



SOFTWARE RELEASE NOTE FOR RT2860/2760/2790/306X/309X/35X2 STA

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Product Name	RT2860/2890/2760/2790/306X/309X/35X2 Wireless Card
Interface Supported	CardBus, MiniPCI, PCI, PCIe
Install Package Version	IS_AP_STA_RT2860_D-1.4.12.0_VA-2.3.11.0_W7-3.0.11.0_RU-3.1.4.0_AU-3.0.5.0_120109_1.5.6.0WP_Free
XP/2K Driver Version	1.4.12.0
Vista Driver Version	2.3.11.0
Win7 Driver Version	3.0.11.0
STA User Interface Version	3.1.4.0
SoftAP User Interface Version	3.0.5.0
Date	2009-12-01

System Requirements:

Ralink RT2860/2890/2760/2790/306X/309X/35X2 series miniport drivers require NDIS 5.0 and NDIS 5.1 for XP/2K; NDIS 6.0 for Vista and NDIS 6.2 for Win 7 operation system.

NOTE: UNINSTALL OEM PROVIDED PACKAGE BEFORE RUNNING THIS RALINK PACKAGE.

Hardware Supported:

Ralink RT2860/2890/2760/2790/306X/309X/35X2 chipsets.

Software Supported:

Windows 2000, XP 32/64, Vista 32/64 and Win7 32/64.

Release History:



IS_AP_STA_RT2860_D-1.4.12.0_VA-2.3.11.0_W7-3.0.11.0_RU-3.1.4.0_AU-3.0.5.0_120109_1.5.6.0WP_FREE

Install Package 1.5.6.0

1. Support 2008 x64, modify the driver path in each driver_installed
2. Remove Cisco Module "InstallLocation" writing to pass Win7 logo test (RTW)
3. Support DiagFunc.dll and DiagFunc.ini on Vista and Win7 (system32)
4. Support to modify display name in add and remove function by DISPLAY_NAME in setup.h
5. Remove runonce written by vista supplicant uninstalling if user don't restart computer and re-install install package.

Driver Win7 V3.0.12.0

1. Fixed scan table may show empty
2. Fixed driver does not disable WPS after AP reset

Driver Win7 V3.0.9.0

1. Add WPS LED Mode 10

Driver Win7 V3.0.8.0

1. Fix system logo test issue
2. Fix hidden AP connect issue when enable carrier detection
3. Open 11n support for Morocco and Ukraine

Driver Vista V2.3.11.0

1. Fixed scan table may show empty

Driver Vista V2.3.10.0

1. Add WPS LED Mode 10
2. Open 11n support for Morocco and Ukraine

Driver XP V1.4.11.0

1. Fixed scan table may show empty

Driver XP V1.4.9.0

1. Add WPS LED Mode 10



2. Open 11n support for Morocco and Ukraine

RaUI V3.1.4.0

1. Fixed: Add profile->Select Infra. network type->Select WPA-PSK auth->Encry still show "None" if encry show "None" originally
2. Add "WPA2PSKForAdhocXP" key value in [AuthEncry] section in RaUI.ini to control enable or disable WPA2-PSK item of AuthEncry page for adhoc XP
3. Modify "EapFastEnhancement" and "ShowCountryRegion" ini file value default from 0 to 1.

APUI V3.0.5.0

1. Set Lowercase in properties to false to fix the issue WEP key will translate to lowercase.
2. Group key re-key interval is between 30 seconds and 0x3ffffff seconds.
3. Return CAccessControlPage::WriteConfigToRegistryAndSetOid if abnormally exit the program.
4. Modify CAuthSecuDlg::VerifyRekeyInterval to show rekey interval
5. [Settings] DebugMode=1 to show message.

IS_AP_STA_RT2860_D-1.4.6.0_VA-2.3.6.0_W7-3.0.3.0_RU-3.1.2.0_AU-
3.0.3.0_082409_1.5.4.0_FREE

Install Package 1.5.4.0

1. Uninstall Vista Supplciant in system32 on x64 system.
2. Fixed the issue that inbox driver won't be installed automatically on Win7x64.
3. Remove driver only install package info after installing package v.1.5.
4. Fixed unable to install SoftAP in common folder on WIN7 when overwriting.
5. Reduce uninstall time - modify the RemoveOEMInfFiles() to check all the oem*.inf with the first hardware ID of [szModelName] section in ProjectFolder\Settings\HWID.ini.
6. Add function STRING TransOS2String(nWinOS) to get the OS string.
7. Modify STRING ParseTextFile(szPath, szFile, szString) to get a line of text containing [szString] from a text file in [szPath\szFile].
8. Add WriteLogFile(). ISetup.log in the user-defined path from command line arguments if running setup.exe in silent mode or set CREATELOG to one in ProjectFolder\Settings\setup.h.
9. Add LOG_NAME in setup.h to specify log file name.
10. Remove the info of install package v1.2 for driver only before refreshing device manager after installing driver.
11. Install both RaRegistry.exe and RaRegistry64.exe on Vista x64 and Win7 x64.
12. Able to install & uninstall RaRegistry.exe on XP x64.



13. Modify IDS_DIALOG_WARNING in simple Chinese.
14. Add CREATE_SHORTCUT_DESKTOP to add/remove UI shortcut on the desktop.
15. Remove the info of install package v1.2 for driver only after installing driver by GUID not product name.

Install Package 1.5.1.0

1. Add Disable(Logging) when installing XPSupplcant and VistaSupplcant.
2. Uninstall XPSupplcant in system32 if install count<=1.
3. Uninstall VistaSupplcant in system32 if ccx install count<=1.
4. Win7 OS installation support.

