

**Product:** RTL8188C/8192C USB Software Package - Linux Driver  
**Version:** v4.0.5\_11249.20140422

**Release History:**

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| v2.0.939.20100726  | <ol style="list-style-type: none"> <li>1. Use the bg mode when AP is in WEP and TKIP mode. (Recommended by latest WiFi 11n test plan).</li> <li>2. First release.</li> </ol>   |
| v2.0.967.20100730  | <ol style="list-style-type: none"> <li>1. Add functionality of Antenna diversity.</li> </ol>   |
| v2.0.974.20100803  | <ol style="list-style-type: none"> <li>1. Fixed the Big Endian issue.</li> </ol>   |
| v2.0.1042.20100902 | <ol style="list-style-type: none"> <li>1. Resolved static link issue with RTL8712U.</li> <li>2. Fixed the Ad-hoc connection bug when the Ad-hoc ssid is the same with someone AP's SSID.</li> <li>3. Update related PHY parameters to improve throughput.</li> <li>4. Improve Antenna diversity algorithm.</li> </ol>  |
| v2.0.1126.20101020 | <ol style="list-style-type: none"> <li>1. Added USB's selective suspend feature.</li> <li>2. Added the Realtek GPL into each C and header files.</li> <li>3. Added related ioctl command for Android platform.</li> <li>4. Fixed NIC status display issue.</li> <li>5. Fixed power training issue at station mode.</li> </ol>  |
| v2.0.1170.20101112 | <ol style="list-style-type: none"> <li>1. Modify the CONFIG section of Android-x86</li> <li>2. Fixed radius issue.</li> <li>3. Update FW to V60.</li> <li>4. Support the Power saving function.</li> <li>5. Update usb_id_table to v38.</li> <li>6. Fixed the kernel panic when receive WDS packet.</li> </ol>   |
| v2.0.1180.20101116 | <ol style="list-style-type: none"> <li>1. Fixed compiler error.</li> </ol>   |
| v2.0.1212.20101205 | <ol style="list-style-type: none"> <li>1. Fix the Android private wifi ioctl SCAN-ACTIVE, SCAN-PASSIVE</li> <li>2. Alter the retry limit of "Active disconnect" to 8</li> <li>3. Fix the overkilling problem of active disconnect caused by frequently site surveying</li> <li>4. Fix the connect/disconnect looping problem on Android.</li> <li>5. Removed the "scan interval" protection of site survey function temporarily</li> <li>6. Adjust locking mechanism of TX, and fix race-condition issue.</li> </ol> |
| v2.0.1212.20101208 | <ol style="list-style-type: none"> <li>1. Add Kconfig.</li> </ol>  |
| v2.0.1324.20110126 | <ol style="list-style-type: none"> <li>1. Synchronization strategy improved.</li> <li>2. Fixed the AP Tx fragment issue when using the WPA2-RADIUS.</li> <li>3. Added the IP header 8 bytes alignment.</li> <li>4. Added new feature - Easy Replacement.</li> <li>5. Added 20/40 MHz Coexistence test item (5.2.48 for wifi test )</li> <li>6. Fixed related connection failure issue in Ad-hoc mode.</li> <li>7. Updated usb_id_table to DID_USB_v47_20110118.</li> </ol>   |
| v2.0.1346.20110214 | <ol style="list-style-type: none"> <li>1. Fixed Ad-hoc connection issues.</li> </ol>   |
| v2.0.1406.20110309 | <ol style="list-style-type: none"> <li>1. Updated usb_id_table to DID_USB_V50_20110209.</li> </ol>   |

