PRODUCT BRIEF

Intel® Wi-Fi 6 AX200 Module
1st Generation Wi-Fi 6 (802.11ax[1]) Solution
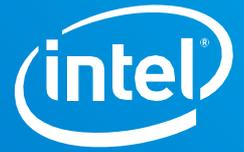
intel®

Intel® Wi-Fi 6 AX200 (Gig+) Module

Nearly 3X higher peak data rates and up to 4X capacity
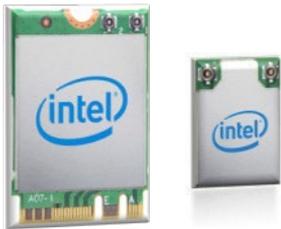
The Intel® Wi-Fi 6 AX200 (Gig+) adapter supports the new IEEE 802.11ax standard – Wi-Fi 6 technology and is Wi-Fi CERTIFIED 6™[1]. The product supports 2x2 Wi-Fi 6 technology, including new features such as UL and DL OFDMA and 1024QAM, delivering data rates of up to 2.4Gbps[2] and increased network capacity as well as Bluetooth® 5.1 support. These new features deliver a significant improvement in user experience in dense deployments, supporting fast uploads and downloads, lower latency and longer battery life compared to solutions supporting 802.11ac. Combined with Intel® Core™ processors and exceptional Intel wireless innovations, the Intel® Wi-Fi 6 AX200 module can provide Gigabit wireless speed[2] and dramatically improve your connected experience at home, work, or on the go.

1ST GENERATION INTEL Wi-Fi 6 WIRELESS	
Increased Capacity Faster Speed Better Coverage Extended Battery Life 802.11ax Dual band 2x2 160MHz	By implementing the new 802.11ax standard with its unique features such as OFDMA, 1024QAM, Target Wake Time (TWT) and spatial reuse, Intel® Wi-Fi 6 AX200 module enables smooth streaming of high-resolution videos, fewer dropped connections, and faster connections farther away from the router and in dense environments. When using Wi-Fi 6 technology with 1024QAM and 160MHz channels, Intel® Wi-Fi 6 AX200 module can deliver nearly 3x higher peak data rates[3] (up to 2.4Gbps) and up to 4x capacity improvement in dense or congested environments comparing to 802.11ac[4].
Improved Security	Intel® Wi-Fi 6 AX200 module supports the new WPA3* security features, enabling next-generation authentication and military-grade encryption.
Bluetooth® 5.1	Bluetooth® 5.1 provides 4x[5] range over Bluetooth® 4.2 using the same Tx power, enabling coverage throughout the home. Bluetooth® 5.1 also doubles data rates speed for faster transmissions thereby reducing the overall power consumption[5]. Additionally, Bluetooth® 5.1 adds new enhanced data broadcasting, enabling seamless location-based services and simpler pairing for Bluetooth® devices.
Microsoft Windows 10*	Full support for latest Microsoft Windows 10* OS.
Form Factors (M.2 2230 and 1216)	M.2 2230 modules enable system configuration and platform usage flexibility with the use of a standard Key A or Key E socket for attaching the module. M.2 1216 modules enable platform design providing savings on motherboard space and BOM.

EXPERIENCE THE INTEL® DIFFERENCE

Worldwide Regulatory Support **Intel® Dynamic Regulatory Solution**	Enables performance optimized worldwide regulatory compliance SKU. The Intel® Wi-Fi 6 AX200 module detects its location and automatically optimizes the Wi-Fi settings to local regulatory requirements, maximizing performance in each geography, simplifying travel experience and global enterprise procurement. Future regulatory changes are easily managed during the product life cycle.
Wireless Functionality in Pre-boot Environment	Support for Wi-Fi network and Bluetooth® Low Energy Human Interface Device (HID) connectivity in the platform's UEFI (Unified Extensible Firmware Interface) environment during its boot stage. This capability enables use cases like OS recovery over Wi-Fi and Bluetooth® Low Energy-based keyboard and mouse connectivity in this pre-boot environment.
Wirelessly Project to the Big Screen	Project your 2-in-1 or laptop content instantly, without wires, on the big HD screen with stunning image clarity and sound using Wi-Fi Miracast*. Stream movies, videos, games, photos, connect with friends, and more. Experience it all, bigger and better than ever before.

BUSINESS-CLASS WIRELESS

Intel® vPro™ Technology[6]	Supports Intel's hardware-based security and management features built into Intel® Core™ vPro™ processors and chipsets that enable IT to manage PCs virtually anywhere, anytime, while reducing deployment costs, improving security and ROI.
Intel® Active Management Technology[7]	Using integrated platform capabilities and popular third-party management and security applications, Intel® AMT allows IT or managed service providers to better discover, repair, and help protect their networked computing assets. Intel® AMT is a feature of Intel® Core™ processors with Intel® vPro™ technology.

