



Intel® Centrino® Ultimate-N 6300



Product Description

The Intel® Centrino® Ultimate-N 6300 is an IEEE 802.11 a/b/g/n wireless network adapter that operates in both the 2.4 GHz and 5.0 GHz spectra. This adapter is available in a PCIe* Half Mini Card form factor and delivers up to 450 Mbps of Bandwidth¹; in addition to providing a host of features that enhance today's mobile lifestyle.

Features

- Up to 450 Mbps of bandwidth¹
- Up to 2X greater range¹
- IEEE standards based 802.11 a/b/g/n WLAN adapter
- Wi-Fi Personal Area Network capabilities⁷
- Industry leading power consumption²
- Wireless support for Intel® Active Management Technology
- Advanced security via 802.11i
- Easy to use Intel® PROSet v13.0 WLAN Software³
- Support for Cisco Compatible Extensions* v4
- Performance-optimized for Connect with Centrino® certified Access Points

| Features | Benefits |
|--|---|
| Performance, Flexibility, and Mobility | |
| 450 Mbps ready¹ Support for up to 3 Transmit and Receive spatial streams | Minimizes the time needed to transfer large files and enables applications such as High Definition (HD) video streaming, Voice over IP (VoIP), and multi-player gaming by providing up to 450 Mbps of bandwidth ¹ compared to 54 Mbps for 802.11 a/b/g solutions |
| Up to 2X greater range¹ MIMO, diversity, and support for up to three antennas enable better wireless reception at the same distance when compared to 802.11 a/b/g solutions | Reduces the number of "dead zones", network re-connects, and dropped data packets; dramatically improving connectivity throughout the home and enabling more consistent coverage in the enterprise |
| Intel® My WiFi Technology⁷ Wireless Personal Area Network solution for connectivity to consumer electronic devices | Enables wireless connectivity to millions of Wi-Fi enabled devices such as digital cameras, portable media players, game players, and printers for activities such as file sharing, file syncing, or file streaming |
| Industry-leading power consumption² Optimized power modes (sleep states) reduce power consumption during periods of inactivity | Reduced WLAN power consumption results in potentially longer platform battery life ² for greater utility, enjoyment, and convenience |
| PCIe* Half Mini Card form factor | Support for the PCIe Half Mini Card form factor enables the Intel® Centrino® Ultimate-N 6300 to be designed into existing laptops as well as for newer thinner, smaller laptops |
| Manageability and Security | |
| Intel® Active Management Technology Asset management, remote system diagnostics, network protection, and network security technology | Provides IT managers the capability to remotely discover, heal, and protect wireless notebooks regardless of the functional state of the operating system which can result in reduced on-site support costs |
| Advanced Security via 802.11i Wireless security supporting AES encryption | Ensures enterprise wireless networks are protected from unauthorized access via stronger authentication and encryption mechanisms |
| Intel® PROSet/Wireless Software v.13.0³ Intel WLAN management software | Simplifies client deployments and allows remote management of wireless settings and profiles by IT managers |
| Interoperability | |
| IEEE standards based 802.11 a/b/g/n WLAN adapter Wi-Fi CERTIFIED* to IEEE 802.11a, 802.11b, 802.11g, and 802.11n standards | Enables maximum interoperability with other IEEE-based Wireless Access Points and Wireless network adapters |

Features

Support for Cisco Compatible Extensions* v4
Cisco Centralized Key Management, Call Admission Control, Unscheduled Automatic Power Save Delivery (U-APSD), and Voice Metrics

Connect with Centrino®
Intel certification that focuses on interoperability between IEEE 802.11n devices

Benefits

Helps prevent delays in VoIP calls when roaming between Access Points; enables improved network diagnostics

Selection of Access Points with the Connect with Centrino® label ensures that both the Access Point and the Intel® Centrino® Ultimate-N 6300 equipped laptop has passed numerous interoperability tests

Intel® PROSet/Wireless WiFi Software³ for Microsoft Windows



Intel® PROSet/Wireless WiFi Software v.13.0 is available for users of Intel® WLAN hardware. The latest version of the software helps enable a superior experience by providing enhancements for end users as well as IT administrators who deploy and manage wireless networks. Features include:

- Enhanced simple User Interface
- IT Administration Tool capabilities
 - Install Package Creator
 - Central control over driver and application settings
 - Single Sign On for Microsoft and Novell networks
- Additional profile management capabilities
- Support for Wi-Fi Protected Setup* (WPS)
- Support for high rate 802.11n networks
- Support Intel® Active Management Technology

