

## kobe.huang 总结:

### 1、原理:

WIFI使用OOB方式, 唤醒MCU。推荐使用OOB, Inbind 方式 (sdio polling) 会漏中断;

休眠后, 当有 “wifi事件” 收到, 会通过配置的gpio唤醒MCU。一般是低到高。

### 2、睡眠前输入dhd\_priv setsuspendmode 1

睡眠命令echo mem > /sys/power/state

### 3、“wifi事件” 可以在config.txt中设置 (和固件放在同一目录) :

```
1 dhd_master_mode=1
2 pkt_filter_del=100, 102, 103, 104, 105
3 pkt_filter_add=131 0 0 12 0xFFFF 0x886C, 132 0 0 12 0xFFFF 0x888E
```

*说明: 131, 132 不过滤, 100, 102, 103, 104, 105过滤*

*在driver代码中, 也有说明:*

```
1 include\ethernet.h:
2 #define ETHER_TYPE_8021Q 0x8100 /* 802.1Q */
3 #define ETHER_TYPE_IPV6 0x86dd /* IPv6 */
4 #define ETHER_TYPE_BRCM 0x886c /* Broadcom Corp. */
5 #define ETHER_TYPE_802_1X 0x888e /* 802.1x */
```

### 4、config.txt里面再加dhd\_msg\_level=0x901, 能看到具体是什么事件。

### 5、如果复测客户还是觉得有多的唤醒事件, 请在Makefile中加如下dump packet:

```
1 DHDCFLAGS += -DDHD_8021X_DUMP -DDHD_DHCP_DUMP -DDHD_ICMP_DUMP
2 -DDHD_TX_DUMP -DDHD_RX_DUMP -DDHD_TX_FULL_DUMP -DDHD_RX_FULL_DUMP
```

### 6、截图说明:

```

2436 [ 160.810023] [VFE_WARN]vfe vpu clock is null
2437 [ 160.817854] usb usb1: root hub lost power or was reset
2438 [ 160.828433] [VFE_ERR]sensor power on error at device number 0 when vfe resume!
2439 [ 160.828442] [VFE_ERR]sensor standby on
2440 [ 160.828449] [VFE]vfe resume work end!
2441 [ 160.874032] usb usb2: root hub lost power
2442 [ 161.110078] PM: resume of devices complete
2443 [ 161.137474] android.usb.gadget: high-speed
2444 [ 161.305317] [pm]aw_pm_end!
2445 [ 161.402986] Restarting tasks ... done
2446 [ 161.609373] adb_release
2447 [ 161.609562] adb_open
2448 [ 161.609572] adb_bind_config
2449 [ 161.609592] ep_matches, wrn: endpoint
2450 [ 161.628192] PM: suspend exit 2019-06-21 10:08:54.556462063 UTC
2451 root@Skb-Slam:/# [ 161.874594] android.usb.gadget: high-speed
2452 [ 201.130695] TX DUMP[wlan0] - ARP
2453 [ 201.134392] FF FF FF FF FF FF 28 ED E
2454 [ 201.142452] 08 00 06 04 00 01 28 ED E

```

字符串

行包含查找字符串:

系统唤醒

```

128 [ 160.804642] PHY_Changemode: timing_change
129 [ 160.804657] _get_right_timing_para, send
130 [ 160.804670] nand_release_lock
131 [ 160.804674] [NAND][NAND] nand_resume
132 [ 160.804807] [VFE]vfe_resume
133 [ 160.804825] [VFE]resume_work_handle, vfe_resume
134 [ 160.804852] [cedar] standby_resume
135 [ 160.805026] RX DUMP[wlan0] - BRCM
136 [ 160.810023] [VFE_WARN]vfe vpu clock is null
137 [ 160.817854] usb usb1: root hub lost power
138 [ 160.828433] [VFE_ERR]sensor power on error at device number 0 when vfe resume!
139 [ 160.828442] [VFE_ERR]sensor standby on
140 [ 160.828449] [VFE]vfe_resume_work_end!
141 [ 160.874032] usb usb2: root hub lost power
142 [ 161.110078] PM: resume of devices complete

```

收到TX数据，唤醒

## 7、给出建议:

- wifi唤醒的功能，就是当有 **wifi事件** 的时候，及时唤醒MCU。
- 建议，选择自己需要的唤醒事件。或用默认的唤醒。
- 当系统唤醒后，检测事件后，再进入休眠（客制程序中）。