

Driver configuration for RF regulatory certification (V3.0)

2024/08/22

Introduction:

This document introduces which configurations SHOULD be involved when the product needs to comply with the country related RF certification.

Depending on different country's RF-related policy, below configurations of the end-product should be enabled as default before shipping if necessary.

Configurations and Regulations

(A) EN300 328 (Adaptivity function):

Realtek Wi-Fi solutions support both ETSI Adaptivity test and Carrier Sense test. Customers can find ways to configure Wi-Fi driver for the homologation test and simple debug methods in the document

“Quick_Start_Guide_for_Adaptivity_and_Carrier_Sensing_Test.pdf” in the driver package.

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

(B) For other RF-related certification request, customer should check the document “TX_Power_Setting_for_RF_Regulatory.pdf” for more details. If you didn't get the document before, please contact the hardware (HW) vendor for further information.

(C) For Realtek 11ax solution, It needs to set specific parameters which depends on the Region, Customers need to refer the document “Command Flow of RTK 11ax solution for Regulatory Certification” for detail before sending the Product to homologation testing (eg. FCC, CE testing).

Please contact the hardware (HW) vendor for further information if needed.

(D) “CONFIG_RTW_REGDB” option in Makefile

The newer driver keeps versions of regulatory database file in core/regdb/ folder of source tree and provides “CONFIG_RTW_REGDB” option in Makefile to select which regulatory database file to be compiled.

The file name of Realtek regulatory database in core/regdb/ folder is:

rtw_regdb_rtk_VERSION_STR.c

For example:

To choose Realtek 60-32 regulatory database,

set CONFIG_RTW_REGDB = **rtk_60-32** then

core/regdb/rtw_regdb_**rtk_60-32**.c is compiled as the regulatory database.

To choose Realtek 8852CE_M.2_2230-67-51 regulatory database,

set CONFIG_RTW_REGDB = **rtk_8852CE_M.2_2230-67-51** then

core/regdb/rtw_regdb_**rtk_8852CE_M.2_2230-67-51**.c is compiled as the regulatory database.

Customers **who use RTK_PRIV regulatory database (not from OS)** should use this option to configure which version of database to be used to fit the RF-Regulation authentication status of their shipping product.

For shipping products to update driver and keep using the original version of regulatory database, if the original driver has “core/regdb/” folder in source tree, customer can modify “CONFIG_RTW_REGDB” option in new driver to the value of original driver. Otherwise, please follow these step:

Step 1: Check the channel plan version on the shipping product. (with original driver)

```
#cat /proc/net/rtl8852bu/chplan_ver
```

Step 2 : Get and record the return value

60-32

Step 3 : Modify the Makefile in the updated driver with a prefix “rtk_” and fill it to the flag “CONFIG_RTW_REGDB” before compile.

```
##### RTW regulatory DB selection #####
```

```
# RTW regulatory database version to select
```

```
# *MUST* config to match the certification status of shipping product,
```

```
# otherwise regression issue on regulatory may happen.
```

```
CONFIG_RTW_REGDB = rtk_60-32
```

Reference:

<https://www.ecfr.gov/current/title-47/chapter-I>