

# Si7021 Software Manual

1.0

Generated by Doxygen 1.8.18



<b>1 File Index</b>	<b>1</b>
1.1 File List	1
<b>2 File Documentation</b>	<b>3</b>
2.1 C:/Users/Dominik/Desktop/doc/i2c.c File Reference	3
2.1.1 Function Documentation	3
2.1.1.1 i2c_open()	3
2.1.1.2 i2c_rx()	4
2.1.1.3 i2c_slave_address()	4
2.1.1.4 i2c_tx()	4
2.1.2 Variable Documentation	4
2.1.2.1 i2c_dev	4
2.1.2.2 i2c_status	4
2.2 C:/Users/Dominik/Desktop/doc/i2c.h File Reference	5
2.2.1 Function Documentation	5
2.2.1.1 i2c_open()	5
2.2.1.2 i2c_rx()	5
2.2.1.3 i2c_slave_address()	5
2.2.1.4 i2c_tx()	6
2.3 C:/Users/Dominik/Desktop/doc/si7021.c File Reference	6
2.3.1 Macro Definition Documentation	7
2.3.1.1 SI7021_ADDRESS	8
2.3.1.2 SI7021_FIRMVERS_A	8
2.3.1.3 SI7021_FIRMVERS_B	8
2.3.1.4 SI7021_ID11	8
2.3.1.5 SI7021_ID12	8
2.3.1.6 SI7021_ID21	8
2.3.1.7 SI7021_ID22	8
2.3.1.8 SI7021_MEASRH_HOLD	8
2.3.1.9 SI7021_MEASRH_NOHOLD	8
2.3.1.10 SI7021_MEASTEMP_HOLD	8
2.3.1.11 SI7021_MEASTEMP_NOHOLD	9
2.3.1.12 SI7021_READHEATER_REG	9
2.3.1.13 SI7021_READPREVTEMP	9
2.3.1.14 SI7021_READRHT_REG	9
2.3.1.15 SI7021_REG_HTRE_BIT	9
2.3.1.16 SI7021_RESET	9
2.3.1.17 SI7021_REV_1	9
2.3.1.18 SI7021_REV_2	9
2.3.1.19 SI7021_WRITEHEATER_REG	9
2.3.1.20 SI7021_WRITERHT_REG	9
2.3.2 Function Documentation	9

---

2.3.2.1 si7021_heat_level()	10
2.3.2.2 si7021_heater()	10
2.3.2.3 si7021_init()	10
2.3.2.4 si7021_read_firmware()	10
2.3.2.5 si7021_read_humidity()	11
2.3.2.6 si7021_read_serial_number()	11
2.3.2.7 si7021_read_temperature()	11
2.3.2.8 si7021_read_user_reg()	11
2.3.2.9 si7021_reset()	12
2.3.2.10 si7021_write_user_reg()	12
2.3.3 Variable Documentation	12
2.3.3.1 firmware_revsn	12
2.3.3.2 model	12
2.3.3.3 rxBuffer	12
2.3.3.4 txBuffer	12
2.4 C:/Users/Dominik/Desktop/doc/si7021.h File Reference	13
2.4.1 Function Documentation	13
2.4.1.1 si7021_heat_level()	13
2.4.1.2 si7021_heater()	13
2.4.1.3 si7021_init()	14
2.4.1.4 si7021_read_firmware()	14
2.4.1.5 si7021_read_humidity()	14
2.4.1.6 si7021_read_serial_number()	14
2.4.1.7 si7021_read_temperature()	15
2.4.1.8 si7021_read_user_reg()	15
2.4.1.9 si7021_reset()	15
2.4.1.10 si7021_write_user_reg()	15
<b>Index</b>	<b>17</b>

# Chapter 1

## File Index

### 1.1 File List

Here is a list of all files with brief descriptions:

C:/Users/Dominik/Desktop/doc/ <a href="#">i2c.c</a> . . . . .	3
C:/Users/Dominik/Desktop/doc/ <a href="#">i2c.h</a> . . . . .	5
C:/Users/Dominik/Desktop/doc/ <a href="#">si7021.c</a> . . . . .	6
C:/Users/Dominik/Desktop/doc/ <a href="#">si7021.h</a> . . . . .	13