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|                      | <ol style="list-style-type: none"> <li>2. Fixed compile error in kernel 2.6.37</li> <li>3. Fixed Ad-hoc issue with DLink-DWA130.</li> </ol>   |
| v3.0.1590.20110511   | <ol style="list-style-type: none"> <li>1. The version of usb_id_table is DID_USB_V60_20110425.</li> </ol>   |
| v3.0.1684.20110525   | <ol style="list-style-type: none"> <li>1. Add wps probe req ie &amp; wps assoc resp ie for wps2.0</li> <li>2. Patch issue_qos_nulldata()/issue_nulldata() to set tods/fromds bit field depend on sta mode, ap mpde, adhoc mode</li> </ol>   |
| v3.0.1759.20110601   | <ol style="list-style-type: none"> <li>1. Supported the WiFi Direct functionality.</li> <li>2. Supported the WPSv2.0 functionality.</li> <li>3. Updated the hostapd and wpa_supplicant for WiFi Direct and WPS v2.0.</li> </ol>   |
| v3.0.2028.20110629   | <ol style="list-style-type: none"> <li>1. Refine WiFi Direct.</li> <li>2. Support Android wifi cmd "COUNTRY" .</li> <li>3. Add HW antenna diversity function.</li> <li>4. Modified set wep key for auth SHARED mode.</li> <li>5. Modified key index for Broadcom IOT issue.</li> <li>6. Fixed Big Endian issue in amsdu_to_msdu().</li> <li>7. Support more USB dongle (DID_USB_V71_20110628).</li> <li>8. Refine Mac0(2.4G) &amp; Mac1(5G) for 92D.</li> </ol>   |
| v3.0.2052.20110701   | <ol style="list-style-type: none"> <li>1. Fixed the problem of cannot power down.</li> <li>2. Support Android early suspend</li> </ol>  |
| v3.0.2164.20110715   | <ol style="list-style-type: none"> <li>1. Reset MCU while polling FW ready fail</li> <li>2. Refine of RX signal statistics</li> <li>3. Support combo scan.</li> </ol>   |
| v3.0.2230.20110728   | <ol style="list-style-type: none"> <li>1. WiFi Direct function improve.</li> <li>2. Refine power saving functions.</li> </ol>   |
| v3.1.2291.20110804   | <ol style="list-style-type: none"> <li>1. Fixed WPS ie parsing issue.</li> <li>2. Add an ioctl rtw_p2p_get_device_name() that can get peer devices' names.</li> <li>3. Refine ioctls' set/get forms that related to p2p.</li> </ol>   |
| v3.1.2497.20110906   | <ol style="list-style-type: none"> <li>1. For SoftAP mode, fixed WPS connecting issue with RALINK3070.</li> <li>2. Fixed the Big Endian Autoload check fail issue.</li> <li>3. Fixed the IOT issue with Cisco 802.1x ap.</li> </ol>   |
| v3.1.2590.20110922   | <ol style="list-style-type: none"> <li>1. Fixed incorrect LED behavior.</li> <li>2. Fixed a potential resource leaks.</li> <li>3. Fixed possible race condition when using incorrect lock.</li> </ol>   |
| v3.1.2590.20111020   | <ol style="list-style-type: none"> <li>1. Sync. WiFi_Direct_User_Interface to driver</li> </ol>   |
| v3.3.0_2971.20111128 | <ol style="list-style-type: none"> <li>1. Support both CU-series and DU-series</li> <li>2. Supported Linux kernel v3.0.2</li> <li>3. Improved quality of Video over IP multicast</li> <li>4. Increase a functionality to support L2 Bridge</li> <li>5. Speed up hardware initialization process for CU-series</li> <li>6. Update android_reference_code</li> <li>7. Fixed some Endianness issues</li> <li>8. Fixed the IOT issue for Wi-Fi Direct connection, software AP and station mode</li> <li>9. Fix the roaming problem</li> </ol> |
| v3.3.1_3083.20111213 | <ol style="list-style-type: none"> <li>1. Fix WEP SHARED connection problem.</li> </ol>   |
| v3.3.2_3192.20120103 | <ol style="list-style-type: none"> <li>1. Add android_reference_code_ICS to support Android 4.x</li> <li>2. Support scan with multiple SSID</li> </ol>  |

