



Quick Guide for Wake on WLAN

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Version: 0.1

Quick Start Guide for Wake on Lan

(1) Support list:

- .) USB interface: 8188EU, 8188CU, 8192DU, 8192EU, 8812AU.
- .) 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 MUST 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 MUST work fine between suspend and resume.

.) Out-band requirements:

- ✓ The GPIO of the **PLATFORM** MUST be wakeup source.
- ✓ The platform MUST keep power to WiFi chip in suspend state.
- ✓ The platform MUST 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
```

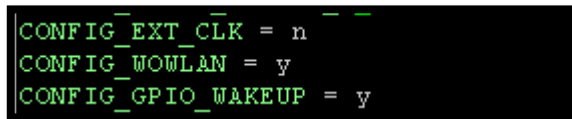
(figure 1)

.) Out-band configuration:

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

- Makefile Configuration:

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



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

(figure 2)

- 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	Note
0x01	Receive pairwise key change packet.	
0x02	Receive group key change packet.	8723BS support GTK offload.
0x04	Receive disassociate packet.	
0x08	Receive de-auth. packet.	
0x10	AP power off, or could not receive AP's beacon in a period time	
0x21	Receive magic packet.	
0x22	Receive unicast packet.	The unicast packet included IP level.