

Quick Start Guide for ETSI Adaptivity and Carrier Sensing Test ver. 1.1.0

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Release History

1.1.0	2021/07/19	1. Add configuration of adapting runtime setting with the selection of channel plan
1.0.1	2018/09/28	1. Add periodic idle time declaration.
1.0.0	2014/09/26	1. Add documentation for ADAPTIVITY_VERSION 7.0, 7.1, 7.2

1. Introduction

Realtek Wi-Fi solutions support both ETSI Adaptivity test and Carrier Sense test. This document describes ways to configure Wi-Fi driver for the corresponding test and simple debug methods.

※ The test item "periodic idle time" can be skipped by a declaration document from chip vendor. Please get the document from chip vendor for Certification Lab reference **Before** starting test.

※ According to the test requirement, the Wi-Fi performance will drop at interfering environment. Please enable this function only when you really need it.

2. Driver configuration

There are 2 configuration arguments in Makefile to control:

● CONFIG_RTW_ADAPTIVITY_EN

■ disable

Disable adaptivity function

■ enable

Enable adaptivity function

■ auto (driver version \geq 5.14)

Adapt runtime settings (disable/adaptivity/carrier sense) with the selection of channel plan.

● CONFIG_RTW_ADAPTIVITY_MODE

■ normal

For ETSI adaptivity test

■ carrier_sense

For carrier sense test

3. Driver configuration – disable (default setting)

To disable Realtek adaptivity function (also the default setting):

<code>CONFIG_RTW_ADAPTIVITY_EN = disable</code>

Check the configuration arguments through driver's proc interface at runtime:

```
# cat /proc/net/rtl8723bs/wlan0/odm/adaptivity
ADAPTIVITY_VERSION 9.7.08
RTW_ADAPTIVITY_EN_DISABLE
th_l2h_ini th_edcca_hl_diff
0x2d      7
```

4. Driver configuration – enable for ETSI Adaptivity test

If your product needs to fit the requirement of ETSI Adaptivity test:

```
CONFIG_RTW_ADAPTIVITY_EN = enable
CONFIG_RTW_ADAPTIVITY_MODE = normal
```

Check the configuration arguments through driver's proc interface at runtime:

```
# cat /proc/net/rtl8723bs/wlan0/odm/adaptivity
ADAPTIVITY_VERSION 9.7.08
RTW_ADAPTIVITY_EN_ENABLE
RTW_ADAPTIVITY_MODE_NORMAL
th_l2h_ini th_edcca_hl_diff
0x2d      7
```

5. Driver configuration – enable for Carrier Sense test

If your product needs to fit the requirement of Carrier Sense test:

```
CONFIG_RTW_ADAPTIVITY_EN = enable
CONFIG_RTW_ADAPTIVITY_MODE = carrier_sense
```

Check the configuration arguments through driver's proc interface at runtime:

```
# cat /proc/net/rtl8723bs/wlan0/odm/adaptivity
ADAPTIVITY_VERSION 9.7.08
RTW_ADAPTIVITY_EN_ENABLE
RTW_ADAPTIVITY_MODE_CARRIER_SENSE
th_l2h_ini th_edcca_hl_diff
0x2d      7
```

6. Driver configuration – adapt runtime setting with the selection of channel

plan (driver version >= 5.14)

If your product needs to adapt runtime setting with the selection of channel plan:

```
CONFIG_RTW_ADAPTIVITY_EN = auto
```

Check the configuration arguments through driver's proc interface at runtime:

```
# cat /proc/net/rtl8723bs/wlan0/odm/adaptivity
ADAPTIVITY_VERSION 9.7.08
RTW_ADAPTIVITY_EN_AUTO
th_l2h_ini th_edcca_hl_diff
0x2d      7
```