# Chapter 2

## File Documentation

### 2.1 C:/Users/Dominik/Desktop/doc/i2c.c File Reference

```
#include "i2c.h"
```

#### Functions

- void [i2c\\_open](#) (void)  
[i2c\\_open\(\)](#)
- void [i2c\\_slave\\_address](#) (alt\_u8 slave\_address)  
[i2c\\_slave\\_address\(\)](#)
- void [i2c\\_tx](#) (alt\_u8 bytes, alt\_u8 \*data)  
[i2c\\_tx\(\)](#)
- void [i2c\\_rx](#) (alt\_u8 bytes, alt\_u8 \*data)  
[i2c\\_rx\(\)](#)

#### 2.1.1 Function Documentation

##### 2.1.1.1 i2c\_open()

```
void i2c_open (  
    void )
```

[i2c\\_open\(\)](#)

<Open is communication  
Function activates i2c device

---

#### Parameters

in	<i>none</i>	
out	<i>void</i>	

### 2.1.1.2 i2c\_rx()

```
void i2c_rx (
    alt_u8 bytes,
    alt_u8 * data )
```

#### [i2c\\_rx\(\)](#)

Receive data from i2c slave. Data to receive needs to be an array. If only one byte to receive data[0]

#### Parameters

in	<i>bytes</i>	Ammount of bytes in the receive array
in	<i>data</i>	Data to receive
out	<i>none</i>	

### 2.1.1.3 i2c\_slave\_address()

```
void i2c_slave_address (
    alt_u8 slave_address )
```

#### [i2c\\_slave\\_address\(\)](#)

Transmit data to i2c slave.  
Set address of I2C slave

#### Parameters

in	<i>slave_address</i>	Address of the i2c slave
out	<i>none</i>	

### 2.1.1.4 i2c\_tx()

```
void i2c_tx (
    alt_u8 bytes,
    alt_u8 * data )
```

#### [i2c\\_tx\(\)](#)

Receive data from i2c slave.  
Set data to i2c slave, Data to send needs to be an array. If only one byte to send data[0]

#### Parameters

in	<i>bytes</i>	Ammount of bytes in the transmit array
in	<i>data</i>	Data to transmit
out	<i>none</i>	

## 2.1.2 Variable Documentation

### 2.1.2.1 i2c\_dev

```
ALT_AVALON_I2C_DEV_t* i2c_dev
```

### 2.1.2.2 i2c\_status

```
ALT_AVALON_I2C_STATUS_CODE i2c_status
```



## 2.2 C:/Users/Dominik/Desktop/doc/i2c.h File Reference

```
#include <alt_types.h>
#include <altera_avalon_i2c.h>
#include <io.h>
#include <system.h>
#include <stdio.h>
```

### Functions

- void [i2c\\_open](#) (void)  
    *<Open is communication*
- void [i2c\\_slave\\_address](#) (alt\_u8 slave\_address)  
    *Transmit data to i2c slave.*
- void [i2c\\_tx](#) (alt\_u8 bytes, alt\_u8 \*data)  
    *Receive data from i2c slave.*
- void [i2c\\_rx](#) (alt\_u8 bytes, alt\_u8 \*data)  
    *i2c\_rx()*

### 2.2.1 Function Documentation

#### 2.2.1.1 i2c\_open()

```
void i2c_open (
    void )
<Open is communication
Choose slave address
<Open is communication
Function activates i2c device
```

---

##### Parameters

in	<i>none</i>	
out	<i>void</i>	

#### 2.2.1.2 i2c\_rx()

```
void i2c_rx (
    alt_u8 bytes,
    alt_u8 * data )
```

##### [i2c\\_rx\(\)](#)

Receive data from i2c slave. Data to receive needs to be an array. If only one byte to receive data[0]

---

##### Parameters

in	<i>bytes</i>	Ammount of bytes in the receive array
in	<i>data</i>	Data to receive
out	<i>none</i>	

#### 2.2.1.3 i2c\_slave\_address()

```
void i2c_slave_address (
    alt_u8 slave_address )
```

---

Transmit data to i2c slave.

Transmit data to i2c slave.

Set address of I2C slave

#### Parameters

in	<i>slave_address</i>	Address of the i2c slave
out	<i>none</i>	

#### 2.2.1.4 i2c\_tx()

```
void i2c_tx (
    alt_u8 bytes,
    alt_u8 * data )
```

Receive data from i2c slave.

Receive data from i2c slave.

