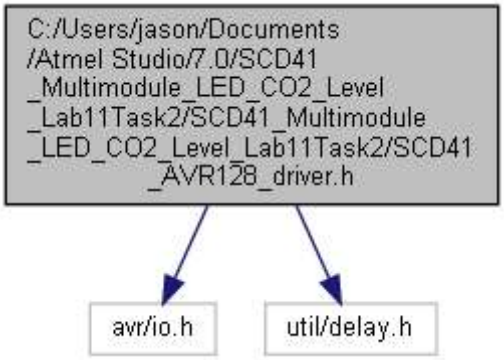
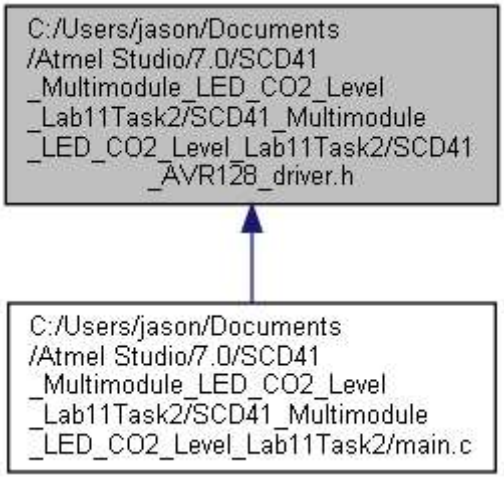
SCD41_AVR128_driver.h File Reference

```
#include <avr/io.h>
#include <util/delay.h>
```

Include dependency graph for SCD41_AVR128_driver.h:



This graph shows which files directly or indirectly include this file:



Go to the source code of this file.

Macros

#define	**F_CPU** 4000000
#define	**CRC8_POLYNOMIAL** 0x31
#define	**CRC8_INIT** 0xFF
#define	**I2CSLAVE_ADDR_WRITE** 0xC4
#define	**I2CSLAVE_ADDR_READ** 0xC5
#define	**ADDRESS_STARTPERIODIC_LSB** 0xB1
#define	**ADDRESS_STARTPERIODIC_MSB** 0x21
#define	**ADDRESS_STOPPERIODIC_LSB** 0x86
#define	**ADDRESS_STOPPERIODIC_MSB** 0x3F
#define	**ADDRESS_READMEASUR_LSB** 0x05
#define	**ADDRESS_READMEASUR_MSB** 0xEC

#define **ADDRESS_GETDATAREADY_LSB** 0xB8

#define **ADDRESS_GETDATAREADY_MSB** 0xE4

Functions

void **I2C0_SCD41_init** ()

void **SCD41_start_periodic_measurement** (uint8_t, uint8_t, uint8_t)

void **SCD41_stop_periodic_measurement** (uint8_t, uint8_t, uint8_t)

void **SCD41_read_measurement** (uint8_t, uint8_t, uint8_t)

uint8_t **SCD41_get_data_ready_status** (uint8_t, uint8_t, uint8_t)

uint8_t **sensirion_common_generate_crc** (const uint8_t *, uint16_t)

Variables

uint8_t **readDataStatusMSB**

uint8_t **readDataStatusLSB**

uint16_t **getDataStatusReadyResponse**

uint8_t **readCO2MSB**

uint8_t **readCO2LSB**

uint8_t **readCO2CRC**

uint16_t **getParseCO2**

uint8_t **readTempMSB**

uint8_t **readTempLSB**

uint8_t **readTempCRC**

uint32_t **getParseTemp**

uint8_t **readRhMSB**

uint8_t **readRhLSB**

uint8_t **readRhCRC**

uint16_t **getParseRh**

uint8_t **readDataStatusCRC**

uint8_t **storedCO2** [2]

uint8_t **storedTemp** [2]

uint8_t **storedRH** [2]

Macro Definition Documentation

◆ ADDRESS_GETDATAREADY_LSB

```
#define ADDRESS_GETDATAREADY_LSB  0xB8
```

Definition at line **44** of file **SCD41_AVR128_driver.h**.

◆ ADDRESS_GETDATAREADY_MSB

```
#define ADDRESS_GETDATAREADY_MSB  0xE4
```

Definition at line **45** of file **SCD41_AVR128_driver.h**.

◆ ADDRESS_READMEASUR_LSB

```
#define ADDRESS_READMEASUR_LSB  0x05
```

Definition at line **40** of file **SCD41_AVR128_driver.h**.

◆ ADDRESS_READMEASUR_MSB

```
#define ADDRESS_READMEASUR_MSB  0xEC
```

Definition at line **41** of file **SCD41_AVR128_driver.h**.

◆ ADDRESS_STARTPERIODIC_LSB

```
#define ADDRESS_STARTPERIODIC_LSB  0xB1
```

Definition at line **32** of file **SCD41_AVR128_driver.h**.

◆ ADDRESS_STARTPERIODIC_MSB

```
#define ADDRESS_STARTPERIODIC_MSB  0x21
```

Definition at line **33** of file **SCD41_AVR128_driver.h**.

◆ ADDRESS_STOPPERIODIC_LSB

```
#define ADDRESS_STOPPERIODIC_LSB   0x86
```

Definition at line **36** of file **SCD41_AVR128_driver.h**.

◆ ADDRESS_STOPPERIODIC_MSB

```
#define ADDRESS_STOPPERIODIC_MSB   0x3F
```

Definition at line **37** of file **SCD41_AVR128_driver.h**.