Driver Win7 3.0.3.0

1. Update channel change
2. Adhoc RX rate incorrect issue
3. Enhancement for connection in noise environment
4. Fix AdHoc AES compatible issue
5. HW PBC issue
6. Enhance throughput for first installation
7. CKIP support
8. Fix the low Rx throughput if LinkSpeedStatus=1

Driver Win7 3.0.2.0

1. Fix station might not connect well with WPS AP
2. Fix HW Radio on/off issue.
3. Patch connection issue with some legacy AP
4. Add LinkSpeedStatus by Rx data rate

Driver Win7 3.0.1.0

1. First formal release for Win7 OS, Pass WLK1.4, and WHQL certified

Driver Vista 2.3.6.0

1. Update channel change
2. Adhoc RX rate incorrect issue
3. Enhancement for connection in noise environment
4. Fix AdHoc AES compatible issue
5. Customized Link speed report
6. CKIP support



Driver Vista 2.3.5.0

1. Update channel change
2. Fix system lag with very low signal
3. Fast reconnect when radio on from radio off
4. Fix AdHoc AES connection issue with Intel 4965 v12.4.0.21

Driver Vista 2.3.4.0

1. Fix Ralink and Atheros will ping fail in 11n adhoc
2. Link Status icon is not changed after doing HW radio off.
3. Add LinkSpeedStatus by Rx data rate
4. Driver robustness enhancement
5. Fix MicErr report may not be sent
6. Patch connection issue with some legacy AP
7. Fix Driver stuck at BW 20 after connecting AdHoc or TKIP/WEP

Driver Vista 2.3.3.0

1. Disable WEP/TKIP HT rate.
2. Enhance endurance in noisy environment.
3. Upgrade FW v.20 for LED Mode 10 behavior.
4. Enhance peer STA/AP age-out mechanism
5. Fixed TX packet count issue.(EeeBOX B202 WLAN)
6. New registry "SoftAPForceMulticastRate" for SoftAP multicast rate configuration

Driver Vista 2.3.2.0

1. Support 11g only operating mode for RT3090
2. Country region 15 for CE, 16 for all channels
3. Delay to wait for host being stable.
4. Set WEP key failure
5. FW v.19 Enhance LED mode

Driver XP 1.4.6.0

1. Update channel change
2. Adhoc RX rate incorrect issue
3. Enhancement for connection in noise environment
4. Fix AdHoc AES compatible issue
5. Customized Link speed report



6. CKIP support

Driver XP 1.4.5.0

1. Fix cause system lag with very low signal
2. Update channel change
3. Adhoc rate incorrect issue
4. Enhancement for connection in noise environment
5. Change Reconnect time as 90 seconds
6. Fast reconnect when radio on from radio off

Driver XP 1.4.4.0

1. Fix Ralink and Atheros will ping fail in 11n adhoc
2. Throughput enhancement for netbook
3. Add CCKM Link info
4. Add LinkSpeedStatus by Rx data rate
5. Patch connection issue with some legacy AP
6. Fix Driver stuck at BW 20 after connecting AdHoc or TKIP/WEP

Driver XP 1.4.3.0

1. Disable WEP/TKIP HT rate.
2. Enhance endurance in noisy environment.
3. Upgrade FW v.20 for LED Mode 10 behavior.
4. Fix 11n may be disabled unexpectedly
5. Enhance peer STA/AP age-out mechanism
6. Fixed TX packet count issue.(EeeBOX B202 WLAN)
7. New registry "SoftAPForceMulticastRate" for SoftAP multicast rate configuration

Driver XP 1.4.2.0

1. XP sp3 Zero Config does not auto reconnect back Adhoc network after all peer leave. (XP Only)
2. Support 11g only operating mode in RT3090.
3. Country region 15 for CE, 16 for all channels
4. Delay to wait for host being stable.
5. Set WEP key failure
6. FW v.19 Enhance LED mode

RaUI 3.1.2.0



1. Fixed: UI has opened at guest mode. Adhoc WPA2-AES reconnect fail when radio off/on at admin mode
2. If SW radio off at APClient mode, remove AP button.
3. If select cipher as WEP for CCKM on Vista, WEP input should be disabled
4. If user is guest privilege, disable advance, WMM, WPS page
5. Adjust "Password Mode" text position. Disable "Tunnel authentication" text if combobox is also disabled

RaUI 3.1.0.0

1. First formal release for RaUI V3 edition; supports XP/Vista/Win7 OS.

APUI 3.0.3.0

1. Add new function ProcGetToolbarWindow32() to refresh the taskbar when terminating UI(posted from RaUI v.2)
2. Modify the strCommand for RaSwap with string from ini.
3. add function CheckINT(CString str) in Common.cpp
4. delete #define MSG_INTERFACE_ARRIVAL (WM_USER + 0x03) in stdafx.h - macro redefinition in RaDefine.h

APUI 3.0.2.0

1. First formal release for APUI V3 edition; supports XP/Vista/Win7 OS.

IS_AP_STA_RT2860_D-1.4.2.0_VA-2.3.2.0_RU-2.2.3.0_VA-2.2.8.0_AU_2.1.3.0_VA-2.1.3.0_040209_1.0.9.0_FREE

Install Package 1.0.9.0

1. Moved the files in SSO feature to TARGETDIR\SSO, RalinkGina.dll will be copied to System32 folder in SSO_Installed() function.
2. Launch zero config automatically if don't install RaUI in OnFirstUIAfter() and OnMaintUIAfter()
3. Some Anti-Virus program may block the installation file, add the warning message in the installation procedure.

Driver Vista 2.3.2.0

1. Support 11b/g only operating mode for RT3090
2. Add country region 15 for CE, 16 for all channels
3. Delay to wait for host being stable.