Set data to i2c slave, Data to send needs to be an array. If only one byte to send data[0]

#### Parameters

in	<i>bytes</i>	Ammount of bytes in the transmit array
in	<i>data</i>	Data to transmit
out	<i>none</i>	

## 2.3 C:/Users/Dominik/Desktop/doc/si7021.c File Reference

```
#include "si7021.h"
```

### Macros

- `#define SI7021_ADDRESS 0x40`  
*device base address*
- `#define SI7021_MEASRH_HOLD 0xE5`  
*Measure Relative Humidity, Hold Master Mode.*
- `#define SI7021_MEASRH_NOHOLD 0xF5`  
*Measure Relative Humidity, No Hold Master Mode.*
- `#define SI7021_MEASTEMP_HOLD 0xE3`
- `#define SI7021_MEASTEMP_NOHOLD 0xF3`  
*Measure Temperature, No Hold Master Mode.*
- `#define SI7021_READPREVTEMP 0xE0`  
*Read Temperature Value from Previous RH Measurement.*
- `#define SI7021_RESET 0xFE`
- `#define SI7021_WRITERHT_REG 0xE6`  
*Write RH/T User Register 1.*
- `#define SI7021_READRHT_REG 0xE7`
- `#define SI7021_WRITEHEATER_REG 0x51`  
*Write Heater Control Register.*
- `#define SI7021_READHEATER_REG 0x11`  
*Read Heater Control Register.*
- `#define SI7021_REG_HTRE_BIT 0x02`  
*Control Register Heater Bit.*
- `#define SI7021_ID11 0xFA`

*Read Electronic ID 1. Byte*

- #define `SI7021_ID12` 0x0F
- #define `SI7021_ID21` 0xFC

*Read Electronic ID 2. Byte.*

- #define `SI7021_ID22` 0xC9
- #define `SI7021_FIRMVERS_A` 0x84

*Read Firmware Revision.*

- #define `SI7021_FIRMVERS_B` 0xB8
- #define `SI7021_REV_1` 0xff

*Sensor revision 1.*

- #define `SI7021_REV_2` 0x20

*Sensor revision 2.*

## Functions

- alt\_u8 `si7021_read_user_reg` (alt\_u8 reg)  
*si7021\_read\_user\_reg();*
- void `si7021_write_user_reg` (alt\_u8 reg, alt\_u8 value)  
*si7021\_write\_user\_reg();*
- void `si7021_reset` ()  
*void si7021\_reset();*
- void `si7021_init` ()  
*void si7021\_init();*
- float `si7021_read_humidity` ()  
*si7021\_read\_humidity();*
- float `si7021_read_temperature` ()  
*void si7021\_read\_temperature();*
- void `si7021_read_firmware` ()  
*si7021\_read\_firmware();*
- void `si7021_read_serial_number` ()  
*si7021\_read\_serial\_number();*
- void `si7021_heater` (alt\_u8 set)  
*si7021\_heater();*
- void `si7021_heat_level` (alt\_u8 level)  
*si7021\_heater\_level();*

## Variables

- alt\_u8 `txBuffer` [3]  
*global buffer to hold tx*
- alt\_u8 `rxBuffer` [3]  
*global buffer to hold rx*
- alt\_u8 `firmware_revsion` = 0  
*firmware revision number*
- alt\_u8 `model` = 0  
*sensor model*

### 2.3.1 Macro Definition Documentation

#### 2.3.1.1 SI7021\_ADDRESS

```
#define SI7021_ADDRESS 0x40  
device base address
```

#### 2.3.1.2 SI7021\_FIRMVERS\_A

```
#define SI7021_FIRMVERS_A 0x84  
Read Firmware Revision.
```

#### 2.3.1.3 SI7021\_FIRMVERS\_B

```
#define SI7021_FIRMVERS_B 0xB8
```

#### 2.3.1.4 SI7021\_ID11

```
#define SI7021_ID11 0xFA  
Read Electronic ID 1. Byte
```

#### 2.3.1.5 SI7021\_ID12

```
#define SI7021_ID12 0x0F
```

#### 2.3.1.6 SI7021\_ID21

```
#define SI7021_ID21 0xFC  
Read Electronic ID 2. Byte.
```

#### 2.3.1.7 SI7021\_ID22

```
#define SI7021_ID22 0xC9
```

#### 2.3.1.8 SI7021\_MEASRH\_HOLD

```
#define SI7021_MEASRH_HOLD 0xE5  
Measure Relative Humidity, Hold Master Mode.
```

#### 2.3.1.9 SI7021\_MEASRH\_NOHOLD

```
#define SI7021_MEASRH_NOHOLD 0xF5  
Measure Relative Humidity, No Hold Master Mode.
```

#### 2.3.1.10 SI7021\_MEASTEMP\_HOLD

```
#define SI7021_MEASTEMP_HOLD 0xE3
```

#### 2.3.1.11 SI7021\_MEASTEMP\_NOHOLD

```
#define SI7021_MEASTEMP_NOHOLD 0xF3
```

Measure Temperature, No Hold Master Mode.