◆ CRC8_INIT

```
#define CRC8_INIT   0xFF
```

Definition at line **26** of file **SCD41_AVR128_driver.h**.

◆ CRC8_POLYNOMIAL

```
#define CRC8_POLYNOMIAL   0x31
```

Definition at line **25** of file **SCD41_AVR128_driver.h**.

◆ F_CPU

```
#define F_CPU   4000000
```

Definition at line **13** of file **SCD41_AVR128_driver.h**.

◆ I2CSLAVE_ADDR_READ

```
#define I2CSLAVE_ADDR_READ   0xC5
```

Definition at line **29** of file **SCD41_AVR128_driver.h**.

◆ I2CSLAVE_ADDR_WRITE

```
#define I2CSLAVE_ADDR_WRITE   0xC4
```

Definition at line **28** of file **SCD41_AVR128_driver.h**.

Function Documentation

◆ I2C0_SCD41_init()

```
void I2C0_SCD41_init ( )
```

Definition at line **83** of file **SCD41_AVR128_driver.h**.

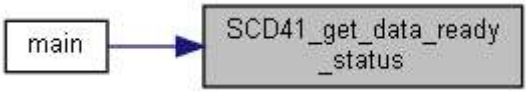
Here is the caller graph for this function:

◆ SCD41_get_data_ready_status()

```
uint8_t SCD41_get_data_ready_status ( uint8_t  SCD41_address,
                                      uint8_t  SCD41_MSB,
                                      uint8_t  SCD41_LSB
                                    )
```

Definition at line **239** of file **SCD41_AVR128_driver.h**.

Here is the caller graph for this function:

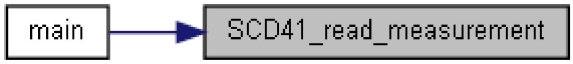


◆ SCD41_read_measurement()

```
void SCD41_read_measurement ( uint8_t  SCD41_address,
                              uint8_t  SCD41_MSB,
                              uint8_t  SCD41_LSB
                            )
```

Definition at line **135** of file **SCD41_AVR128_driver.h**.

Here is the caller graph for this function:



◆ SCD41_start_periodic_measurement()

```
void SCD41_start_periodic_measurement ( uint8_t  SCD41_address,
                                        uint8_t  SCD41_MSB,
                                        uint8_t  SCD41_LSB
                                      )
```

Definition at line **95** of file **SCD41_AVR128_driver.h**.

Here is the caller graph for this function:

◆ SCD41_stop_periodic_measurement()

```
void SCD41_stop_periodic_measurement ( uint8_t  SCD41_address,
                                       uint8_t  SCD41_MSB,
                                       uint8_t  SCD41_LSB
                                     )
```

Definition at line **116** of file **SCD41_AVR128_driver.h**.

◆ sensirion_common_generate_crc()

```
uint8_t sensirion_common_generate_crc ( const uint8_t *  data,
                                        uint16_t         count
                                      )
```

Definition at line **293** of file **SCD41_AVR128_driver.h**.

Variable Documentation

◆ getDataStatusReadyResponse

uint16_t getDataStatusReadyResponse

Definition at line **51** of file **SCD41_AVR128_driver.h**.

◆ getParseCO2

uint16_t getParseCO2

Definition at line **57** of file **SCD41_AVR128_driver.h**.

◆ getParseRh

uint16_t getParseRh

Definition at line **69** of file **SCD41_AVR128_driver.h**.

◆ getParseTemp

uint32_t getParseTemp

Definition at line **63** of file **SCD41_AVR128_driver.h**.

◆ readCO2CRC

uint8_t readCO2CRC

Definition at line **56** of file **SCD41_AVR128_driver.h**.

◆ readCO2LSB

uint8_t readCO2LSB

Definition at line **55** of file **SCD41_AVR128_driver.h**.

◆ readCO2MSB

uint8_t readCO2MSB

Definition at line **54** of file **SCD41_AVR128_driver.h**.

◆ readDataStatusCRC

uint8_t readDataStatusCRC

Definition at line **72** of file **SCD41_AVR128_driver.h**.

◆ readDataStatusLSB

uint8_t readDataStatusLSB

Definition at line **50** of file **SCD41_AVR128_driver.h**.

◆ readDataStatusMSB

uint8_t readDataStatusMSB

Definition at line **49** of file **SCD41_AVR128_driver.h**.

◆ readRhCRC

uint8_t readRhCRC

Definition at line **68** of file **SCD41_AVR128_driver.h**.

◆ readRhLSB

uint8_t readRhLSB

Definition at line **67** of file **SCD41_AVR128_driver.h**.

◆ readRhMSB

uint8_t readRhMSB

Definition at line **66** of file **SCD41_AVR128_driver.h**.

◆ readTempCRC

uint8_t readTempCRC

Definition at line **62** of file **SCD41_AVR128_driver.h**.

◆ readTempLSB

uint8_t readTempLSB

Definition at line **61** of file **SCD41_AVR128_driver.h**.

◆ readTempMSB

uint8_t readTempMSB

Definition at line **60** of file **SCD41_AVR128_driver.h**.

◆ storedCO2

uint8_t storedCO2[2]

Definition at line **75** of file **SCD41_AVR128_driver.h**.

◆ storedRH

uint8_t storedRH[2]

Definition at line **77** of file **SCD41_AVR128_driver.h**.

◆ storedTemp

uint8_t storedTemp[2]

Definition at line **76** of file **SCD41_AVR128_driver.h**.