

ADDI-DATA: test ring buffer

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```
# cat reload.sh
rmmod apci1710ctr
rmmod apci1710
insmod apci1710.ko
insmod apci1710ctr.ko
#
# . reload.sh
[81810.853216] apci1710ctr: calling proc_remove()
[81810.858650] apci1710: board 0000:05:04.0 unloaded
[81810.865592] apci1710: loaded
[81810.868596] apci1710: board 0000:05:04.0 managed (minor number will be 0)
[81810.875387] module 0: ID is 0x53433237 (functionality: INCREMENTAL_COUNTER, version: 0x3237)
[81810.883811] module 1: ID is 0x53433237 (functionality: INCREMENTAL_COUNTER, version: 0x3237)
[81810.892236] module 2: ID is 0x53433237 (functionality: INCREMENTAL_COUNTER, version: 0x3237)
[81810.900660] module 3: ID is 0x53433237 (functionality: INCREMENTAL_COUNTER, version: 0x3237)
[81810.918126] apci1710ctr: looking for board 0
[81810.922396] apci1710ctr: calling proc_create()
[81810.926845] apci1710ctr: beginning test
[81810.930687]
[81810.930687] slac_inc_counter_kernel: Initialization of module 0 successful
#
# cat /proc/driver/ctr0/status
ReadLatchRegisterStatus: 0x00000000 (0)
ReadLatchRegisterValue: 0x00000000 (0)
Interrupt count: 0
Frame count: 0
Overflow count: 0
Buffer level: 0 / 7
#
# echo 42 > /proc/driver/ctr0/counter
#
# cat /proc/driver/ctr0/status
ReadLatchRegisterStatus: 0x00000000 (0)
ReadLatchRegisterValue: 0x00000000 (0)
Interrupt count: 0
Frame count: 3
Overflow count: 0
Buffer level: 3 / 7
#
# echo 44 > /proc/driver/ctr0/counter
```

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[81859.060538] apci1710ctr: ringbufPeek: counter=0x00000011, frameCount=0
#
# echo 44 > /proc/driver/ctr0/counter
[81870.790383] apci1710ctr: ringbufPeek: counter=0x00000011, frameCount=0
#
# echo 43 > /proc/driver/[81876.699279] apci1710ctr: ringbufPop: counter=0x00000011, frameCount=0
ctr0/counter
#
# echo 44 > /proc/driver/ctr0/counter
[81884.024314] apci1710ctr: ringbufPeek: counter=0x00000022, frameCount=1
#
# cat /proc/driver/ctr0/status
ReadLatchRegisterStatus: 0x00000000 (0)
ReadLatchRegisterValue: 0x00000000 (0)
Interrupt count: 0
Frame count: 3
Overflow count: 0
Buffer level: 2 / 7
#
# echo 42 > /proc/driver/ctr0/counter
# echo 42 > /proc/driver/ctr0/counter
[81905.052097] apci1710ctr: ringbufPush(0x33) failed
#
# cat /proc/driver/ctr0/status
ReadLatchRegisterStatus: 0x00000000 (0)
ReadLatchRegisterValue: 0x00000000 (0)
Interrupt count: 0
Frame count: 8
Overflow count: 1
Buffer level: 7 / 7
#
# echo 43 > /proc/driver/ctr0/counter
[81946.062610] apci1710ctr: ringbufPop: counter=0x00000022, frameCount=1
#
# echo 42 > /proc/driver/ctr0/counter
[81955.253138] apci1710ctr: ringbufPush(0x22) failed
[81955.257969] apci1710ctr: ringbufPush(0x33) failed
#
# echo 43 > /proc/driver/ctr0/counter
[81961.992226] apci1710ctr: ringbufPop: counter=0x00000033, frameCount=2
# echo 43 > /proc/driver/ctr0/counter
[81963.486491] apci1710ctr: ringbufPop: counter=0x00000011, frameCount=3
# echo 43 > /proc/driver/ctr0/counter
[81964.248280] apci1710ctr: ringbufPop: counter=0x00000022, frameCount=4
# echo 43 > /proc/driver/ctr0/counter
[81965.000326] apci1710ctr: ringbufPop: counter=0x00000033, frameCount=5
# echo 43 > /proc/driver/ctr0/counter
[81965.957471] apci1710ctr: ringbufPop: counter=0x00000011, frameCount=6
# echo 43 > /proc/driver/ctr0/counter
[81966.738785] apci1710ctr: ringbufPop: counter=0x00000022, frameCount=7
```

```
# echo 43 > /proc/driver/ctr0/counter
[81967.725235] apci1710ctr: ringbufPop: counter=0x00000011, frameCount=8
# echo 43 > /proc/driver/ctr0/counter
[81970.704121] apci1710ctr: ringbufPop() failed
#
# echo 44 > /proc/driver/ctr0/counter
[81982.726989] apci1710ctr: ringbufPeek() failed
#
# cat /proc/driver/ctr0/status
ReadLatchRegisterStatus: 0x00000000 (0)
ReadLatchRegisterValue: 0x00000000 (0)
Interrupt count: 0
Frame count: 9
Overflow count: 3
Buffer level: 0 / 7
#
```