#### 2.3.1.12 SI7021\_READHEATER\_REG

```
#define SI7021_READHEATER_REG 0x11
```

Read Heater Control Register.

#### 2.3.1.13 SI7021\_READPREVTEMP

```
#define SI7021_READPREVTEMP 0xE0
```

Read Temperature Value from Previous RH Measurement.

#### 2.3.1.14 SI7021\_READRHT\_REG

```
#define SI7021_READRHT_REG 0xE7
```

#### 2.3.1.15 SI7021\_REG\_HTRE\_BIT

```
#define SI7021_REG_HTRE_BIT 0x02
```

Control Register Heater Bit.

#### 2.3.1.16 SI7021\_RESET

```
#define SI7021_RESET 0xFE
```

#### 2.3.1.17 SI7021\_REV\_1

```
#define SI7021_REV_1 0xff
```

Sensor revision 1.

#### 2.3.1.18 SI7021\_REV\_2

```
#define SI7021_REV_2 0x20
```

Sensor revision 2.

#### 2.3.1.19 SI7021\_WRITEHEATER\_REG

```
#define SI7021_WRITEHEATER_REG 0x51
```

Write Heater Control Register.

#### 2.3.1.20 SI7021\_WRITERHT\_REG

```
#define SI7021_WRITERHT_REG 0xE6
```

Write RH/T User Register 1.

### 2.3.2 Function Documentation

### 2.3.2.1 si7021\_heat\_level()

```
void si7021_heat_level (
    alt_u8 level )
```

```
si7021_heater_level();
```

Set the heater level.

Description: Sets the level of the internal heater At VDD 3.3 V current is level typical current draw 0000 3.09 mA 0001 9.18 mA 0010 15.24 mA .... 0100 27.39 mA .... 1000 51.69 mA .... 1111 94.20mA

#### Parameters

in	<i>level</i>	sees above
out	<i>void</i>	

### 2.3.2.2 si7021\_heater()

```
void si7021_heater (
    alt_u8 set )
```

```
si7021_heater();
```

Activate the inbuilt heater.

Activate the sensor heater

#### Parameters

in	<i>set</i>	When value hold 1 heater gets activated, when 0 heater off.
out	<i>void</i>	

### 2.3.2.3 si7021\_init()

```
void si7021_init ( )
```

```
void si7021_init();
```

Init function for sensor.

Init function for si7021 needs to be called first in order for the sensor to work.

#### Parameters

in	<i>none</i>	
out	<i>void</i>	

### 2.3.2.4 si7021\_read\_firmware()

```
void si7021_read_firmware ( )
```

```
si7021_read_firmware();
```

Read firmware from sensor.

Send 2 byte instruction data to the device and returns value 1 or 2 according to firmware revision 0xFF version 1.0 0x20 version 2.0

#### Parameters

in	<i>none</i>	
out	<i>void</i>	

**2.3.2.5 si7021\_read\_humidity()**

```
float si7021_read_humidity ( )
si7021_read_humidity();
```

Read humidity from sensor.

Reads humidity from si7021 and in No Hold Master Mode. Retrurns humidity in RH as a 16 bit integer

---

**Parameters**

in	<i>none</i>	
out	<i>humidity</i>	16 bit value

**Returns**

Functions returns the calculated humidity value in percent as a float

---

**2.3.2.6 si7021\_read\_serial\_number()**

```
void si7021_read_serial_number ( )
si7021_read_serial_number();
```

Read serial number from sensor.

Function read the serial number. Device returns 64 bit value where of 0x00 or 0xFF are engineering samples 0x0D = Si7013 0x14 = Si7020 0x15 = Si7021 Two I2C commands are required to access the device memory and retrieve the complete serial number. see datasheet page 23

---

**Parameters**

in	<i>none</i>	
out	<i>void</i>	

---

**2.3.2.7 si7021\_read\_temperature()**

```
float si7021_read_temperature ( )
void si7021_read_temperature()
```

Read Temperature from sensor.

