



## WLAN Software Release Notes

Date: 19-March-2013

Package Series: 6.30.59.124

## 1. Overview

This delivery provides the latest Broadcom software release, and includes the following packages:

- Setup.exe = Driver & BCM Service Setup Package
- INF\_DriverOnly = Driver Only

The version numbers for the software components are as follows:

- Application/installer: 6.30.59.124
- STA Driver: 6.30.59.124
- STA INF: 6.30.59.124

The release includes WHQL-signed CAT files from Microsoft and is intended for production purposes.

For newly added:

- Features see section 3
- Adapters see section 5
- Resolved observations see section 10

For existing:

- Features see section 0
- Adapters see section 4
- Known observations see section 9
- Operating Systems see section 7

This software supports the following languages:

English	Brazilian Portuguese	Japanese	Dutch	Swedish	Hungarian
German	European Portuguese	Korean	Finnish	Polish	Turkish
Italian	Simplified Chinese	Thai	Norwegian	Greek	Russian
International Spanish	Traditional Chinese	Danish	French	-	-

## 2. Existing Features

### Driver Support:

Feature	Description
IEEE 802.11a	Supports all IEEE 802.11a mandatory modes and data rates up to 54Mbps
IEEE 802.11b	Supports all IEEE 802.11b mandatory modes and data rates (i.e. 11, 5.5, 2 and 1 Mbps)
IEEE 802.11g	Supports all IEEE 802.11g mandatory modes and data rates up to 54Mbps
IEEE 802.11n	Supports all IEEE 802.11n
IEEE 802.11d	Partial support
IEEE 802.11i	Supports 802.11i, including Driver only support for Pre-Authentication. Authentication supported: - WPA- Enterprise w/ TKIP - WPA- PSK - WPA2- Enterprise w/ AES-CCMP - WPA2- Enterprise w/ TKIP - WPA2- PSK
IEEE 802.11e	Partial support
IEEE 802.11h	Supports 802.11h including TPC, DFS and active client radar detection
IEEE 802.11k	Partial support, including measurement reporting
IEEE 802.1p	Priority Tagging, mapping frames to queues based on tags as defined in 802.1d (802.1p is a subset of 802.1d).
WFA 802.11b/g	Wi-Fi Alliance 802.11 b/g certified
WFA 802.11a	Wi-Fi Alliance 802.11a dual-band certified
WFA 802.11n	Wi-Fi Alliance 802.11n certified
WFA 802.11r	Partial compliance to the draft 802.11r fast roaming standard.
WFA WPA	Wi-Fi Alliance 802.11 WPA certified

Feature	Description
WFA WPA2 Personal	Wi-Fi Alliance 802.11 WPA2 Personal Certified.
WFA WPA2 Enterprise	Wi-Fi Alliance WPA2 Enterprise Certified.
WFA WMM	Wi-Fi Alliance WMM certified based on 802.11e.
WFA Wi-Fi Protected Setup (WPS)	Wi-Fi Alliance Protected Setup Certified supporting PIN and push button modes.
Windows / WHQL Logo	Formally passes Microsoft HCT/DTM tests and WHQL / Premium Logo.
Encryption:	<ul style="list-style-type: none"> <li>- OPEN</li> <li>- WEP (64/128 bit) including key avoidance and IV randomization</li> <li>- TKIP</li> <li>- CKIP (CCX feature)</li> <li>- AES_ CCMP</li> <li>- Michael Checksum</li> </ul>
Wi-Fi LED	Provides user feedback regarding radio state
Wireless On/OFF	Supports Fn-Fn2 Radio On/Off toggle, and Radio On/Off switch. Both mutually exclusive on a specific target platform
Bluetooth Coexistence	Broadcom WLAN-Bluetooth co-existence scheme
ACPI Sleep	Supports platform ACPI 2.0 sleep states (D0-D3)
Resume state behavior	Returns to the pre-hibernation (S4) or pre-suspend (S3) radio enable/disable state when resuming
Wake On WLAN	Supports Wake On WLAN operation, including: <ul style="list-style-type: none"> <li>• Under AC power only</li> <li>• Wake from S3 and S4</li> <li>• Wake from S5</li> <li>• Wake on MagicPacket, DirectedPacket</li> </ul>
WCN 2.0	Supports Microsoft's Wireless Connect Now 2.0
Secure IBSS	Provide WPA support for IBSS network connections (Vista and Win7).
Coexistence Mode - Optimization	BT/Wi-Fi coexistence optimization through gain table tuning

Feature	Description
11n BTAMP	BT over Wi-Fi
Velocity Compliance	
XP FIPS 3eti + Funk I/F	Integrated support for alternative FIPS certified plug-ins for WinXP.
WLK 1.6	Microsoft WLK 1.6 certified
Russian 11n	Supporting 802.11n in Russia

#### Application Support:

Feature	Description
IEEE 802.1x	<p>Supports 802.1x supplicant functionality for both WinXP and Vista.</p> <p>Authentication support:</p> <ul style="list-style-type: none"> <li>- EAP- TLS</li> <li>- EAP-TTLS/PAP</li> <li>- EAP-TTLS/CHAP</li> <li>- EAP-TTLS/MS-CHAP</li> <li>- EAP-TTLS/MS-CHAPv2</li> <li>- EAP-TTLS/MD5</li> <li>- EAP-MS-CHAPv2</li> <li>- EAP- LEAP</li> <li>- EAP- PEAP (GTC)</li> <li>- EAP- PEAP (Auto-GTC)</li> <li>- EAP- PEAP (TLS)</li> <li>- EAP- PEAP (MSCHAPv2)</li> <li>- EAP- FAST</li> <li>- Smart Card support for TLS</li> </ul>
CCX	<ul style="list-style-type: none"> <li>- Support v5 for Win7, Vista</li> <li>- Support v4 for XP</li> </ul> <p>On limited range of platforms</p>
Common Profiles	Profiles can be setup to be shared across all machine accounts – desirable in cases where several users share one machine (e.g. factory / retail environment).