4. Set WEP key failure
5. FW v.19 Enhance LED mode

Driver XP 1.4.2.0

1. XP sp3 Zero Config does not auto reconnect back Adhoc network after all peer leave. (XP Only)
2. Support 11b/g only operating mode in RT3090.
3. Add country region 15 for CE, 16 for all channels
4. Delay to wait for host being stable.
5. Set WEP key failure
6. Update FW v.19 for LED mode enhancement.

RaUI Vista 2.2.8.0

1. Add country region 16: {36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165, 169, 173}.
2. Modify country region 7: {36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165}.
3. If IEEE80211H, filter these following channels, {52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 169, 173}.
4. Make the connection without setting country region.

RaUI XP 2.2.3.0:

1. When connecting the AP on LEAP authentication, shouldn't remove WEP key.
2. Display wrong with Leap-"W"PA-TKIP when moving the mouse to "W"PA-TKIP radio button.
3. When using keyboard to select the AP on sitesurvey and clicking "Add Profile" or "Connect" button, should show the selected AP infor.
4. Hide noise level.
5. Add 11b and 11g radio button on advance page.
6. Add country region 16: {36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165, 169, 173}.
7. Modify country region 7: {36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165}.
8. If IEEE80211H, filter these following channels {52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 169, 173}.

ApUI Vista 2.1.3.0:

APUI XP 2.1.3.0:

1. Modify the RTS threshold and fragment threshold OID for XP and Vista.
2. Do not show ApUI in guest mode.

3. Fixed that ApUI does not detect adapter on timer.
4. Close the help file window when ApUI exit.
5. Set wireless mode OID before country region OID.
6. Add country region 16: {36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165, 169, 173}.
7. Modify country region 7: {36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161, 165}.
8. If IEEE80211H, filter these following channels {52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 169, 173}.

IS_AP_STA_RT2860_D-1.4.1.0_VA-2.3.1.0_RU-2.2.2.0_VA-2.2.7.0_AU_2.1.2.0_VA-2.1.2.0_031309_1.0.8.0_FREE

Install Package 1.0.8.0

1. Use the SERVICE_FILE_NAME name instead of RalinkRegistryWriter.exe
2. Use the SERVICE64_FILE_NAME name instead of RalinkRegistryWriter64.exe
3. Silent uninstall for the RalinkRegistryWriter service when overwrite
4. Do not pack the RaUI_9x and HelpFile_9x in the RT2860 and RT2870 install package
5. Add RT2870 HW DeviceID_69=USB\VID_0DF6&PID_003F
6. Terminate ApUI.exe and softap help window before copying common file

Driver Vista 2.3.1.0

1. Forbidden TKIP on 802.11n HT.
2. Capable to Disable 5GHz Adhoc Mode.
3. Update RaColnst.dat for additional 3 countries Tx power setting changed.
4. Fixed the STA cannot finish the WPS handshaking if it connects the target WPS AP in advance.
5. Update TX mixer gain for RT309X to improve TX EVM.
6. WAPI Rekey feature.
7. Limit Tx rate to 2 Mbps when NDS link up.
8. RT27xx NIC unexpected NIC removal – FW V.15.
9. CCXv5 performance & roaming enhancement.
10. Ralink Tx aggregation feature.
11. Speed up hidden AP connection when the carrier detect is enabled.
12. Enhance RT35xx Radio-Off power consumption – FW V.18.
13. RT3592/RT3562/RT3062 preliminary support.
14. Support new CE channel 167,169,171,173.



15. Fall-back to legacy data rate when connect with 11n AP.
16. OFDM Rx failure for IOT issue.

Driver XP 1.4.1.0

1. Forbidden TKIP on 802.11n HT
2. Add Reposit BSSID List merge to current BSSID List
3. Capable to disable 5GHz Adhoc mode
4. Update RaColnst.dat for additional 3 countries Tx power setting changed
5. Fixed the STA cannot finish the WPS handshaking if it connects the target WPS AP in advance
6. Update TX mixer gain for RT309X to improve TX EVM
7. WAPI Rekey feature.
8. Limit Tx rate to 2 Mbps when NDS link up
9. RT27xx NIC unexpected NIC removal – FW V.15
10. Enhance 35xx Radio-Off power consumption – FW.V18
11. RT3592/RT3562/RT3062 preliminary support.
12. Support new CE channel 167,169,171,173.
13. Fall-back to legacy data rate when connect with 11n AP.
14. OFDM Rx failure for IOT issue.

RaUI Vista 2.2.7.0

1. User can input more than 32 characters as SSID on SysConfig page.
2. When adding/editing a profile, memory leak is detected.
3. The profile key index isn't emptied for non-WEP encryption profile.
4. The focus isn't set to name/password tab when changing PEAP/TLS to PEAP/MSCHAP2(LEAP).
5. WPS profiles are missing when turning off radio, plugging out card, plugging in card, then turning on radio.
6. Simplified Chinese characters display incorrectly on menus.
7. Changing radio state in RaUI doesn't reflect in Windows utility.
8. Incorrect warning message appears when exporting the WPS profile.
9. Add Adhoc 5G disable registry key.
10. Update HT table.
11. Add CE channels.
12. Remove scanning action after connection.
13. Remove noise level indication.