Reads temperature from si7021 and in No Hold Master Mode. Retrurns it in celsius as a 16 bit integer.

---

**Parameters**

in	<i>none</i>	
out	<i>temperature</i>	16 bit value

**Returns**

Functions returns the calculated temperature value in celsius as a float.

---

**2.3.2.8 si7021\_read\_user\_reg()**

```
alt_u8 si7021_read_user_reg (
    alt_u8 reg )
si7021_read_user_reg();
```

Read Si7021 user register.

Read from the si7021 user register

---

**Parameters**

in	<i>register</i>	Register to write
out	<i>value</i>	

---

**Returns**

Retruns the value of the user Register. After reset it holds 0011\_1010

---

**2.3.2.9 si7021\_reset()**

```
void si7021_reset ( )
void si7021\_reset\(\);
si7021.h
Reset function for si7021
```

---

**Parameters**

in	<i>none</i>	
out	<i>void</i>	

---

**2.3.2.10 si7021\_write\_user\_reg()**

```
void si7021_write_user_reg (
    alt_u8 reg,
    alt_u8 value )
si7021\_write\_user\_reg\(\);
Write toSi7021 user register.
Write to the si7021 user register
```

---

**Parameters**

in	<i>register</i>	Register to write
out	<i>value</i>	Register value to write
out	<i>void</i>	

---

**2.3.3 Variable Documentation****2.3.3.1 firmware\_revsn**

```
alt_u8 firmware_revsn = 0
firmware revision number
```

**2.3.3.2 model**

```
alt_u8 model = 0
sensor model
```

**2.3.3.3 rxBuffer**

```
alt_u8 rxBuffer[3]
global buffer to hold rx
```

**2.3.3.4 txBuffer**

```
alt_u8 txBuffer[3]
global buffer to hold tx
```

---



## 2.4 C:/Users/Dominik/Desktop/doc/si7021.h File Reference

```
#include "i2c.h"
```

### Functions

- void [si7021\\_reset](#) ()  
*si7021.h*
- void [si7021\\_init](#) ()  
*Init function for sensor.*
- void [si7021\\_read\\_firmware](#) ()  
*Read firmware from sensor.*
- void [si7021\\_read\\_serial\\_number](#) ()  
*Read serial number from sensor.*
- float [si7021\\_read\\_temperature](#) ()  
*Read Temperature from sensor.*
- float [si7021\\_read\\_humidity](#) ()  
*Read humidity from sensor.*
- alt\_u8 [si7021\\_read\\_user\\_reg](#) (alt\_u8 reg)  
*Read Si7021 user register.*
- void [si7021\\_write\\_user\\_reg](#) (alt\_u8 reg, alt\_u8 value)  
*Write toSi7021 user register.*
- void [si7021\\_heater](#) (alt\_u8 set)  
*Activate the inbuilt heater.*
- void [si7021\\_heat\\_level](#) (alt\_u8 level)  
*Set the heater level.*

### 2.4.1 Function Documentation

#### 2.4.1.1 si7021\_heat\_level()

```
void si7021_heat_level (
    alt_u8 level )
```

Set the heater level.

~~Set the heater level.~~

Description: Sets the level of the internal heater At VDD 3.3 V current is level typical current draw 0000 3.09 mA  
0001 9.18 mA 0010 15.24 mA .... 0100 27.39 mA ....  
1000 51.69 mA .... 1111 94.20mA

#### Parameters

in	<i>level</i>	sees above
out	<i>void</i>	

#### 2.4.1.2 si7021\_heater()

```
void si7021_heater (
    alt_u8 set )
```

Activate the inbuilt heater.

~~Activate the inbuilt heater.~~  
Activate the sensor heater

**Parameters**

in	<i>set</i>	When value hold 1 heater gets activated, when 0 heater off.
out	<i>void</i>	

**2.4.1.3 si7021\_init()**

```
void si7021_init ( )
```

Init function for sensor.

Init function for sensor.

Init function for si7021 needs to be called first in order for the sensor to work.

**Parameters**

in	<i>none</i>	
out	<i>void</i>	

**2.4.1.4 si7021\_read\_firmware()**

```
void si7021_read_firmware ( )
```

Read firmware from sensor.

Read firmware from sensor.

