PRODUCT BRIEF
Intel® Centrino® Wireless-N 2230
802.11b/g/n, 2x2, single-band Wi-Fi + Bluetooth 4.0

Intel® Centrino® Wireless-N 2230

Enhanced Wireless Performance with Enhanced Intel Features

Intel® Centrino® Wireless-N 2230 delivers enhanced Wi-Fi wireless performance with innovative Intel-only features for a richer mobile experience. This dual-stream (2x2), single-band, 802.11b/g/n Wi-Fi plus Bluetooth 4.0* product with Wi-Fi Direct* combines better speed (up to 300 Mbps[1]), range and reliability with Intel® Smart Connect Technology, Intel® Wireless Display, and Intel ® My WiFi Dashboard.

Recommended For

Home or small business, Web browsing, streaming video and network connectivity in moderate traffic, low interference Wi-Fi environments.

Next-Gen Wireless Connectivity

Multi-Stream, Single Band 802.11b/g/n 2x2 and 2.4 GHz	Delivers up to 300 Mbps speed in the 2.4 GHz band with multiple streams for enhanced speed while improving coverage and reliability.
Bluetooth 4.0* (Low Energy) Dual mode Bluetooth	Connects to Bluetooth enabled devices such as a headset, keyboard, mouse and more, including Bluetooth low energy devices.
Wi-Fi Direct* New game-changing technology certified by the Wi-Fi Alliance for direct device-to-device Wi-Fi connectivity	Enables Wi-Fi enabled devices to connect directly without the need for a WLAN or hotspot. With the Intel® My WiFi Dashboard you can chat, transfer files, create a personal hotspot, and sync over Wi-Fi Direct.*
Energy Efficient[2] Optimized power modes during periods of inactivity	Saves battery life for greater mobility and convenience.

Ultra Mobile Experience

Intel® Wireless Display[3] Share your personal and online content on a big HD screen (up to 1080p) with a simple wireless connection	Experience your favorite movies, videos, photos, online shows and more in full HD on your TV with great image clarity and sound. With a PC featuring Intel® Wireless Display and powered by an Intel® Core processor, share content from your hard disk, network or anywhere a browser can take you to a big screen.
Intel® Smart Connect Technology[4] Instant Internet and always updated mobility	Automatically updates important content and can identify access points while asleep for quicker Internet on resume.
Intel® My WiFi Dashboard[5] Visually intuitive app for managing Wi-Fi Direct* connectivity and services	Use the ultimate portability of Wi-Fi Direct with the Intel® My WiFi Dashboard on your Ultrabook™, PC or other devices. Whether you're connected to a Wi-Fi network, public hotspot or no network at all – connect, communicate and collaborate with others in your vicinity. No extra hardware or cloud-based service. No fumbling for USB flash drives or complicated network setup.

Intel® Centrino® Wireless-N 2230 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	3.45g
Diversity	On-board diversity support for systems designed with two antennas
Radio ON/OFF Control	Supported in both hardware and software
Connector interface	Half Mini Card form factor, based on PCIe electrical interface
LED Output	On/Off
Operating Temperature (Adapter Shield)	0° to +80° C
Humidity Non-Operating	50% to 90% RH non-condensing (at temperatures of 25°C to 35°C)
Operating Systems	Microsoft Windows 7*, Microsoft Windows 8*, Linux*
Wi-Fi Alliance	Wi-Fi CERTIFIED* for 802.11b, 802.11g, 802.11n, WMM*, WPA*, WPA2*, and WPS Wi-Fi Direct for peer to peer device connections
Microsoft WHQL	Yes
IEEE WLAN Standard	IEEE 802.11b/g/n, 802.11d, 802.11e, 802.11i, 802.11h
Architecture	Infrastructure and SoftAP
Roaming[6]	Supports seamless roaming between respective access points (802.11b, 802.11g, 802.11b/g, and 802.11b/g/n)
Bluetooth*	Dual Mode Bluetooth* 2.1, 2.1+EDR, 3.0, 3.0+HS, 4.0 (BLE)

Security[7]

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, TKIP
Wi-Fi Direct* Encryption and Authentication	WPA2, AES-CCMP
Product Safety	UL, C-UL, CB (IEC 60950-1)

Compliance

Retail (Credit Card Processing)	PCI, CISP
Government	FIPS[8] ,FISMA

Product Name	Model Number	Version
Intel® Centrino® Wireless-N 2230	2230BNHMW	802.11b/g/n, Bluetooth 4.0

For more information on Intel® Centrino® wireless products, visit intel.com/go/wireless

[1] Based on the theoretical maximum bandwidth enabled by 2x2 802.11n implementations with 2 spatial streams. 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 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] Requires an Intel® Wireless Display enabled PC, compatible adapter, and TV. 1080p and Blu-Ray* or other protected content playback only available on 2nd generation Intel® Core™ processor-based PCs with built-in visuals enabled. Consult your PC manufacturer. For more information, see www.intel.com/go/widi.
[4] Intel® Smart Connect Technology requires a select Intel® processor, Intel® software and BIOS update, Intel® Wireless adaptor, and Internet connectivity. Solid state memory or drive equivalent may be required. Depending on system configuration, your results may vary. Contact your system manufacturer for more information.
[5] Intel® My WiFi Dashboard is an optional feature and requires additional software and an Intel® Centrino® wireless adapter. Wi-Fi devices must be certified by the WiFi Alliance for 802.11a/g/n and Wi-Fi Direct* in order to connect. See www.intel.com/network/connectivity/products/wireless/mywifi.htm for more details.
[6] Roaming is supported only within each respective band and mode of access points.
[7] 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.
[8] Microsoft Windows 7 only.

Software and workloads used in performance tests may have been optimized for performance only on Intel microprocessors. Performance tests, such as SYSmark and MobileMark, are measured using specific computer systems, components, software, operations and functions. Any change to any of those factors may cause the results to vary. You should consult other information and performance tests to assist you in fully evaluating your contemplated purchases, including the performance of that product when combined with other products.
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