**GPIO setting**

Device Tree

Because need to use the gpio2\_23, you need to remove the original settings

// USER1 {

// label = "Up";

// linux,code = <KEY\_UP>;

// gpios = <&gpio2 23 GPIO\_ACTIVE\_LOW>;

// };

power fail detect io

#define POWER\_SUB\_INT GPIO\_TO\_PIN(2,23)

#define POWER\_MAIN\_INT GPIO\_TO\_PIN(3,21)

**Install kernel module**

insmod power\_fail.ko

[ 194.569832] pxm\_io\_int\_init\_module

[ 194.573551] pxm\_io\_int\_config

[ 194.576539] gpio\_to\_irq(55)

[ 194.579418] Mapped int 94

[ 194.582189] gpio pin is high

[ 194.585080] IEI GPIO INFO [ver: 0.0.1] enable successfully!

**Run Dhrystone to Simulate full load(Because it is dual core, we run twice)**

|  |
| --- |
| root@am57xx-evm:/run/media/mmcblk0p1# dhrystone 700000000 &  [1] 1345  Dhrystone Benchmark, Version 2.1 (Language: C)  Program compiled without 'register' attribute  number of runs = 700000000  Execution starts, 700000000 runs through Dhrystone  root@am57xx-evm:/run/media/mmcblk0p1# dhrystone 700000000 &  [2] 1352  Dhrystone Benchmark, Version 2.1 (Language: C)  Program compiled without 'register' attribute  number of runs = 700000000  Execution starts, 700000000 runs through Dhrystone |

**Test power fail function**

root@am57xx-evm:/run/media/mmcblk0p1# ./power\_fail\_ap

[ 89.511459] GPIO\_SET\_PID 0x555

[ 89.514527] pid = 1365

1. TEST SIG

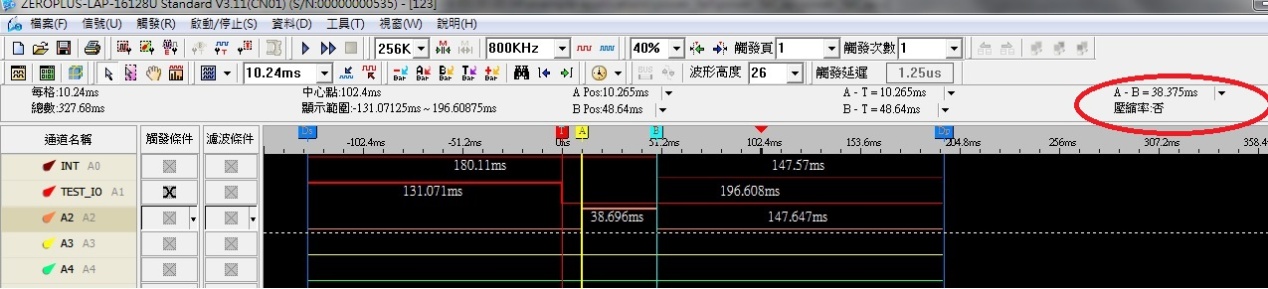
99. Exit Program

Please enter the choice>>

Unplug the power supply and get power\_fail signal

get 0x20001 <--- power\_fail detect

Power hold time is 38.375ms on full load



Power hold time is 133ms on idle

