

How to set bt-coex antenna isolation parameters on combo card

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Introduction

To ensure that WIFI and BT have better connection quality and BT coexistence mechanism works well, we need to set related parameters of BT coexistence antenna isolation correctly.

Through setting those parameters, total antenna numbers of WIFI and BT on hardware module and antenna distance between WIFI and BT, let BT coexistence mechanism to determine how to allocate resource between WIFI and BT.

These are two parameters must comply with the actual situation; otherwise it will greatly affect the performance of WIFI and BT.

Note!

- Sample configure file is in this folder, file name is “wifi_ant_isolation.txt”.
- Store “wifi_ant_isolation.txt” in a read only partition is a good idea to avoid damage.
- “wifi_ant_isolation.txt” cannot be removed by upgrade image and reset default.

Configure steps

1. Prepare configure file, file name must be “wifi_ant_isolation.txt”.
 - A. Set the parameters according to the actual situation.
 - ANT_NUMBER - antenna numbers of WIFI and BT on module.
(The default value is 2)
 - ANT_DISTANCE - the distance between WIFI antenna and BT antenna.
(The default value is 15)
 - RFE_TYPE was wifi and BT antenna type.
RFE_TYPE = 0 was SPDT (switch) , RFE_TYPE = 1 was coupler.
Ex: 8192eu+8761aw was SPDT, 8812au+8761 was coupler

This parameter can confirm with FAE.
(If not assign, default value was 1)
(If ANT_NUMBER=3, don't care this parameters)

2. Load parameter from file – by modify Makefile.
 - A. Modify the CONFIG_LOAD_PHY_PARA_FROM_FILE to y .
Ex: `CONFIG_LOAD_PHY_PARA_FROM_FILE = y`
3. Copy configure file to specified folder:
 - A. Make new folder according to WIFI chip name.
Ex: `/lib/firmware/rtl8192e`
 - B. Move “wifi_ant_isolation.txt” to above folder.
4. 3 ways to decide if driver refer to configure file
 - A. By change configuration
Step-1.Modify file path in Makefile
Ex: `EXTRA_CFLAGS += -DREALTEK_CONFIG_PATH=\"/lib/firmware/\"`
Or
 - B. By change configuration
Step-1.Modify file path in os_intfs.c
Ex: `char *rtw_phy_file_path = "/lib/firmware/";`
Or
 - C. By change load-time module parameter
`$>insmod 8192eu.ko rtw_phy_file_path="/lib/firmware/"`
5. Parameter Notes:
 - A. rtw_phy_file_path:
 - i. rtw_phy_file_path="/lib/firmware/", path /lib/firmware/ is the location of tx power related file.
6. Folder name for each supported chip.
 - A. rtl8192e
 - B. rtl8812a