Send 2 byte instruction data to the device and returns value 1 or 2 according to firmware revision 0xFF version 1.0 0x20 version 2.0

**Parameters**

in	<i>none</i>	
out	<i>void</i>	

**2.4.1.5 si7021\_read\_humidity()**

```
float si7021_read_humidity ( )
```

Read humidity from sensor.

Read humidity from sensor.

Reads humidity from si7021 and in No Hold Master Mode. Returns humidity in RH as a 16 bit integer

**Parameters**

in	<i>none</i>	
out	<i>humidity</i>	16 bit value

**Returns**

Function returns the calculated humidity value in percent as a float

**2.4.1.6 si7021\_read\_serial\_number()**

```
void si7021_read_serial_number ( )
```

Read serial number from sensor.

Read serial number from sensor.

Function reads the serial number. Device returns 64 bit value where 0x00 or 0xFF are engineering samples 0x0D = Si7013 0x14 = Si7020 0x15 = Si7021 Two I2C commands are required to access the device memory and retrieve the complete serial number. see datasheet page 23

**Parameters**

in	<i>none</i>	
out	<i>void</i>	

**2.4.1.7 si7021\_read\_temperature()**

```
float si7021_read_temperature ( )
```

Read Temperature from sensor.

Read Temperature from sensor.

Reads temperature from si7021 and in No Hold Master Mode. Retrurns it in celsius as a 16 bit integer.

**Parameters**

in	<i>none</i>	
out	<i>temperature</i>	16 bit value

**Returns**

Functions returns the calculated temperature value in celsius as a float.

**2.4.1.8 si7021\_read\_user\_reg()**

```
alt_u8 si7021_read_user_reg (
    alt_u8 reg )
```

Read Si7021 user register.

Read Si7021 user register.

Read from the si7021 user register

**Parameters**

in	<i>register</i>	Register to write
out	<i>value</i>	

**Returns**

Retruns the value of the user Register. After reset it holds 0011\_1010

**2.4.1.9 si7021\_reset()**

```
void si7021_reset ( )
```

[si7021.h](#)

Created on: 07.04.2021 Author: Dominik Socher Reset the sensor

[si7021.h](#)

Reset function for si7021

**Parameters**

in	<i>none</i>	
out	<i>void</i>	

**2.4.1.10 si7021\_write\_user\_reg()**

```
void si7021_write_user_reg (
```

```
alt_u8 reg,  
alt_u8 value )
```

Write toSi7021 user register.

Write toSi7021 user register.

Write to the si7021 user register

---

#### Parameters

in	<i>register</i>	Register to write
out	<i>value</i>	Register value to write
out	<i>void</i>	

---

# Index

C:/Users/Dominik/Desktop/doc/i2c.c, [3](#)  
C:/Users/Dominik/Desktop/doc/i2c.h, [5](#)  
C:/Users/Dominik/Desktop/doc/si7021.c, [6](#)  
C:/Users/Dominik/Desktop/doc/si7021.h, [13](#)

firmware\_revsn  
    si7021.c, [12](#)

i2c.c  
    i2c\_dev, [4](#)  
    i2c\_open, [3](#)  
    i2c\_rx, [4](#)  
    i2c\_slave\_address, [4](#)  
    i2c\_status, [4](#)  
    i2c\_tx, [4](#)

i2c.h  
    i2c\_open, [5](#)  
    i2c\_rx, [5](#)  
    i2c\_slave\_address, [5](#)  
    i2c\_tx, [6](#)

i2c\_dev  
    i2c.c, [4](#)

i2c\_open  
    i2c.c, [3](#)  
    i2c.h, [5](#)

i2c\_rx  
    i2c.c, [4](#)  
    i2c.h, [5](#)

i2c\_slave\_address  
    i2c.c, [4](#)  
    i2c.h, [5](#)

i2c\_status  
    i2c.c, [4](#)

i2c\_tx  
    i2c.c, [4](#)  
    i2c.h, [6](#)

model  
    si7021.c, [12](#)

rxBuffer  
    si7021.c, [12](#)

si7021.c  
    firmware\_revsn, [12](#)  
    model, [12](#)  
    rxBuffer, [12](#)  
    SI7021\_ADDRESS, [7](#)  
    SI7021\_FIRMVERS\_A, [8](#)  
    SI7021\_FIRMVERS\_B, [8](#)  
    si7021\_heat\_level, [9](#)