RaUI XP 2.2.2.0:

1. Add DetectMoreThanOneProcess function. When using two process (RaUI.exe) and two user, don't switch AP mode.
2. When authentication mode is shared-wep, don't show 802.1x.
3. Change _TRANSMIT_SETTING structure. Add two HT mode (11b and 11g).
4. Set the focus to another item on sitesurvey list when pressing a key.
5. When radio status is from off to on, reset TIMER_HIDE_DLG_RETRY_CON timer.
6. Memory leak about adding/editing profile.
7. Fixed RaUI crash issue.
8. After radion status is from off to on, delay 1.5 seconds to connect the AP for RT3070.
9. Add new OID, RT_OID_802_11_WSC_SET_HW_PBC_CUSTOMER_VENDOR_STATE_MACHINE
10. Delay 600ms after doing disconnection in order to finish link down behavior for WPS(RT2870D_1.3.0.0 driver bugs).
11. When switching from AP to STA mode, don't scan the APs with 5G band.
12. Fixed the incorrect simplified Chinese character display.
13. When selecting correct certificate, can show warning message about incorrect certificate.
14. Radio status is changed to on, it shouldn't connect the AP with open authentication.
15. When radio status is off and then open RaUI, can't get WPS profile.
16. If the registry value of "Adhoc5GDisable" is 1, then UI will hide 5G channels for adhoc mode.
17. When exporting WPS profile with 32-character SSID, it shouldn't show 33-character SSID on profile page.
18. When linking up, set ADDKEY for wep encryption with non-802.1x.
19. After 10 seconds, ready to retry to connect WAPI-PSK for infrastructure type. And for adhoc type, shouldn't retry to connect.
20. When switching zeroconfig tool, set "NetworkType" registry/OID (Network Type = Ndis802_11Infrastructure) and HT setting OID (BW==40).
21. Add CE channel.
22. When link up, the UI can crash because don't check if G_pProfData is NULL.
23. When connecting the AP by using bssid, don't set country region oid every time.
24. When connecting the AP on LEAP authentication, shouldn't remove wep key.

ApUI Vista 2.1.2.0:

APUI XP 2.1.2.0:

1. Modify the statistics structure to query OID.
2. Modify the condition to detect device exist in OnTimer function.
3. Fixed TxRate combobox is not visible.
4. Fixed reset counter in Statistic page fail in Vista.
5. Fixed 2.4 G and 5G, the behavior of BW40 check box disable or enable is different.



6. Add channel 169, 173 to country region 7, region 15 which contains channel 149, 153, 157, 161, 165, 169, 173
7. uncheck and diable "ALLOW BW40" if selecting channel 169 or 173.
8. Add "11nTKIPandWEP=0" to "ProhibitTKIPonHT=1" in APUI.ini to disable TKIP in 11n mode.
9. Add "ProhibitWEPonHT=1" in APUI.ini to disable WEP in 11n mode.

IS_AP_STA_RT2860_D-1.3.0.0_VA-2.2.0.0_RU-2.2.0.0_VA-2.2.5.0_AU_2.1.0.0_VA-2.1.0.0_120508_1.0.7.0_FREE

Install Package 1.0.7.0

1. Support OEM Ready Test.
2. Record the install type(Driver+UI or Driver only) in the registry for overwrite function.

Driver Vista 2.2.0.0

1. Update MFP and Performance Roaming for CCXv5.
2. Fix Ping failure of 802.11n Ad Hoc STA running with WZC.
3. New scan mechanism for fast-roaming to reduce ping loss.
4. Update firmware to Version 0.13.
5. Fix data rate issue (1MB, OFDM) for Ad-hoc B only mode.
6. Ad-hoc mode support HT rate only for pure N environment.

Driver XP 1.3.0.0

1. CCXv5 support.
2. Fix Ping failure of 802.11n Ad Hoc STA running with WZC.
3. New scan mechanism (for fast-roaming) to reduce ping loss.
4. Update firmware to Version 0.13.
5. Update idle power save method.
6. Fix data rate issue (1MB, OFDM) for Ad-hoc B only mode.
7. Adhoc mode support HT rate only for pure N environment.

RaUI Vista 2.2.5.0

1. Fixed if identity or user cert is missing for TLS 802.1x authentication, no warning message appears.
2. Fixed incorrect warning message if server name is missing for 802.1x authentication.
3. Fixed when deleting the active profile, no warning message appears.
4. Fixed Eap-fast setting dialog appears when connecting to an open network.
5. Fixed UI crashed due to enter CPageWPSDlg::RescanTimeEnd() twice.
6. Replace "11A" and "11B/G" strings on Advance Page with "5GHz" and "2.4GHz".



7. Set channel if connecting via SiteSurvey page.
8. When there are more than two users to use RaUI, do not allow user to switch SoftAP mode.
9. Change TRANSMIT_SETTING structure.

RaUI XP 2.2.0.0:

1. Fixed when not keying in tunnel ID, display tunnel required warning string.
2. Fixed when adding server name required warning message.
3. Check WEP key length.
4. Fixed when selecting GTC tunnel method and soft token mode, not checking if key in the tunnel password.
5. Fixed when editing profile, don't enable tunnel password item on GTC tunnel method and soft token mode.
6. Disable PBC mode when the STA acts as a Registrar.
7. When there are more than two users to use RaUI, do not allow user to switch SoftAP mode.

ApUI Vista 2.1.0.0:

APUI XP 2.1.0.0:

1. Support OEM Ready test.
2. Add registry key index of the device in the device management.
3. Detect the number of the user account to use the computer.
4. Use PBT_APMRESUMEAUTOMATIC instead of PBT_APMRESUMESUSPEND to fix hibernate issue.
5. Detect the number of the ApUI process account.
6. Modify the Chinese "IDS_BEACON" string in language folder.

IS_AP_STA_RT2860_D-1.2.1.0_VA-2.1.2.0_RU-2.1.9.0_VA-2.2.4.0_AU_2.0.9.0_VA-2.0.9.0_111108_1.0.6.0_FREE

Install Package 1.0.6.0

1. Delete registry value of GinaDLL when uninstall the SSO.
2. After install Scutum dll file, do not delete the Scutum dll file.

