G8200 FPGA Test Report

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Spec
Test Condition
Test Item
I2C Test Pattern
Device Address Check
Read/Write Test
Write/Read Data to Register Check
確認暫存器寫入功能

Spec

• Address = 0X48

Test Condition

• Clock = 400KHz

Test Item

Item	Result
<u>I2C Test Pattern</u>	Fail

I2C Test Pattern

Item	Result
Read/Write Test	Pass
Write/Read Data to Register Check	Fail

Device Address Check

Read/Write Test

- Action: Read register 0 from device Address 0~127.
- Check: If there is any response from the address other than 0X48
- Result: Pass

Test Log

Write/Read Data to Register Check

確認暫存器寫入功能

- Action:
 - 對 Register 0x00~0x0xFF 開始執行單筆寫入 1byte 到 256byte
 - o 寫入1byte是以一循環是以 bit 位移七次,也就是 byte 值為 1->2->4->8->...->127 為寫入循環
- Check: 檢查是否有寫回ACK
- Result:
 - o 寫入 OXFO 後,再寫入其他register沒有發出ACK

```
I2C Write Address= 0X48, reg 0XF0
Data = 0x01 ACK
Data = 0x02 ACK
Data = 0x04 ACK
Data = 0x08 ACK
Data = 0x10 ACK
Data = 0x20 ACK
Data = 0X40 ACK
Data = 0 \times 80 ACK
I2C Write Address= 0X48, reg 0XF1
Data = 0X01 Failed
Data = 0x02 Failed
Data = 0x04 Failed
Data = 0x08 Failed
Data = 0x10 Failed
Data = 0x20 Failed
Data = 0X40 Failed
Data = 0x80 Failed
```

Write REG 0XF0 = 0X01. PASS 5.3 V 3.3 V 1.3 V -700 m\ -2.7 V P1:dutv(C1) 18.788 % P4:---P5:---P6:---HD Tbase -38.0 µs Trigger 100 12 Bits 10.0 µs/div Normal 1.64 V 1 MS 10 GS/s Edge Neg X1= 23.9265 μs Δ X= 116.3 ns X2= 24.0428 μs $1/\Delta$ X= 8.598 MHz Write REG 0XF1 = 0X01 after write REG0XF0. No ACK 5.3 V 3.3 V 1.3 V

P4:---

P5:---

P6:---

P7:---

| 12 Bits | 10.0 μs/div | 10 ms/div | 10.5 μs/div | 10.5

P8:---

• Note:

o 重複寫G8200會發生錯誤 => add MCU I2C write timeout

P2:freq(C1) 326.3488 kHz

P1:duty(C1) 29.421 %