**MON32信号测试**

1. 为保证测试的有效性，每条命令应至少间隔10ms，设置报警门限值后应等待500ms再进行监测，因此不可直接复制、粘贴执行多条命令。
2. 严格按照步骤顺序执行。若其中某个步骤做错了，需断电从头开始测试。
3. 以下步骤中，蓝色为应执行的命令，红色表示为应该重点观测的信息。
4. 使用测试板fw版本1.0.2及以上版本，模块fw版本S0.5及以上版本。

**步骤：**

1. 测试板、模块上电。
2. 如果模块未曾定标过，需写入如下临时光开关定标数据。

>debug cal sw1 1 10000 10000

Time is 47ms

Returned status from module is 0 (= 0)

Command returned normal status

>debug cal sw1 6 10000 10000

Time is 46ms

Returned status from module is 0 (= 0)

Command returned normal status

>debug cal sw2 1 10000 10000

Time is 48ms

Returned status from module is 0 (= 0)

Command returned normal status

>debug cal sw4 10 10000 10000

Time is 46ms

Returned status from module is 0 (= 0)

Command returned normal status

>debug cal sw5 1 10000 10000

Time is 46ms

Returned status from module is 0 (= 0)

Command returned normal status

>debug cal sw5 3 10000 10000

Time is 46ms

Returned status from module is 0 (= 0)

Command returned normal status

>debug cal sw6 1 10000 10000

Time is 46ms

Returned status from module is 0 (= 0)

Command returned normal status

>debug cal sw8 10 10000 10000

Time is 46ms

Returned status from module is 0 (= 0)

Command returned normal status

>debug cal tosa 1 0 0 0 0

Time is 90ms

Returned status from module is 0 (= 0)

Command returned normal status

>

1. 验证txsw D0-D5, strobe, mode信号：按照顺序执行以下命令，使用IO模式将通道切换到第2 to 32路，然后回读switch返回通道为2 to 32。使用IO模式将通道切换到第1 to 1路，然后回读switch返回通道为1 to 1。使用串口命令模式将通道切换到2 to 32路，然后回读switch返回通道为2 to 32。

>debug txsw\_io 2 to 32

Set value: 0X3F

Command returned normal status

>txsw read

Time is 9ms

Returned status from module is 0 (= 0)

TX switch channel is 2 to 32

Command returned normal status

>debug txsw\_io 1 to 1

Set value: 0

Command returned normal status

>txsw read

Time is 9ms

Returned status from module is 0 (= 0)

TX switch channel is 1 to 1

Command returned normal status

>txsw write 2 to 32

Time is 40ms

Returned status from module is 0 (= 0)

Command returned normal status

>txsw read

Time is 9ms

Returned status from module is 0 (= 0)

TX switch channel is 2 to 32

Command returned normal status

>

1. 相同方法验证rxsw D0-D4, strobe, mode信号：按照顺序执行以下命令，使用IO模式将通道切换到第32路，然后回读switch返回通道为32。使用IO模式将通道切换到第1路，然后回读switch返回通道为1。使用串口命令模式将通道切换到第32路，然后回读switch返回通道为32。

>debug rxsw\_io 32

Set value: 0X1F

Command returned normal status

>rxsw read

Time is 9ms

Returned status from module is 0 (= 0)

RX switch channel is 32

Command returned normal status

>debug rxsw\_io 1

Set value: 0

Command returned normal status

>rxsw read

Time is 9ms

Returned status from module is 0 (= 0)

RX switch channel is 1

Command returned normal status

>rxsw write 32

Time is 40ms

Returned status from module is 0 (= 0)

Command returned normal status

>rxsw read

Time is 9ms

Returned status from module is 0 (= 0)

RX switch channel is 32

Command returned normal status

>

1. 验证sw\_ready信号，此时sw\_ready都应为有效。

>debug monitor

Alarm signal is not set

TX Switch Ready signal is set

RX Switch Ready signal is set

L\_Ready signal is not set

Command returned normal status

>

1. 验证sw1\_block、sw\_ready信号。使block变为有效，txsw将成为block状态，sw1\_ready将变为无效。

>debug pin sw1\_block 0

Command returned normal status

>txsw read

Time is 2ms

Returned status from module is 0 (= 0)

TX switch channel is blocked

Command returned normal status

>debug monitor

Alarm signal is not set

TX Switch Ready signal is not set

RX Switch Ready signal is set

L\_Ready signal is not set

Command returned normal status

>

1. 验证pro\_dis\_n管脚、Alarm管脚：查询内部异常状态位、Alarm状态位，使开启激光器信号有效，由于没有有效定标数据，再查询均应显示异常，Alarm有报警。

>debug inter\_exp

Time is 4ms

Returned status from module is 0 (= 0)

Internal Exception Code is 0X80000000

Command returned normal status

>debug pin pro\_dis\_n 0

Command returned normal status

>debug inter\_exp

Time is 4ms

Returned status from module is 0 (= 0)

Internal Exception Code is 0X80001800

Command returned normal status

>alarm

Time is 2ms

Returned status from module is 0 (= 0)

Alarm: 0X100

Command returned normal status

>debug monitor

Alarm signal is set

TX Switch Ready signal is not set

RX Switch Ready signal is set

L\_Ready signal is not set

Command returned normal status

>

1. 验证hard\_reset、LATCH管脚：查询管脚状态，使hard\_reset为0，此时vsersion命令通信失败。再次查询管脚状态，查询结果与第七步查询的结果保持一致。将hard\_reset设为1，version通信成功。

>debug pin hard\_reset 0

Command returned normal status

>version

process\_command,2163: Receive failed : Received timeout 1

Command returned error status, Returned code is 101 (= 0X65)

>debug monitor

Alarm signal is set

TX Switch Ready signal is not set

RX Switch Ready signal is set

L\_Ready signal is not set

Command returned normal status

>debug pin hard\_reset 1

Command returned normal status

>version

Time is 3ms

Returned status from module is 0 (= 0)

Firmware Version: H1.1S0.5

Command returned normal status

>

1. 验证master\_reset管脚：master\_reset为0时，vsersion命令通信失败。将master\_reset设为1时，通信成功。

>debug pin master\_reset 0

Command returned normal status

>version

process\_command,2163: Receive failed : Received timeout 1

Command returned error status, Returned code is 101 (= 0X65)

>debug pin master\_reset 1

Command returned normal status

>version

Time is 3ms

Returned status from module is 0 (= 0)

Firmware Version: H1.1S0.5

Command returned normal status

>

注意：由于某些原因，pro\_ctl和L\_Ready\_N在裸板阶段不能测试。需等到Tosa定标之后

1. 开启激光器，执行debug monitor查看L\_Ready\_N是否为”set”状态。
2. 开启调制模式，执行debug timer on查看激光器是否输出调制信号。