Intel® Centrino® Ultimate-N 6300 Technical Specifications

General

| | |
|-----------------------------------|--|
| Dimensions (H x W x D) | 26.80 mm x 30.00 mm x 2.4 mm Max (Top Side) / 1.35 mm Max (Bottom Side) |
| Weight | 4.0 g |
| Diversity | On-board diversity support for systems designed with three antennas |
| Radio ON/OFF Control ⁴ | Supported in both hardware and software |
| Connector interface | Half Mini Card form factor, based on PCIe electrical interface |
| LED Output | Single WLAN-LED (as per Mini Card specification) |
| Operating Temperature | 0 to +60°C |
| Humidity Non-Operating | 50% to 90% RH non-condensing (at temperatures of 25°C to 35°C) |
| Operating Systems | Microsoft Windows XP* 32/64-bit, Microsoft Windows Vista* 32/64-bit, Microsoft Windows 7* 32/64-bit, Ubuntu Linux* |
| Wi-Fi Alliance | Wi-Fi CERTIFIED* for 802.11a, 802.11b, 802.11g, 802.11n, WMM*, WPA*, WPA2*, and WPS |
| Microsoft WHQL | YES |
| IEEE WLAN Standard | IEEE 802.11a/b/g/n, 802.11d, 802.11e, 802.11i, 802.11h |
| Architecture | Infrastructure or ad hoc (peer-to-peer) |
| Roaming ⁵ | Supports seamless roaming between respective access points (802.11b, 802.11g, 802.11a/b/g, and 802.11a/b/g/n) |

Security⁶

| | |
|--------------------------|--|
| Authentication | WPA and WPA2, 802.1X (EAP-TLS, TTLS, PEAP, LEAP, EAP-FAST), EAP-SIM, EAP-AKA |
| Authentication Protocols | PAP, CHAP, TLS, GTC, MS-CHAP*, MS-CHAPv2 |
| Encryption | 64-bit and 128-bit WEP, AES-CCMP, CKIP, TKIP |
| Product Safety | UL, C-UL, CB (IEC 60950-1) |

Compliance

| | |
|---------------------------------|---------------------------|
| Retail (Credit Card Processing) | PCI, CISP |
| Government | FIPS ⁸ , FISMA |

Products Available

Intel® Centrino® Ultimate-N 6300

Model Code

633ANHMW

Version

633ANHMW (supports 802.11a/b/g/n)

Δ Intel® Active Management Technology (Intel® AMT) requires the computer system to have an Intel® AMT-enabled chipset, network hardware and software, as well as connection with a power source and a corporate network connection. Setup requires configuration by the purchaser and may require scripting with the management console or further integration into existing security frameworks to enable certain functionality. It may also require modifications of implementation of new business processes. For more information, see www.intel.com/technology/platform-technology/intel-amt/.

¹ Up to 2X greater range enabled by 3x3 802.11n implementations with 3 spatial streams. Up to 450 Mbps bandwidth based on the theoretical maximum bandwidth enabled by 3x3 802.11n implementations with 3 spatial streams in combination with a 3 spatial stream Access Point. Actual wireless throughput and/or range will vary depending on your specific operating system, hardware and software configurations. Check with your PC manufacturer for details.

² References to industry leading power consumption refer to Wi-Fi module power consumption comparisons versus competing 802.11n WLAN solutions. Actual platform battery life savings will vary depending on your specific operating system, hardware and software configurations. Check with your PC manufacturer for details.

³ Intel® PROSet for Wireless software may not be supported by your PC manufacturer. Check with your PC manufacturer for details on availability.

⁴ Wireless connectivity and some features may require the purchase of additional software, services, or external hardware. Availability of public wireless LAN access points is limited, wireless functionality may vary by country. See <http://www.intel.com/go/wifi> for more information.

⁵ Roaming is supported only between each respective band and mode of access points.

⁶ Some security solutions may not be supported by your PC's operating system and/or by your PC manufacturer. Check with your PC manufacturer for details on availability.

⁷ Wi-Fi Personal Area Network refers only to Wi-Fi enabled devices connecting to the PC via the Intel® My WiFi Technology. Wi-Fi devices must be certified by the Wi-Fi Alliance for 802.11a/b/g. Check with your PC manufacturer for more details.

⁸ Microsoft Windows Vista and Microsoft Windows 7 only.

(* Other names and brands may be claimed as the property of others.

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