REALTEK

Quick Guide for Wake on WLAN

Date: 2014/01/17

Version: 0.1

Quick Start Guide for Wake on Lan

(1) Support list:

.) USB interface: 8188EU, 8188CU, 8192DU, 8192EU.

.) SDIO interface: 8189ES, 8723BS.

(2) Requirements of wakeup via in-band and out-band methods:

.) In-band requirements:

- SDIO Interface:
    - SDIO host MUST support remote wakeup feature.
    - SDIO data1 MUST be wakeup source in the host platform.
    - The platform MUST keep power to WiFi chip in suspend state.
    - The platform MSUT work fine between suspend and resume.

- USB Interface:
    - USB host MUST support remote wakeup feature.
    - The platform MUST keep power to WiFi chip in suspend state.
    - The platform MSUT work fine between suspend and resume.

.) Out-band requirements:

- The GPIOof the **PLATFORM** MUST be wakeup source.
- The platform MUST keep power to WiFi chip in suspend state.
- The platform MSUT work fine between suspend and resume.
- The WIFI module MUST have the GPIO wakeup pin.

(3) Driver Configuration for Wake on Lan:

.) In-band configuration:

If using **SDIO DATA1 pin** or **USB protocol D+/D- toggle** in-band method to wakeup the host, driver need to do is only switch **CONFIG_WOWLAN** from "n" to "y" in Makefile as figure 1.


```
CONFIG_EXT_CLK = n
CONFIG_WOWLAN = y
CONFIG_GPIO_WAKEUP = n
```

(figure 1)

.) Out-band configuration:

If using out-band method, driver need to do is modify Makefile and config GPIO. The detail is as following:

n Makefile Configuration:

Switch **CONFIG_WOWLAN** and **CONFIG_GPIO_WAKEUP** from "n" to "y" as figure 2.

(figure 2)

n GPIO Configuration:

Please contact with RTK technical support team.

(4) The wake yo reasib table:

The DUT could be waked up by the WIFI chip with the following reasons:

Reason Value	Description N	ote
0x02	Receive group key change packet.	8723BS support GTK offld.
0x04	Receive disassociate packet.	
0x08	Receive de-auth. packet.	
0x10	AP power off or could not receive AP's beacon in a period tine	
0x21	Receive magic packet.	
0x22	Receive unicast packet.	The unicast packet included IP level.