

I2C

1. Operation Overview

Can confirm master/slave of I2C by input command at the Teraterm.

2. Basic Operation

It display "command >" on Teraterm. Can work slave/master of I2C by inputting command under command formats.

Can switch master to slave by the command. Can input command when I2C work master mode.

• command format :

"command[_parameter]"

Note: Refer command list

The Parameter is different by command.

• UART setting:

TXD

:PK1

Baud Rate

:115200(bps)

Data

:8(bit)

Parity

: None

Stop Bit

:1(bit)

Flow Control

: None

• I2C setting :

SCL(PB1)

SDA(PB0)

3. Display example

I2C Master

```
I2C TEST - I2C0

-----
| I2C master mode |
-----

command > write
master
sa B0
tx[0] 00
tx[1] 01
tx[2] 02
tx[3] 03

command > read
master
sa B0
tx[0] 00
tx[1] 01
rx[0] 80
rx[1] 81

command >
```

I2C Slave

```
I2C TEST - I2C0

-----
| I2C master mode |
-----

command > slave

-----
| I2C slave mode |
-----

slave
sa B0
rx[0] 00
rx[1] 01
rx[2] 02
rx[3] 03

slave
sa B0
rx[0] 00
rx[1] 01
tx[0] 80
tx[1] 81

slave
```

[Log information]
 "I2C0" means ch of I2C.
 "sa B0" means Slave Address.
 "tx[]" means TX data and "rx[]" means RX data.

Command list

command	description	parameter(hex)		exsample of input	remarks
		1 (data form1)	2 (data form2)		
write	Data sending	XX ...	XX ...	"write"	The size of sending data is total byte number of "data_form1 + data_form2".
		[slave_address]	[master_tx_data]	"write B0" "write B011223344"	
read	Data sending+ Data reciving	XX ...	XX ...	"read"	The size of send/receive is follows. TX: The byte number of data_form1 RX: The byte number of data_form2
		[slave_address]	[master_tx_data]	"read B0" "read B05566"	
slave	switch to Slave Mode	XX	-	"slave" "slave B0"	After switch to slave mode of I2C, it wait to receive slave address. When the total receive data size is more than size of "data_form1 + data_form2", it output slave data log on the Teraterm.When log data output 10 times, it return Master mode.
		[slave_address]	-		

Note1)"XX" means hexadecimal. Ex. In case of 0x12, input "12".

Note2)Can omit parameter of [].