Driver Vista 2.1.2.0

1. Add country code #14 for 5GHz.
2. Support HT on DLS.
3. Update power saving mechanism.



Driver XP 1.2.1.0

1. Enhance scan mechanism.
2. Add country code #14 for 5GHz.
3. Support HT on DLS.
4. Update power saving mechanism.

RaUI Vista 2.2.4.0

1. Click "Rotate" then "Delete" on WPS profile page, the status is still "Get profile successfully"
2. Click "Rotate" then "Delete" on WPS profile page, the status is still "Get profile successfully".
3. Guest user connects via SiteSurvey page, and the ResetDefault_for_SSID_InfraMode_Wep() function causes the sta settings change. The administrator can't connect to the active profile.
4. Fixed of can't connect to hidden WAPI AP.
5. The Windows profile isn't deleted when deleting profile.
6. Fixed of Can't connect to WPA2/TKIP(MFP) and WPA2/AES(MFP) via sitesurvey page.
7. Set profile custom data as "Ralink" to tell if it's a Ralink profile.
8. Remove the "connecting" message which is for WAPI connection.
9. Refresh profile list when detecting user change.
10. Allow user to add/edit/delete profile though radio is off.
11. Hide / Show RTS statistical counter items according to the setting in configuration file.
12. Connect to a network through SiteSurvey page. Change the country region to cause the disconnection. Change the country region again to the previous one. UI will connect to the profile by SetOidFromReg function, not connect to the SiteSurvey connection by G_pProfData.
13. Add country region code 14.
14. Resize UI for 800*600 resolution(Add CResizeDLg class.)
15. If the input frag threshold is less 256, the warning message is popped-up.
16. Disable PBC button for registrar.

RaUI XP 2.1.9.0:

1. Hide/show RTSSuccessCount item on statistics.
2. Hide/show RTSFailureCount item on statistics.
3. When radio status is off, allow to edit and delete a profile.
4. Add country code #14 for 5G band on both STA and AP.
5. 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 136, 140, 149, 153, 157, 161, 165
6. When adding a profile from sitesurvey with hidden ssid, must keyin unempty string.
7. When radio status is off, allow to add a profile.
8. When switching guest user, don't update profile list.
9. When enabling power save of wmm, show wrong strings of power save setting.



10. When radio status is off, gray pin and pbc button.

ApUI Vista 2.0.9.0:

APUI XP 2.0.9.0:

1. Modify the idle time message from 20-1000 sec to 60-3600 sec.
2. Create an ini value for RTS Counter to show or not.
3. Add country code #14 for all 11n models.
4. SoftAP device change and InitCard issue.
5. Hide the RTS counter when reset.
6. Change 11B/G and 11A country region code as 2.4GHz and 5GHz.
7. Do not input zero or negative number for group rekey interval.
8. Change the open method of the help files.

IS_AP_STA_RT2860_D-1.2.0.0_VA-2.1.1.0_RU-2.1.8.0_VA-2.2.3.0_AU_2.0.8.0_VA-2.0.8.0_100808_1.0.5.0_NH

Install Package 1.0.5.0

1. Translate the Ralink utility tool and Microsoft ZeroConfig Tool..
2. The new install package will install the RAPI when overwrite the old install package.

Driver Vista 2.1.1.0

1. Add 5G band region #13.
2. Patch LED issue.
3. Fix smart scan issue.
4. Update Adhoc 802.11n mode.
5. Fix WPS reconnection.

Driver XP 1.2.0.0

1. Add 5G band region #13.
2. Patch LED issue.
3. Support WPA2 WEP Mixed mode.
4. Fix WPS reconnection.

RaUI Vista 2.2.3.0

1. The "Connecting" message box appears though the connection is unsecure when changing wireless mode.
2. Save a WPA2/AES(MFP) profile, then edit it. The cipher type is SMS4.
3. Check e-ffuse and decide if EEPROM can be set.
4. Wrong descriptions for WMM power saving check boxes.
5. Modify noise level calculation.
6. Block UI for 15 sec. for 802.1x and WAPI only.
7. Fixed help icon missing issue.
8. If the tab buttons are not hidden, perform CDialog::OnNcHitTest() to prevent the UI moves with cursor.
9. Can't query hardware register on Vista x64.
10. Always load x86 EapHost module.
11. Not to display "Connecting" message for AdHoc connection.
12. List country regions according to the max country region code returned by driver.

RaUI XP 2.1.8.0:

1. After waking up, run releaseAegis, not ReleaseAegisForNotChangeDev.
2. When radio status is on, execute UpdateConnectStatus(). And RaUI can crash.
3. Don't update connection status when radio status is on.
4. When waking up, Aegis don't work successfully.
5. All these 4 items on WMM page are AC_BK.
6. Driver use 5.2 seconds for scan in ABG_MIXED mode or A mode
7. Change bssid list buffer size to 49152 bytes(48KB) for all OS (MAX_BSSID_LIST_BUFFER_SIZE).
8. Don't show the key material of WPS profile.
9. Add Country region for 5G band
CH 12: 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140
CH 13: 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 149, 153, 157, 161
10. After initializing Aegis successfully, open acDebug.txt and write debug message about Aegis.
11. When initializing Aegis failed, destroy all queue.
12. When initializing Aegis failed, don't execute selectaegisadapter().
13. When supporting 800*600 resolution, can move RaUI's windows by clicking anywhere on RaUI.
When not support 800*600 resolution, don't move RaUI's windows by clicking anywhere on RaUI.
14. After plugging out and in the device, it can set open-none authentication, not wapi-psk(adhoc) authentication.
15. When the number of profile is larger than 1, can gray "edit", "delete", and "activate" buttons.
But when the number is equal to 1, don't gray these buttons.
16. Get max country region index by using PROXY_RT_OID_QUERY_COUNTRY_REGION OID.
17. When radio status is off, don't execute UpdateConnectStatus(). Because RaUI can crash.