si7021\_heater, [10](#)  
SI7021\_ID11, [8](#)  
SI7021\_ID12, [8](#)  
SI7021\_ID21, [8](#)  
SI7021\_ID22, [8](#)  
si7021\_init, [10](#)  
SI7021\_MEASRH\_HOLD, [8](#)  
SI7021\_MEASRH\_NOHOLD, [8](#)  
SI7021\_MEASTEMP\_HOLD, [8](#)  
SI7021\_MEASTEMP\_NOHOLD, [8](#)  
si7021\_read\_firmware, [10](#)  
si7021\_read\_humidity, [10](#)  
si7021\_read\_serial\_number, [11](#)  
si7021\_read\_temperature, [11](#)  
si7021\_read\_user\_reg, [11](#)  
SI7021\_READHEATER\_REG, [9](#)  
SI7021\_READPREVTEMP, [9](#)  
SI7021\_READRHT\_REG, [9](#)  
SI7021\_REG\_HTRE\_BIT, [9](#)  
SI7021\_RESET, [9](#)  
si7021\_reset, [12](#)  
SI7021\_REV\_1, [9](#)  
SI7021\_REV\_2, [9](#)  
si7021\_write\_user\_reg, [12](#)  
SI7021\_WRITEHEATER\_REG, [9](#)  
SI7021\_WRITERHT\_REG, [9](#)  
txBuffer, [12](#)

si7021.h  
    si7021\_heat\_level, [13](#)  
    si7021\_heater, [13](#)  
    si7021\_init, [14](#)  
    si7021\_read\_firmware, [14](#)  
    si7021\_read\_humidity, [14](#)  
    si7021\_read\_serial\_number, [14](#)  
    si7021\_read\_temperature, [15](#)  
    si7021\_read\_user\_reg, [15](#)  
    si7021\_reset, [15](#)  
    si7021\_write\_user\_reg, [15](#)  
SI7021\_ADDRESS  
    si7021.c, [7](#)  
SI7021\_FIRMVERS\_A  
    si7021.c, [8](#)  
SI7021\_FIRMVERS\_B  
    si7021.c, [8](#)  
si7021\_heat\_level  
    si7021.c, [9](#)  
    si7021.h, [13](#)  
si7021\_heater  
    si7021.c, [10](#)

si7021.h, [13](#)  
SI7021\_ID11  
    si7021.c, [8](#)  
SI7021\_ID12  
    si7021.c, [8](#)  
SI7021\_ID21  
    si7021.c, [8](#)  
SI7021\_ID22  
    si7021.c, [8](#)  
si7021\_init  
    si7021.c, [10](#)  
    si7021.h, [14](#)  
SI7021\_MEASRH\_HOLD  
    si7021.c, [8](#)  
SI7021\_MEASRH\_NOHOLD  
    si7021.c, [8](#)  
SI7021\_MEASTEMP\_HOLD  
    si7021.c, [8](#)  
SI7021\_MEASTEMP\_NOHOLD  
    si7021.c, [8](#)  
si7021\_read\_firmware  
    si7021.c, [10](#)  
    si7021.h, [14](#)  
si7021\_read\_humidity  
    si7021.c, [10](#)  
    si7021.h, [14](#)  
si7021\_read\_serial\_number  
    si7021.c, [11](#)  
    si7021.h, [14](#)  
si7021\_read\_temperature  
    si7021.c, [11](#)  
    si7021.h, [15](#)  
si7021\_read\_user\_reg  
    si7021.c, [11](#)  
    si7021.h, [15](#)  
SI7021\_READHEATER\_REG  
    si7021.c, [9](#)  
SI7021\_READPREVTEMP  
    si7021.c, [9](#)  
SI7021\_READRHT\_REG  
    si7021.c, [9](#)  
SI7021\_REG\_HTRE\_BIT  
    si7021.c, [9](#)  
SI7021\_RESET  
    si7021.c, [9](#)  
si7021\_reset  
    si7021.c, [12](#)  
    si7021.h, [15](#)  
SI7021\_REV\_1  
    si7021.c, [9](#)  
SI7021\_REV\_2  
    si7021.c, [9](#)  
si7021\_write\_user\_reg  
    si7021.c, [12](#)  
    si7021.h, [15](#)  
SI7021\_WRITEHEATER\_REG  
    si7021.c, [9](#)  
SI7021\_WRITERHT\_REG  
    si7021.c, [9](#)  
txBuffer  
    si7021.c, [12](#)