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|                      | <ol style="list-style-type: none"> <li>3. Fix problem of PMK caching</li> <li>4. Fix problem of TKIP countermeasure</li> <li>5. Fix RX reordering mechanism</li> </ol>  |
| v3.4.0_3317.20120120 | <ol style="list-style-type: none"> <li>1. Support NL80211 interface</li> <li>2. Support Android WiFi-Direct Framework</li> </ol>  |
| v3.4.1_3418.20120217 | <ol style="list-style-type: none"> <li>1. Fix the problem of TX rate report using NL80211</li> <li>2. Update android_reference_codes_ICS</li> <li>3. Fix some bugs of WiFi-Direct using NL80211</li> <li>4. Fix the Wifi-Direct IOT issue with Samsung GS2</li> </ol>   |
| v3.4.2_3727.20120404 | <ol style="list-style-type: none"> <li>1. Bug fix for WiFi-Direct</li> <li>2. Fix deadlock problem caused by rtw_wx_set_wap()</li> <li>3. Fix WEP shared connection problem for Android</li> <li>4. Fix racing problem of AP mode's asoc_list</li> <li>5. Fix problem to scan AP with hidden SSID for Android</li> <li>6. Disable IOL for USB2.0 by default</li> <li>7. Disable CONFIG_IOCTL_CFG80211 by default</li> </ol>   |
| v3.4.3_4369.20120622 | <ol style="list-style-type: none"> <li>1. Fix Wifi Logo ACM test item</li> <li>2. Drop RX BC/MC packet before group key is installed</li> <li>3. Support hostapd's ignore_broadcast_ssid setting (need patch of hostapd)</li> <li>4. Fix the problem indicate IFF_UP event when netdev_close() is called</li> </ol>   |
| v3.4.4_4749.20121105 | <ol style="list-style-type: none"> <li>1. Fix endian and channel plan error.</li> <li>2. Fix racing problem of resume_process() and netdev_open().</li> <li>3. Set wps ie for probe req for WPS 2.0</li> <li>4. Fix CFG80211 scan issue.</li> <li>5. Modify mem_flags for memory allocation.</li> <li>6. Modify TX &amp; RX for CONFIG_MINIMAL_MEMORY_USAGE flag.</li> <li>7. Add IGI Adjustment by false alarm before linked.</li> <li>8. Add TX ampdu support for WiFi Logo test.</li> </ol>  |
| v4.0.0_5967.20121201 | <ol style="list-style-type: none"> <li>1. Support concurrent mode (STA+STA, STA+AP, STA+P2P)</li> <li>2. Support Android 4.1</li> <li>3. Support WFD (Miracast)</li> </ol>  |
| v4.0.1_6911.20130308 | <ol style="list-style-type: none"> <li>1. Support Android 4.2</li> <li>2. Support P2P service discovery with nl80211</li> <li>3. Improve P2P connection experience</li> <li>4. Correct RX statistics error</li> <li>5. Improve expiration mechanism</li> </ol>  |
| v4.0.2_9000.20130911 | <ol style="list-style-type: none"> <li>1. Support Android4.2's PKTCNT_POLL command.</li> <li>2. Support linux kernel to 3.9.</li> <li>3. Support ETSI adaptivity test (closed by default).</li> <li>4. P2P: Trigger no common channel status when channel list is limited by buddy adapter.</li> <li>5. P2P: Improve connection experience.</li> <li>6. Improve STA connection process; avoid receiving multicast frames before group key is installed.</li> <li>7. Modify RX signal statistics for concurrent mode</li> <li>8. Fix racing problem of SoftAP mode.</li> <li>9. Fix racing problem of roaming and disconnect ioctl.</li> <li>10. Fix racing problem of early_suspend and ioctl.</li> </ol> |

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|                       | <ol style="list-style-type: none"><li>11. Fix NULL pointer crash issues in concurrent mode</li><li>12. Fix USB bulk-in error handling</li><li>13. Fix bug of registering early suspend twice</li><li>14. Fix deadlock caused by USB resume error handling</li><li>15. Fix WEP connection crash in 64bit OS</li><li>16. Fix AP selection problem</li><li>17. Fix management TX frame/buffer leak problem</li></ol>   |
| v4.0.5_11249.20140422 | <ol style="list-style-type: none"><li>1. Support Android JB 4.3</li><li>2. Support Android KK 4.4</li><li>3. Support Linux kernel 3.10</li><li>4. Fix GC scan result selected registra missing on JB 4.1</li><li>5. Fix GO sends beacon with 1Mbps rate</li><li>6. Fix problems caused by large amount of logs</li><li>7. Fix P2P logo test item 6.1.2 fail</li><li>8. Fix no bulk-in problem after skb allocation failure of RX IO</li><li>9. Fix SKB leak at packet forwarding</li><li>10. Fix CFG80211 STA mode memory leak problem</li><li>11. Fix IOT issue with some AP's RA mechanism</li><li>12. Fix IOT issue with some AP's security mechanism</li><li>13. Refine memory allocation policy</li><li>14. Improve CFG80211 STA mode connection process</li><li>15. Improve CFG80211 P2P connection process</li></ol> |

**Description:**

Realtek provides the solution for WLAN in hardware and software. The software package could be adopted for Realtek RTL8188C/8192C USB WLAN series hardware on Linux based platforms.

**Software Version:**

RTL8188C/8192C USB Linux Driver Version: v4.0.5\_11249.20140422

**Hardware Supported:****CU-series:**

- n RTL8188CUS
- n RTL8188RU
- n RTL8188CUS-Slim Solo
- n RTL8188CUS-Slim Combo
- n RTL8188CE-VAU
- n RTL8188CUS-VL
- n RTL8188CTV
- n RTL8192CUS
- n RTL8192CE-VAU

**Platform Supported:**

- n Linux (kernel 2.6.18 ~ 3.10.10)
- n Android 1.6 ~ 2.3, 4.0 ~ 4.4

**CPU supported:**

- n x86
- n ARM
- n MIPS