18. Check if the expired date of the certificate is invalid.
19. 11.When show wps profile info, check if it shows ascii format.
20. Help icon missing issue.

ApUI Vista 2.0.8.0:

APUI XP 2.0.8.0:

1. Fixed: Security setting wpa-psk & wpa2-psk, the pre-shared-key set 61~64 bit, the pre-shared-key has not been saved.
2. Change the way to add country region code, because the driver add some code to return the max country region code.
3. Fixed: APUI wpa key length warning message: show ASCII characters 8-32 (it should be WEP characters 10-64).
4. Add ApUI debug message tag.
5. Fixed: APUI psk key length warning message: show ASCII characters 8-32 (it should be 8-64).
6. In 5G of Soft AP → the last channel of the country region 12 is ch:140.
7. Fixed: APUI PSK set 64 HEX characters, client can't re-connect after pnp test or hibernate.

IS_AP_STA_RT2860_D-1.1.6.0_VA-2.1.0.0_RU-2.1.6.0_VA-2.2.1.0_AU_2.0.6.0_VA-2.0.6.0_081308_1.0.3.0_NH

Install Package 1.0.3.0

1. Add three Cisco programs to the InstallLocation registry.
2. Add "ask driver only" before the "ask UI" dialog box.
3. The new install package installs the CCX when overwriting the old install package.

Driver Vista 2.1.0.0

1. Update RaCoInst.dll to V1.0.2.0
2. Support WAPI
3. Fix the TP-LINK AP (TL-WR841N) connection issue,
4. Add support for ad hoc N mode.
5. Add support for CCX v5

Driver Vista 2.0.8.0

1. Fix power consumption LED behavior.
2. Add support global domain.



Driver XP 1.1.6.0

1. Update RaCoInst.dll to V1.0.2.0
2. Support WAPI
3. Fix the TP-LINK AP (TL-WR841N) connection issue
4. Add support for ad hoc N mode.

Driver XP 1.1.5.0

1. Fix power consumption LED behavior on.
2. Add support for global domain.

RaUI Vista 2.2.1.0

1. Add Site Survey connection function.
2. Add support for LEAP, PEAP-GTC, EAP-FAST.
3. Enable dBm format, and disconnect the connection. The signal strings are not cleared.
4. Set up a profile whose network type is infrastructure and secure type is WPA2-PSK/TKIP.
Re-open the profile and change its network type to ad hoc. The secure type is still WPA2-PSK/TKIP. It is an illegal security type for ad hoc.
5. Add support for Country Region Code 31.
6. The UI does not display the queried result if the Tx power query fails.
7. Flush the BSSID list when changing wireless modes or country regions.
8. Enter the profile name with a length of 32 characters. The SSID isn't displayed correctly.

RaUI XP 2.1.6.0:

1. Set a profile to a driver after resuming if it's not the zeroconfig tool,
2. Change EncryptedPassword/DecryptedPassword to RegSetValueEx/RegQueryValueEx in Registry.cpp.
3. Do not connect to an AP with Open-WEP-Leap authentication.
4. Do not connect with Site Survey, if the AP is using WPA-Leap/WPA2-Leap authentication.
5. Wait longer for USB 1.1 scan.
6. When WPS fails, it can scan 0 BSSID list table.
7. Wait for the driver to finish initialization.
8. Enable dBm format, and disconnect the connection. The signal strings are not cleared.

ApUI Vista 2.0.6.0:

APUI XP 2.0.6.0:

1. Don't grey Country Region combo box because the CountryRegion feature is still disabled in the coinstaller.



2. Change the "Device Change Detection" event to call the InitCard function and decrease the time.
3. Fixed: At device manager disable AP then on, the channel change to 1.
4. Encrypt password string by default.
5. Hide the "ShowPassword" check box by default.
6. Restart DHCP server after waking from sleep.
7. Fixed: Select security setting/PSK group rekey interval, the value not key then click ok button, the dialog is shown twice.
8. Fixed: Channel list crash in 5 G.
9. Fixed: Handles check fail in API RegSetValueEx().
10. Change "Device Change Detection" event to call InitCard function if the card is exit.

IS_AP_STA_RT2860_D-1.1.4.0_VA-2.0.7.0_RU-2.1.5.0_VA-2.1.5.0_AU_2.0.5.0_VA-2.0.5.0_061608_1.0.2.0

Install Package 1.0.2.0

1. Add RaSwap component to SoftAP feature.
2. It does not ask the user about zeroconfig if installing without the UI.

Driver Vista 2.0.7.0

1. Support 802.11n D4.0

Driver Vista 2.0.6.0

1. Fix OS in standby issue.
2. Fix low throughput issue with Cisco AIR-AP 1242 on 802.11b.
3. Fix hardware radio on/off compatibility issue with windows WLAN service.
4. Fix multiple SSID connection issues.

Driver XP 1.1.4.0

1. Support 802.11n D4.0

RaUI Vista 2.1.5.0/RaUI XP 2.1.5.0:

1. Hide the button if a help file doesn't exist.
2. Change the initial country region string of 11A from full width to half width.
3. Optionally select to show or hide the "Show Password" check box.
4. Check registry "CountryWirelessMode" and filter wireless mode.
5. Set combobox width about country region of 11A. (*3.5)



6. Quote RaSwap command string.
7. Update the B/G protection after reading the registry value.
8. Disable the WEP key for WPA-NONE.

[VISTA]

1. Do not set the radio when initializing the card if the driver radio status is the same as the one in registry.
2. Rescan after resuming from suspend.
3. Display the active profile icon if "ActiveProfileIcon" is defined as 1 on the Advanced tab.

