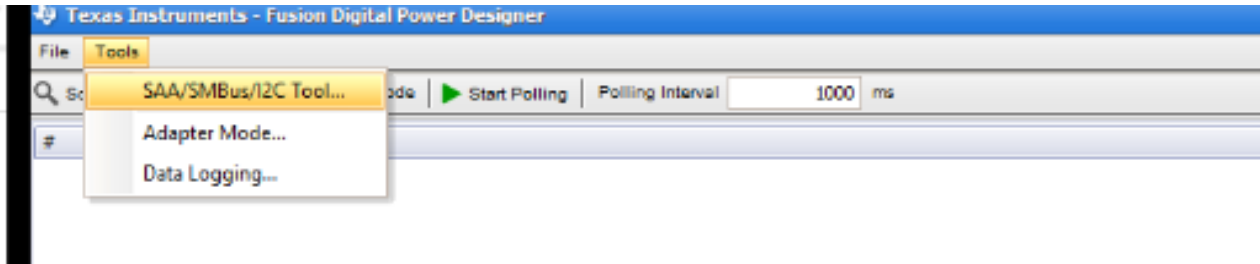


## Open Software:

1. Open the Fusion Power Designer software. On the home page locate the “Tools” section in the top ribbon and click on “SAA/SMBus/I2C Tool”



2. Once the interface opens locate the following Device Address, I2C Read, and I2C write. In the “Device Address” box enter the current device address of the device based on the resistor placed at the ADDR pin.

**Target / Miscellaneous**

Device Address: 48 d 30 h

**Read Data**

Cmd	Data	Status
<input type="radio"/> Receive Byte	---	n/a
<input type="radio"/> Read Byte	00 h	n/a
<input type="radio"/> Read Word	00 h	n/a
<input type="radio"/> Read Block	00 h	n/a
<input checked="" type="radio"/> I2C Read	01 h	n/a
Len 1 d		
<input type="radio"/> I2C Read Generic	Len 1 d	n/a
Does not include device address, nor Cmd. You must setup address, byte elements appropriately		
Read: ---		

Send  Keep Sending

**Write Data**

Cmd	Data	Status
<input type="radio"/> Send Byte	00 h	n/a
<input type="radio"/> Write Byte	00 h 00 h	n/a
<input type="radio"/> Write Word	00 h 0000 h	n/a
<input type="radio"/> Write Block	00 h	n/a
Length: 1 Note: do not include count/length byte in data		
<input checked="" type="radio"/> I2C Write	16 h	n/a
Data: 10		
Length: 1		
<input type="radio"/> I2C Write Generic	Len 1 d	n/a
Does not include device address, nor Cmd. You must setup address, byte elements appropriately		
Read: ---		

Send  Keep Sending

**Batch file**

---

**Process Calls**

Cmd	Data	Status
<input checked="" type="radio"/> Process Call (Word write, word read)	00 h 0000 h	n/a
<input type="radio"/> Block Process Call (Block write, block read)	00 h 00	n/a
Write Length: 1		
Read Length: ---		

Send

**Signals**

SMBALERT#: High Refresh

Control Lines: #1 #2 #3 #4 #5 (clicking sets)

<input type="radio"/> High	<input type="radio"/> High	<input type="radio"/> High	<input type="radio"/> High	<input type="radio"/> High
<input checked="" type="radio"/> Low	<input checked="" type="radio"/> Low	<input checked="" type="radio"/> Low	<input checked="" type="radio"/> Low	<input checked="" type="radio"/> Low

Refresh All

**GPIO Peek/Poke**

b7	b6	b5	b4	b3	b2	b1	b0
Read: <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Write: <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Read/Write

**Log**

```
13:37:30.698: SAA #1: PollPmbusSignalLines: ACK CONTROL #1 is Low
13:37:30.711: SAA #1: PollPmbusSignalLines: ACK CONTROL #2 is Low
13:37:30.713: SAA #1: PollPmbusSignalLines: ACK CONTROL #3 is Low
13:37:30.715: SAA #1: PollPmbusSignalLines: ACK CONTROL #4 is Low
13:37:30.717: SAA #1: PollPmbusSignalLines: ACK CONTROL #5 is Low
13:37:30.757: SAA #1: PollPmbusSignalLines: ACK SMBALERT# is High
13:37:30.758: SMBALERT# now High
```

## Example One: Disabling Monitoring

Monitoring can be disabled using register 0x1E of Bank One. This register assigns a bit to every monitoring channel. In the case of TPS389006004RTERQ1 0x1E will contain a data value of 00111111 or 0x3F by default, meaning CH1 through CH6 have monitoring enabled. Where the LSB corresponds to CH1.

