**1x64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1.0.3及以上版本，模块fw版本01.01及以上版本。

**步骤：**

1. 测试板、模块上电，解锁内部命令。

>debug unlock

Returned status from module is 0 (= 0)

success

1. 如果模块未曾定标过，需写入如下三条临时光开关定标数据。

>debug cal sw1 1 5000 -10000

Returned status from module is 0 (= 0)

success

>debug cal sw1 6 -3000 4000

Returned status from module is 0 (= 0)

success

>debug cal sw2 1 3000 3000

Returned status from module is 0 (= 0)

success

>debug cal sw6 9 8000 -8000

Returned status from module is 0 (= 0)

success

1. 观察alarm和sw\_ready信号，均应为"not set"状态

>debug monitor

Alarm signal is not set

Switch Ready signal is not set

success

1. 验证sw\_mode信号：写0配置成io模式，串口发送切换到第64路命令，虽命令返回成功，但实际切换失败。回读switch返回当前通道是0，switch\_ready仍然为"not set"。

>debug pin sw\_mode 0

success

>switch write 64

Returned status from module is 0 (= 0)

success

>switch read

Returned status from module is 0 (= 0)

Switch channel is 0

success

>debug monitor

Alarm signal is not set

Switch Ready signal is not set

success

1. 验证sw\_D0-D5, sw\_strobe, sw\_ready信号：按照顺序执行以下命令，使用IO模式将通道切换到第64路，然后回读switch返回通道为64，switch\_ready为"is set"。

>debug pin D0 1

success

>debug pin D1 1

success

>debug pin D2 1

success

>debug pin D3 1

success

>debug pin D4 1

success

>debug pin D5 1

success

>debug pin sw\_strobe 0

success

>debug pin sw\_strobe 1

success

>switch read

Returned status from module is 0 (= 0)

Switch channel is 64

success

>debug monitor

Alarm signal is not set

Switch Ready signal is set

success

1. 验证sw\_D0-D5信号：执行以下命令，使用IO模式将通道切换到第1路，回读switch返回通道为1

>debug pin D0 0

success

>debug pin D1 0

success

>debug pin D2 0

success

>debug pin D3 0

success

>debug pin D4 0

success

>debug pin D5 0

success

>debug pin sw\_strobe 0

success

>debug pin sw\_strobe 1

success

>switch read

Returned status from module is 0 (= 0)

Switch channel is 1

success

1. 验证sw\_mode信号：写1配置成串口模式，串口发送切换到第64路命令，

>debug pin sw\_mode 1

success

>switch write 64

Returned status from module is 0 (= 0)

success

>switch read

Returned status from module is 0 (= 0)

Switch channel is 64

success

1. 验证alarm信号：配置门限值触发报警，alarm为"is set"，恢复门限值报警清除，alarm为"not set"。

>debug cal thr 2 2.40

Returned status from module is 0 (= 0)

success

>debug cal thr 1 2.45

Returned status from module is 0 (= 0)

success

>debug monitor

Alarm signal is set

Switch Ready signal is set

success

>debug cal thr 1 2.65

Returned status from module is 0 (= 0)

success

>debug cal thr 2 2.63

Returned status from module is 0 (= 0)

success

>debug monitor

Alarm signal is not set

Switch Ready signal is set

success

1. 验证hard\_reset、LATCH管脚：hard\_reset为0时，switch\_ready为"is set"，alarm为"not set"，vsersion命令通信失败。将hard\_reset设为1时，通信成功，alarm和sw\_ready信号状态不变。

>debug pin hard\_reset 0

success

>debug monitor

Alarm signal is not set

Switch Ready signal is set

success

>version

process\_command,1357: Receive failed : Received timeout 1

Command execution failed, Returned code is 101 (= 0X65)

>debug pin hard\_reset 1

success

>debug monitor

Alarm signal is not set

Switch Ready signal is set

success

>version

Returned status from module is 0 (= 0)

Product Number: 45070038

Manufacture Date: 20200809

Firmware Version: ONET01.0101.01

Assembly Serial Number: 123456789012

Filter Serial Number: 12345678

success

1. 验证master\_reset管脚：master\_reset为0时，switch\_ready为"is set"，alarm为"not set"，vsersion命令通信失败。将master\_reset设为1时，通信成功，alarm和sw\_ready均为"noe set"。

>debug pin master\_reset 0

success

>debug monitor

Alarm signal is not set

Switch Ready signal is set

success

>version

process\_command,1357: Receive failed : Received timeout 1

Command execution failed, Returned code is 101 (= 0X65)

>debug pin master\_reset 1

success

>debug monitor

Alarm signal is not set

Switch Ready signal is not set

success

>version

Returned status from module is 0 (= 0)

Product Number: 45070038

Manufacture Date: 20200809

Firmware Version: ONET01.0101.01

Assembly Serial Number: 123456789012

Filter Serial Number: 12345678

success