[XP]

1. Continuously reconnect the AP if the SSID in Site Survey for hidden-SSID AP is entered incorrectly and correct SSID is entered on the Site Survey tab.
2. Don't connect the AP (184) on the Site Survey tab.
3. Encrypt/decrypt the password feature in registry.
4. Don't query the hardware PBC when switching the zeroconfig tool.

ApUI Vista 2.0.5.0/APUI XP 2.0.5.0:

1. Fixed 5G Country Region Code list shows an error code.
2. Character Set setting for APUI.

```
IS_AP_STA_RT2860_D-1.1.2.0_VA-2.0.4.0_RU-2.1.3.0_VA-2.1.3.0_AU_2.0.2.0_VA-  
2.0.2.0_050608_1.0.0.0
```

Install Package:

1. Add one service running in the background for writing the XP registry.

Driver Vista 2.0.4.0:

1. Fix a bug where the system hangs if it runs on Vista with 4GB memory.
2. Enhance DMA mechanism.
3. Fix RSSI inaccurate issue.

Driver XP 1.1.2.0:

1. Support advanced power saving.

RaUI Vista 2.1.3.0:



RaUI XP 2.1.3.0:

1. Refer to History-RaConfig.txt.

ApUI Vista 2.0.2.0:

APUI XP 2.0.2.0:

1. Refer to History-ApConfig.txt.

IS_AP_STA_RT2860_D-1.1.1.0_VA-2.0.3.0_RU-2.1.0.0_VA-2.1.0.0_AU_1.2.4.0_VA-1.0.6.0_020408_0.1.0.45

Install Package:

1. RaUI is multilingual. The strings are read from INI files.
2. Copy the Language INI file to common folder.
3. The registry writing service is removed after uninstalling the package, even if another RaUI is installed on the PC.

Driver Vista 2.0.3.0:

1. Support carrier detection.
2. Fix DLS issue.
3. Enhance rate adaption.

RaUI Vista 2.1.0.0:

RaUI XP 2.1.0.0:

1. Refer to History-RaConfig.txt.

ApUI Vista 1.0.6.0:

1. Refer to History-ApConfig.txt.

Driver XP 1.1.1.0:

1. Enhance rate adaption.
2. Fix DLS issue.

APUI XP 1.2.4.0:

1. allowBw40Cability should be disabled when the channel rage is less than 4.



IS_AP_STA_RT2860_D-1.1.0.0_VA-2.0.2.0_RU-2.0.7.0_VA-2.0.8.0_AU_1.2.2.0_VA-1.0.5.0_112607_0.1.0.37

Install Package:

1. Manually copy bin files to the system on all windows OS.
2. Change the shortcut to RaUI after running the overwrite install in AP mode.

Driver Vista 2.0.2.0:

1. Fix low throughput issue on AES security mode.
2. Enhance WPS function.
3. Fix channel 126 not working.
4. Fix 5G band may not use OFDM rate.
5. Update rate adaption.
6. Add SSID check before updating the last beacon Rx time.
7. Fix ad hoc connection issue from suspending.
8. Fix site survey issue after installing Kaspersky.

RaUI Vista 2.0.8.0:

Fixed:

1. After finishing WPS and delete profile 1 of WPS, it can't connect with profile 2.
2. After finishing WPS, RaUI closes, and reopens, the site survey of WPS is empty.
3. After finishing WPS, RaUI closes, and reopens, the STA can't connect to a WPS AP.
4. When editing the profile, the ASCII WEP key isn't limited to 13 characters in length.
5. STA wireless mode is affected by soft AP wireless mode, due to a failure to copy the default STA registry values back to root. Remove all the copy registry actions.
6. Select the TLS protocol then PEAP-CHAP2. The user is always asked for a client certificate.

Modified:

1. If the item index is illegal, return without calling CQuickList::GetItemData().
2. Disable the WPS button for ZeroConfig.
3. Warn the user when the profile name is empty.
4. After connection is finished, update the BSSID list on the WPS tab.

ApUI Vista 1.0.5.0:

Fixed:

1. The Allow-BW40 checkbox isn't grayed when selecting channel 14.
2. STA wireless mode is affected by soft AP wireless mode due to a failure to copy the default STA registry values back to root. Remove all the copy registry actions.
3. After pnp test, the central channel is illegal. (The channel in registry : 10 ; in ini file : 1)
 - ➔ Driver set channel as 10 ==> channel is 10 ; central channel is 12
 - ➔ UI set HT phy mode
 - ➔ UI set channel as 1 => channel is 1 ; central channel is 12)
 - ➔ Change the OID setting sequence => channel then HT phy mode.

Driver XP 1.1.0.0:

1. Fix a low throughput issue on AES security mode.
2. Enhance WPS function.
3. Fix channel 126 (not working.)
4. Fix the 5G band that cannot OFDM rate.
5. Update rate adaption.

RaUI XP 2.0.7.0

Fixed:

1. Applying Advance settings causes disconnection.

Modify:

1. Non-admin can use Profile tab, but no "Edit", "Add" and "Delete" behavior.
2. Set WPS preferred phy mode.

APUI 1.2.2.0:

Fixed:

1. When the wireless mode is A/B/G/N, it shows BG mode. It should set B/G/N mode and show B/G/N mode.
2. When wireless mode is A/B/G mode, it can set A/B/G mode, but show B/G mode. It should set B/G mode.
3. When AC/Battery switch, APUI shows it as disconnected in the toolbar.

IS_AP_STA_RT2860_D-1.0.4.0_VA-2.0.0.0_RU-2.0.3.0_VA-1.0.18.0_AU-1.2.0.0_VA-1.0.3.0_091407_0.1.0.29

Install Package:



1. Disable ICS before overwriting in AP mode.

Driver Vista 2.0.0.0:

1. Enhance throughput.

RaUI Vista 1.0.18.0:

1. Removing the card while leaving the wireless combobox open causes a failed assertion.
2. Invoking the Windows profile setting dialog fail.
3. HW-PBC doesn't work after enabling the WPS tab then closing the UI.
4. Add WMM.

