- Parameters:**
 deviceAddr: 7-bit address of the slave to write to.
 regAddr: Address of the register in the slave device to write to.
 val: Value to write to the register.
- Return Value:** Error returned by operation. Possible values:
 MICA_I2C_ERR_OK: Successful write
 Error from I2C component
- Side Effects** This is a blocking (synchronous) function.

uint32 MICA_I2C_Read(uint8 deviceAddr, uint8 regAddr, uint8* readValue)

- Description:** Reads a given register of the target I2C device and places that value into the pointer passed in.
- Parameters:**
 deviceAddr: 7-bit address of the slave to write to.
 regAddr: Address of the register in the slave device to write to.
 readVal: Pointer to value read by the device.
- Return Value:** Error returned by operation. Possible values:
 MICA_I2C_ERR_OK: Successful read
 MICA_I2C_ERR_READ
 Error from I2C component

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
N/A	N/A



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	

