

Quick Start Guide for starting Soft-AP mode

Realtek

(A) How to start Soft-AP mode:

(1) disable network management or other wireless tools, e.g. wpa_supplicant

(2) uncompress the driver and then compile the driver

./make

(3) **insmod 8192cu.ko**

(4) **ifconfig wlan0 up**

(5) **ifconfig wlan0 192.168.0.1** (using the static ip for testing)

(6) compile HOSTAP, unpack wpa_supplicant_hostapd-0.8_rtw_20120803.zip in the folder (wpa_supplicant_hostapd-0.8\hostapd)

./make

(7) start hostapd daemon:

./hostapd rtl_hostapd.conf -B

(B) Configure file for Soft-AP mode setting:

(1) rtl_hostapd.conf is the configure file for functions setting.

(2) the major variable setting in the rtl_hostapd.conf configure file,

(i) basic configuration

interface=wlan0

ssid=rtwap

channel 1-14 is 2.4 GHz ; channel 36, 40, 44, 46, 48, 52, 56, 60,

64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149,

153, 157, 161 is 5GHz

The channels that are available for use in a particular country differ

according to the regulations of that country.

channel=6

Operation mode (a = IEEE 802.11a, b = IEEE 802.11b, g = IEEE

802.11g, Default: IEEE 802.11b)

hw_mode=g

#If the wireless interface is included in a bridge,

#an additional configuration parameter, bridge, is needed

bridge=br0

(ii) security mode configuration

```
# This field is a bit field that can be used to enable WPA
# (IEEE 802.11i/D3.0)
# and/or WPA2 (full IEEE 802.11i/RSN):
# bit1 = IEEE 802.11i/RSN (WPA2) (dot11RSNAEnabled)
wpa=2
```

```
# wpa_passphrase=secret passphrase
wpa_passphrase=87654321
```

```
# Set of accepted key management algorithms
# (WPA-PSK, WPA-EAP, or both).
wpa_key_mgmt=WPA-PSK
```

```
# Set of accepted cipher suites (encryption algorithms)
# for pairwise keys
wpa_pairwise=CCMP
```

(iii) IEEE 802.11n related configuration

```
# ieee80211n: Whether IEEE 802.11n (HT) is enabled
# 0 = disabled (default)
# 1 = enabled
ieee80211n=1
# ht_capab: HT capabilities (list of flags)
# Supported channel width set: [HT40-] = both 20 MHz and 40 MHz
# with secondary channel below the primary channel;
# [HT40+] = both 20 MHz and 40 MHz with secondary channel upon
# the primary channel
# Note: There are limits on which channels can be used with HT40- and
# HT40+. Following table shows the channels that may be available for
# HT40- and HT40+ use per IEEE 802.11n Annex J:
# freq          HT40-          HT40+
# 2.4 GHz       5-13           1-7 (1-9 in Europe/Japan)
# 5 GHz         40,48,56,64   36,44,52,60
# Short GI for 20 MHz: [SHORT-GI-20] (disabled if not set)
# Short GI for 40 MHz: [SHORT-GI-40] (disabled if not set)
ht_capab=[SHORT-GI-20][SHORT-GI-40][HT40]
```

(iv) Check the station connected to softap using hostapd_cli:

```
./hostapd_cli all_sta
```

(v) How to start WPS process as internal registrar?

1. for PIN code = 12345670

```
./hostapd_cli wps_pin any 12345670
```

2. for PBC

```
./hostapd_cli wps_pbc
```

(C) How to get the best channel?

1. Assume the WLAN interface is wlan0 and the IC is RTL8192DU-VS:

```
ifconfig wlan0 up
```

```
iwlist wlan0 scan
```

```
cat /proc/net/rtl819xD/wlan0/best_channel
```

Notes: If your WLAN interface is not wlan0, please change it to your used interface. (ex: wlan51)

If your driver IC is not RTL8192DU-VS, please change the rtl819xD to your used IC. (ex: rtl819xC, rtl8188eu ...etc)