ApUI Vista 1.0.3.0:

1. The MAC table isn't displayed correctly.

IS_AP_STA_RT2860_D-1.0.4.0_VA-1.0.6.0_RU-2.0.3.0_VA-1.0.15.0_AU_1.2.0.0_VA-1.0.0.0_080207_0.1.0.24

Driver Vista 1.0.6.0:

1. Fix multiple SSID issues.
2. Fix Channel report issue.
3. Fix ad hoc Tx throughput issue.
4. Fix WPS PBC issue.

RaUI Vista 1.0.15.0:

1. Correct the the misspelling of "password".
2. Set OID_DOT11_DISCONNECT_REQUEST when disconnecting WPS connection.
3. After disabling and enabling the card several times, the Site Survey tab cannot scan A-band APs.
4. If the user isn't an administrator, remove the "Switch to AP" selection.
5. Connect to WPS-incapable AP when two APs use the same SSID.
6. HW PBC doesn't work.
7. Generate the enrollee's pin code randomly.
8. Add import WSC profile function.

ApUI Vista 1.0.0.0:

1. Enable DHCP server.
2. Write AP settings to the ini file instead of registry.

**Driver XP 1.0.4.0:**

1. Fix WPS issue.
2. Extend Variable IEs buffer.
3. Update IOT.
4. Fix PSPXlink issue.

RaUI XP 2.0.3.0:**Fixed:**

1. When there are two APs with the same SSID, connect WPS' profile so it can link to AP with open authentication.
2. When there are two APs with WPS and the same SSID, click PBC button. Aegis sets OID with Shared-Authentication.
3. WPS issue about clicking PBC or PIN.

Modify:

1. When choosing registrar and selecting open and none-wep authentication, need to popup the dialog to confirm it.
2. Password in 802.1x function is encrypted optionally.
3. Add 'Import WPS' profile to the Profile tab.
4. Renew PIN code every times.

APUI 1.2.0.0:

1. The default wireless mode is b/g on 802.11n devices.

IS_AP_STA_RT2860_D-1.0.3.0_VA-1.0.4.0_RU-2.0.2.0_VA-1.0.12.0_AU-1.1.9.0_060107_0.1.0.22

Install Package:

1. Support SoftAP on Windows 2000.
2. Disable ICS after uninstall.

Driver Vista 1.0.4.0

1. Support WPS.

RaUI Vista 1.0.12.0



1. RSSI value is abnormal while roaming due to query RSSI failed.
2. Connecting to a 32 character AP causes a memory corruption.

IS_AP_STA_RT2860_D-1.0.3.0_VA-1.0.3.0_RU-2.0.2.0_VA-1.0.11.0_AU-
1.1.9.0_052107_0.1.0.18

Install Package:

1. Remove the co-installer value in the registry before uninstalling the driver.

Driver XP 1.0.3.0:

1. Update firmware version 0.7.
2. Support WPS registrar.
3. Update IOT patch.
4. Fix random MAC address bug.

RaUI XP 2.0.2.0:

1. New user interface edition.

APUI 1.1.9.0:

1. When switching channel 14, BW value must be 20.

RaUI Vista 1.0.11.0:

1. The Site Survey tab is empty when starting UI.
2. Add WSC support.
3. Windows profile can't be set due to illegal XML characters.
4. Query Rx rate failed.
5. Failed to connect to the SSID with space inside.
6. Use RT_OID_QUERY_STATISTICS to query linking statistics.

IS_AP_STA_RT2860_D-1.0.2.0_VA-1.0.3.0_RU-1.3.2.0_VA-1.0.10.0_AU-
1.1.8.0_050307_0.1.0.15

Install Package

1. Integrate XP/2K/Vista driver and UI into one package.

Driver Vista 1.0.3.0

1. Enhance throughput issue.
2. Fix hang issue after resume and then disable device.

IS_AP_STA_RT2860_D-1.0.2.0_RU-1.3.2.0_AU_1.1.8.0_041207_0.0.7.14

RaUI:

1. RaUI doesn't work when executing a PNP test.
2. When connecting to AP with profile and keying in erroneous ID, it doesn't show the re-key in dialog.
3. Keep continuing to rescan in Site Survey tab.
4. Support WPS for 11n.

APUI:

1. When removing a card supporting A-band and inserting a non-A-band card, it still shows A-band wireless mode string-table.

IS_AP_STA_RT2860_D-1.0.2.0_RU-1.3.1.0_AU_1.1.7.0_031507_0.0.7.12

Driver:

1. Update R66 tuning algorithm.
2. Update firmware as version 0.6 to fix a radio on/off issue.
3. Rate selection when 1T2R.
4. Fix Marvel AP throughput issue.
5. Implement external LNA gain.
6. Fix bug in Ad-Hoc mode.
7. Minor update rate adaptation and in A band.
8. Update formula for calculating correct RSSI.
9. Fix bug when Ch14 with 40MHz BW.
10. Fix SoftAP WPA/WPA2 re-key issue.
11. Fix STA not disconnected in Win2k.
12. Fix crash issue in x64.

RaUI:

1. Sometimes MCS value is stuck to zero.
2. Go to wireless mode and select a different mode. A dialog box is shown. Remove the card, then an error message is shown.
3. Central channel is not shown on a legacy AP.
4. RaUI crashes when inserting a multi-card and then removing it.



APUI:

1. Add customer ID.

IS_AP_STA_RT2860_D-1.0.0.0_RU-1.2.8.0_AU_1.1.5.0_020707_0.0.2.0F

Driver:

1. Release