

I2C(TW1) Driver for AVR Microcontrollers

Version: 1st

Date: 2/11/2023

- **API specification**

1.1 Type definitions

Name:	TWI_ConfigType
Type:	struct
Element:	I2C_Address address; I2C_BaudRate bit_rate;
Description:	These are I2C config (address,bit rate)

2. Function definitions

Service name:	TWI_init
Syntax:	void TWI_init(const

	TWI_ConfigType * Config_Ptr);
Parameters (in):	pointer to <u>struct</u> (TWI_ConfigType)
Parameters (in/out):	none
Parameters (out):	none
Return value:	none
Description:	Initialize the i2c(address,bit rate prescaler)

Service name:	TWI_start
Syntax:	void TWI_start(void)
Parameters (in):	NONE
Parameters (in/out):	None
Parameters (out):	None
Return value:	None
Description:	Clear the TWINT flag before sending the start bit TWINT=1 send the start bit by TWSTA=1
NUM:	

Service name:	TWI_stop
Syntax:	void TWI_stop(void)
Parameters (in):	NONE
Parameters (in/out):	None
Parameters (out):	NONE
Return value:	None
Description:	Clear the TWINT flag before sending the stop bit TWINT=1 send the stop bit by TWSTO=1
NUM:	

Service name:	TWI_writeByte
Syntax:	void TWI_writeByte(uint8 data)
Parameters (in):	uint8 data >> /* Put data On TWI data Register */
Parameters (in/out):	None
Parameters (out):	NONE
Return value:	None
Description:	write byte and send

NUM:	
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Service name:	TWI_readByteWithACK
Syntax:	uint8 TWI_readByteWithACK(void)
Parameters (in):	NONE
Parameters (in/out):	None
Parameters (out):	NONE
Return value:	uint8 >> /* Read Data */
Description:	Enable sending ACK after reading or receiving data TWEA=1
NUM:	

Service name:	TWI_getStatus
Syntax:	uint8 TWI_getStatus(void)
Parameters (in):	NONE
Parameters (in/out):	None
Parameters (out):	NONE
Return value:	uint8 >>>status
Description:	get status

NUM:	
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