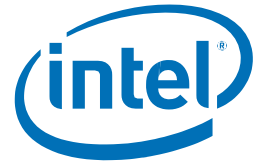
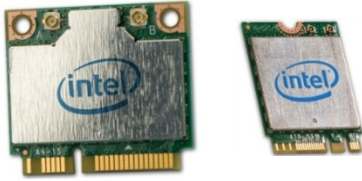




PRODUCT BRIEF  
 Intel® Dual Band Wireless-AC 3160  
 802.11ac, Dual Band, 1x1, Wi-Fi + Bluetooth® 4.0



# Intel® Dual Band Wireless-AC 3160



**Exceptional Wi-Fi. Exceptional Features. Exceptional Connected Experience**

The Intel® Dual Band Wireless-AC 3160 802.11ac, dual band, 1x1, Wi-Fi + Bluetooth® adapter lets you move at the speed of life with faster speeds (up to 433 Mbps<sup>1</sup>), higher capacity, broader coverage and longer battery life. Combined with Intel® Core™ processors and exceptional Intel wireless innovations, the Intel® Dual Band Wireless-AC 3160 dramatically reshapes your connected experience at work, home or on the go.

## Next-Gen 802.11ac Wireless



**Speed  
Coverage  
Capacity**

Delivers dramatically faster Wi-Fi speeds (up to 433 Mbps<sup>1</sup>) than 802.11n, with more bandwidth per stream), more capacity for more users (extended channel bonding 80MHz), broader coverage and better battery life (more data transmit efficiencies reduce power consumption).

802.11ac, Dual Band, 80MHz, 1x1



**Bluetooth® 4.0**

Dual mode Bluetooth® 4.0 connects to the newest low energy Bluetooth® products as well as your familiar devices, such as headsets, keyboard, mice and more.



**Intel® Power Optimizer<sup>2</sup>**

Optimized power modes during periods of activity and inactivity to improve platform battery life for greater mobility and convenience. Dramatically lower power consumption than previous generation products.



**HMC and M.2 Form Factors**

Single sided HMC and M.2 modules support multiple connectors for flexible system configuration and platform usages. The new M.2 form factor (2230 and 2226 Solder Down) delivers a smaller, lower profile, more flexible form factor for thin-and-light designs.

## Experience the Intel Difference



**Always Ready to Go**  
[Intel® Smart Connect Technology<sup>3</sup>](#)

Stay current with automatic, no-wait updates to your email and social networks, even when your device is asleep. Combine it with Intel® WiFi HotSpot Assistant and automatically connect to millions of free and paid hotspots to refresh your content in more locations worldwide.



**Instant Internet Worldwide**  
[Intel® WiFi Hotspot Assistant<sup>5</sup>](#)

Delivers instant Internet connectivity at millions of free and paid hotspot worldwide. After accepting a one-time only terms and conditions (T&C) login, your Internet connections are on auto-pilot as you roam the Wi-Fi hotspot universe—even as your Ultrabook™ sleeps. Combine it with Intel® Smart Connect Technology and your favorite cloud content (email, social networks, news, etc.) is automatically refreshed as you roam.



## Intel® Dual Band Wireless-AC 3160 Technical Specifications

### General

Dimensions (H x W x D)	HMC: 26.80 mm x 30 mm x 2.4 mm Max (Top Side) / 1.3 <sup>4</sup> mm Max (Bottom Side) Single Sided M.2 2230: 22 mm x 30 mm x 2.4 mm [1.5mm Max (Top Side)/ 0.1mm Max (Bottom Side)] M.2 2226: 22 mm x 26 mm x 2.4 mm [1.5mm Max (Top Side)/ 0.1mm Max (Bottom Side)]
Weight	HMC: 3.0g M.2 2230: 2.3g M.2 2226: 2.2g
Diversity	Supported
Radio ON/OFF Control	Supported in both hardware and software
Connector interface	HMC: PCIe, USB M.2: PCIe, USB
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* 8.1, Linux* (most features not available on Linux)
Wi-Fi Alliance	Wi-Fi CERTIFIED* a/b/g/n/ac, WMM*, WMM-PS2, WPA*, WPA2*, WPS2*, Protected Management Frames, Wi-Fi Direct* for peer to peer device connections, Wi-Fi Miracast* as Source.
IEEE WLAN Standard	IEEE 802.11abgn, 802.11ac, 802.11d, 802.11e, 802.11i, 802.11h, 802.11w
Architecture	Infrastructure and SoftAP; Supports simultaneous Client and SoftAP modes
Roaming <sup>5</sup>	Supports seamless roaming between respective access points 802.11b, 802.11g, 802.11a/b/g, 802.11a/b/g/n, and 802.11ac
Bluetooth®	Dual Mode Bluetooth® 2.1, 2.1+EDR, 3.0, 3.0+HS, 4.0 (BLE)

### Security<sup>6</sup>

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)
Management Frame Protection	802.11w (WFA- Protected Management Frames)

### Compliance

Government	FIPS <sup>7</sup> , FISMA
Retail (Credit Card Processing)	PCI, CISP

Product Name	Model Number	Version
Intel® Dual Band Wireless-AC 3160	3160HMC	802.11ac, 1x1, Bluetooth® 4.0, PCIe, USB, HMC
	3160NGW	802.11ac, 1x1, Bluetooth® 4.0, PCIe, USB, M.2 2230
	3160SDW	802.11ac, 1x1, Bluetooth® 4.0, PCIe, USB, M.2 2226 Solder Down
	3160HMC NB	802.11ac, PCIe, USB, HMC, (No Bluetooth)
	3160NGW NB	802.11ac, PCIe, USB, M.2 (No Bluetooth)



For more information on Intel® Wireless products, visit [intel.com/wireless](http://intel.com/wireless)

<sup>1</sup> Based on the theoretical maximum bandwidth enabled by 1x1 802.11ac implementations. 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.

<sup>2</sup> Actual platform battery life savings will vary depending on your specific operating system, hardware and software configurations. Check with your PC manufacturer for details.

<sup>3</sup> 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.

<sup>4</sup> Intel WiFi Hotspot Assistant requires an Intel wireless adapter, Intel® PROSet/Wireless WiFi Software v15.6 or later, and an Internet connection for initial setup with the Easy WiFi® network.

<sup>5</sup> Roaming is supported only within each respective band and mode of access points.

<sup>6</sup> 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.

<sup>7</sup> Microsoft Windows\* 7 and Microsoft Windows\* 8.1.

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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