INTEL® WI-FI 6 AX200 MODULE TECHNICAL SPECIFICATIONS

GENERAL

Dimensions (H x W x D)	M.2 2230: 22mm x 30mm x 2.4mm [1.5mm Max (Top Side)/ 0.1mm Max (Bottom Side)] M.2 1216: 12mm x 16mm x 1.67 (+-0.08) mm
Weight	M.2 2230: 2.83 +/– 0.3 g M.2 1216: 0.67 +/– 0.1 g
Radio ON/OFF Control	Supported
Connector Interface	M.2: PCIe*, USB
Operating Temperature (Adapter Shield)	0°C to +80°C
Humidity Non-Operating	50% to 90% RH non-condensing (at temperatures of 25°C to 35°C)
Operating Systems	Microsoft Windows* 10, Linux*, Chrome OS*
Wi-Fi Alliance[8]	Wi-Fi CERTIFIED* 6, Wi-Fi CERTIFIED* a/b/g/n/ac, WMM*, WMM*-Power Save, WPA2*, WPA3*, WPS*, PMF*, Wi-Fi Direct*, Wi-Fi Agile Multiband* and Wi-Fi TimeSync*
IEEE WLAN Standard	IEEE 802.11-2016 and select amendments (selected feature coverage) IEEE 802.11a, b, d, e, g, h, i, k, n, r, u, v, w, ac, ax; Fine Timing Measurement based on 802.11-2016
Bluetooth®	Bluetooth® 5.1

SECURITY FEATURES[9]

Security Methods	WPA2* Personal and Enterprise; WPA3*
Authentication Protocols	802.1X EAP-TLS, EAP-TTLS/MSCHAPv2, PEAPv0 -MSCHAPv2 (EAP-SIM, EAP-AKA, EAP-AKA')
Encryption	64-bit and 128-bit WEP, TKIP, 128-bit AES-CCMP, 256-bit AES-GCMP

COMPLIANCE

Regulatory	For a list of country approvals, please contact your local Intel representatives.
US Government	FIPS[10] 140-2
Product Safety	UL, C-UL, CB (IEC 60950-1)

PRODUCT NAME	MODEL NUMBER	VERSION
Intel® Wi-Fi 6 AX200	AX200NGW AX200D2WL	Wi-Fi 6 (802.11ax), 2x2, Bluetooth® 5.1, M.2 2230 Wi-Fi 6 (802.11ax), 2x2, Bluetooth® 5.1, M.2 1216; LTE Coex

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

[1] Wi-Fi 6 (802.11ax) WFA certification is available since September 2019.

[2] Based on the theoretical maximum bandwidth enabled by 2x2 802.11ax 160MHz implementations. Actual wireless throughput and/or range will vary depending on your specific operating system, hardware and software configurations. Check with your device manufacturer for details.

[3] "Nearly 3X higher peak data rates" Intel® Wi-Fi 6 AX claims are based on the comparison of the expected maximum theoretical data rates for similarly configured 802.11ax and standard 802.11ac Wi-Fi solutions as documented in IEEE 802.11ax draft 2.0 spec and IEEE 802.11 wireless standard specifications, and require the use of similarly configured 802.11ax wireless network routers.

[4] In accordance with the IEEE 802.1ax PAR. For additional details, visit: https://mentor.ieee.org/802.11/dcn/14/11-14-0165-01-0hew-802-11-hew-sg-proposed-par.docx.

[5] Bluetooth® 5.1 Feature Overview, https://3pl46c46ctx02p7rzdsvsg21-wpengine.netdna-ssl.com/wp-content/uploads/2019/03/1901_Feature_Overview_Brief_FINAL.pdf

[6] Intel® vPro™ Technology is sophisticated and requires setup and activation. Availability of features and results will depend upon the setup and configuration of your hardware, software and IT environment. To learn more visit: http://www.intel.com/technology/vpro.

[7] Requires activation and a system with a corporate network connection, an Intel® AMT-enabled chipset, network hardware and software. For notebooks, Intel® AMT may be unavailable or limited over a host OS-based VPN, when connecting wirelessly, on battery power, sleeping, hibernating or powered off. Results dependent upon hardware, setup and configuration. For more information, visit http://www.intel.com.

[8] Support of Wi-Fi Alliance certifications is OS-dependent.

[9] Some security solutions may not be supported by your device operating system and/or by your device manufacturer or may require additional hardware (e.g., UICC – SIM card). Check with your device manufacturer for details on availability.

[10] On Microsoft Windows 10*.

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Intel:

AX200.D2WG.L AX200.D2WG.LNV AX200.D2WG.LTNV AX200.NGWG AX200.NGWG.NV AX200.NGWG.DTK
AX200.D2WG.LNVP AX200.D2WG.LTNP AX200.D2WG.LP