Feature	Description
Site Survey Tools (Site Monitor)	Provides information on other detected wireless networks in the link status and site monitor tabs. Fields include: <ul style="list-style-type: none"> <li>• Link status (network available, not available...)</li> <li>• SSID / System name</li> <li>• AP's MAC address</li> <li>• WEP enabled (on/off)</li> <li>• Channel</li> <li>• RSSI (in dBm)</li> <li>• Quality (e.g. dB)</li> </ul>
Windows Management Instrumentation	Supports Windows Management Instrumentation.
WLAN Disable Upon Wired Connect	Supports Disable Upon Wired Connect for Windows XP, Windows Vista and Windows 7.
Single Sign-On	Allows a single set of credentials (e.g. Windows log on and domain) to be used for wireless authentication as well as domain login.
Cisco LEAP Single Sign-On	Allow Windows log on and domain to be used for LEAP Authentication (single sign-on support).
PEAP Single Sign-On	Allow Windows log on and domain to be used for PEAP Authentication.
Smartcard Single Sign-On	Allow single SmartCard Authentication for Windows log on and wireless authentication (TLS, TTLS, & PEAP supported).
TPM 1.2 support	Supports Trusted Platform Module 1.2
RF Aware SDK - (+ Interference Classification)	Capability to detect RF interference, classify it and prompt the user with suggestions to avoid it.
UI resize	Support for smaller net book size displays
ICS, Win7 Starter	Internet Connection Sharing for Win7 Starter
InConcert® Maestro™ Interface	A unified API framework eliminating the need to manually choose, establish and manage the underlying wireless network. This supports Wi-Fi Direct (and BT for combo adapters).
Wi-Fi Direct Certification	SDK certified for 4313ePA standalone, 43224 and 43225
WPS 2.0	Wi-Fi Protected Setup 2.0

### 3. New Features

Feature	Description

### 4. Existing Adapter Support

4313HMG2L  
4313HMGBEPA,  
4313HMG,  
4313HMGBL  
43224HMS,  
43225HMB,  
43227HM,  
43227HMB,  
43228HM,  
43228HMB,  
BCM94313HMGIPA  
BCM94313HMGBREF

### 5. New Adapter Support

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### 6. Supported Platforms

Commercial and Consumer platforms that accept Broadcom WLAN network adapters.

### 7. Operating Systems

- Microsoft Windows Win8

## 8. Hardware Requirements

Software is expected to only be run on a mobile system with a minimum configuration of Pentium 300 MHz and 128 MB of RAM. The customer will control the distribution method of the software to ensure it is only preinstalled and web released for qualified mobile systems.

## 9. Known Observations

Observation	Description
BCM 87394	Import/Export Functionality Test: 4313iPA: Auto import is not functioning correctly in Vista.

## 10. Resolved Observations

Observation	Description
BCM110525	Fastreconnect: takes 3-5 sec to reconnect in wpa2PSK security
BCM110264	WIN8:AOAC: unexpected failure in stress
BCM111485	Win8 fast-reconnect failed when WakeUpCapabilities= 0x0000ffff
BCM112600	Driver fails fast reconnect over DHCP under WPA2
BCM80077	AES decryption using group key failed with buffalo (Ralink) AP .
BCM112794	Acer: disabled standard magic packet wakeup capability by default.
BCM112953	WIN8:AOAC: Early wakeup due to GTK Failure - Acer Stress
BCM109871	Win8pc: Build and Release
BCM112703	Driver fails mcast packets from Asus RT-N56U after first GTK refresh
BCM113297	Alignment issue of PMK caching cause PMK cache becomes invalid on win7/8. This causes when STA roaming from one AP to another, it will request a full authentication.
BCM111967	Acer InstallShield package needs to disable/enable adapter after changing WakeUpCapabilities
BCM114391	Acer IOAC Bios detection mismatch in Pegatron platform.



Observation	Description
BCM115632	Installation fail from DVD-ROM
BCM service	Enable GTK rekey system registry setting
BCM 26961	Fix Error event ID0 issue
BCM 27320	Can't ping after resume if BIOS withdraw WLAN power when sleeping
BCM service	Single antenna version for 4313 card.

## 11. *Installation Requirements and Instructions*

### 11.1. Install Instructions

The following command-line switches are available options for installation. This is a fully inclusive listing; options supported will vary with respect to delivered package content:

#### **Setup.exe -justdriver**

Install the driver only, and not the tray service.

#### **Setup.exe -extract\_all:[Destination Folder]**

Extracts all the files from the package to the specified folder.

#### **Setup.exe -f1[path\ResponseFile]**

Specifies an alternate location and name of the response file (.iss file). If this option is used when running InstallShield Silent, the response file is read from the folder/file specified by [path\ResponseFile]. If this option is used along with the -r option, the response file is written to the folder/file specified by [path\ResponseFile]

#### **Setup.exe -f2[path\LogFile]**

Specifies an alternate location and name of the log file created by InstallShield Silent. By default, Setup.log log file is created and stored in the same directory as that of Setup.inx.

#### **Setup.exe -s**

Runs InstallShield Silent to execute a silent setup.

## **12. *BIOS Requirements***

The customer will control the method for limiting specific adapter cards to qualified mobile systems.

## **13. *Known conflicting components***

The XP UI is compatible with only one Broadcom WLAN card at a time.