### 8.5.2.14 MON\_CH\_EN Register (Address = 0x1E) [Default = X]

MON\_CH\_EN is shown in [Table 8-88](#).

Return to the [Summary Table](#).

Channel 1-6 Voltage Monitoring Enable register.

Table 8-88. MON\_CH\_EN Register Field Descriptions

Bit	Field	Type	Default	Description
7:6	RSVD	R/W	X	RSVD
5:0	MON[N]	R/W	0b	Voltage Monitoring Enable for VIN channel N (1 through 6). 0 = Channel Monitor disabled 1 = Channel Monitor enabled

To perform a read operation of register 0x1E of Bank One the user will first need to access Bank One of the register map. To perform this operation, write data 0x01 to register 0xF0, highlighted in blue below. Once the software provides an ACK the user has entered BANK One.

Now to read the register 0x1E provide the desired register address in the entry box next to the "I2C Read" text (highlighted in yellow), hit send. The data log below will provide the received read from the register.

**Target / Miscellaneous**  
Device Address: 48 d 30 h

**Read Data**

Cmd	Data	Status
<input type="radio"/> Receive Byte	---	n/a
<input type="radio"/> Read Byte	00 h ---	n/a
<input type="radio"/> Read Word	00 h ---	n/a
<input type="radio"/> Read Block	00 h ---	n/a
<input checked="" type="radio"/> I2C Read	1E h 3F	ACK
Len 1 d		
<input type="radio"/> I2C Read Generic	Len 1 d	n/a
<i>Does not include device address, nor Cmd. You must setup address, byte elements appropriately</i>		
Length: 0 Read: ---		

Keep Sending

**Write Data**

Cmd	Data	Status
<input type="radio"/> Send Byte	00 h	n/a
<input type="radio"/> Write Byte	00 h 00 h	n/a
<input type="radio"/> Write Word	00 h 0000 h	n/a
<input type="radio"/> Write Block	00 h 00	n/a
Length: 1 Note: do not include count/length byte in data		
<input checked="" type="radio"/> I2C Write	F0 h 01	ACK
Length: 1		
<input type="radio"/> I2C Write Generic		n/a
<i>Does not include device address, nor Cmd. You must setup address, byte elements appropriately</i>		
Length: 0		

Keep Sending

**Batch file**

---

**Process Calls**

Cmd	Data	Status
<input checked="" type="radio"/> Process Call (Word write, word read)	00 h 0000 h ---	n/a
<input type="radio"/> Block Process Call (Block write, block read)	00 h 00	n/a
Write Length: 1 Read Length: ---		

**Signals**

SMBALERT#: High

Control Lines: #1 #2 #3 #4 #5  
(clicking sets)  High  High  High  High  High  High  Low  Low  Low  Low  Low

**GPIO Peek/Poke**

	b7	b6	b5	b4	b3	b2	b1	b0
Read:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Write:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Log**

```
13:50:38.645: SAA #1: I2CWrite (Address 48d, Cmd 0xF0, 0x01): ACK
13:50:41.516: SAA #1: I2CRead (Address 48d, Cmd 0x1E): ACK 0x3F
```

To disable the monitoring capability of every monitoring channel the user must write data 0x00 (00000000) to register 0x1F. This is done using the same "I2C Write" entry, highlighted in blue. Once the interface responds with an ACK the write command has been successful.

Status	Write Data	Cmd	Data	Status
n/a	<input type="radio"/> Send Byte	00 h		n/a
n/a	<input type="radio"/> Write Byte	00 h	00 h	n/a
n/a	<input type="radio"/> Write Word	00 h	0000 h	n/a
n/a	<input type="radio"/> Write Block	00 h	00	n/a
ACK	<input checked="" type="radio"/> I2C Write	1E h	00	ACK
n/a	<input type="radio"/> I2C Write Generic			n/a
	<i>Does not include device address, nor Cmd. You must setup address, byte elements appropriately</i>			
			Length: 0	

0

Send  Keep Sending