



## PRODUCT BRIEF

### Intel® Dual Band Wireless-AC 3165

2<sup>nd</sup> Gen 802.11ac, Dual Band, 1x1 Wi-Fi + Bluetooth 4.2



# Intel® Dual Band Wireless-AC 3165



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

The Intel® Dual Band Wireless-AC 3165 is Intel's 2<sup>nd</sup> generation 802.11ac, dual band, 1x1 Wi-Fi + Bluetooth® adapter. It's engineered to be faster<sup>1</sup>, stronger<sup>1</sup>, greener<sup>1</sup> than previous gen Intel 802.11ac 1x1 products with shared Wi-Fi and Bluetooth antennas, lower power in idle modes, Intel® Dynamic Regulatory Solution and complete Microsoft Windows 10 support. Combined with Intel® Core™ processors and exceptional Intel wireless innovations, the Intel® Dual Band Wireless-AC 3165 dramatically reshapes your connected experience at home, work or on the go.

### Experience the Intel Difference



#### More Speed Better Coverage Larger Capacity

802.11ac, Dual Band, 80MHz, 1x1

Delivers up to 3x faster Wi-Fi speeds (up to 433 Mbps<sup>2</sup>) than 802.11n, with up to 3x more bandwidth per stream for more users and devices. Advanced optional 802.11ac specification features implemented that improve channel reliability resulting in better coverage and performance. Intel® Wireless-AC enables smoother streaming of higher resolution videos, fewer dropped connections and less congestion, and more speeds further away from the router.



#### Bluetooth 4.2® Smart Ready (Low Energy)

Dual mode Bluetooth 4.2® connects to the newest low energy Bluetooth® products as well as your familiar devices, such as headsets, keyboard, mice and more.



#### M.2 2230 or M.2 1216 Form Factors

Multiple form-factors, including M.2 2230 and M.2 1216 modules enable system configuration and platform usages flexibility. The M.2 1216 form factor delivers 70% smaller footprint and lower profile optimized for thin-and-light designs.



#### Microsoft Windows 10 Ready

Full support for latest Microsoft Windows 10 OS with Intel® WiDi and HCI drivers



#### Worldwide Regulatory Support Intel® Dynamic Regulatory Solution<sup>3</sup>

Delivers regulatory busting technology that enables one Intel® Wireless-AC adapter shipped to customers worldwide with the regulatory requirements of most countries in a single database on the Wi-Fi module. The Intel® Dual Band Wireless-AC 3165 detects its location and automatically configures the Wi-Fi to match it. Regulatory updates are easily enabled with software updates so users can travel worldwide without compliance issues.



#### Your Ultrabook™, On Your TV [Intel® Wireless Display<sup>4</sup>](#)

Watch your mobile PC content instantly without wires on the big HD screen with stunning image clarity and sound. Intel® Wireless Display gives you a serious entertainment upgrade. Stream movies, videos, games, photos, connect with friends, and more—experience it all, bigger and better than ever before.



## Intel® Dual Band Wireless-AC 3165 Technical Specifications

### General

Dimensions (H x W x D)	M.2 2230: 22 mm x 30 mm x 2.4 mm [1.5mm Max (Top Side)/ 0.1mm Max (Bottom Side)] M.2 1216: 12 mm x 16 mm x 1.7 mm
Weight	M.2 2230: 2.4g M.2 1216: 0.6g
Radio ON/OFF Control	Supported in both hardware and software
Connector interface	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*, Microsoft Windows 10*, Linux* (most features not available on Linux)
Wi-Fi Alliance	Wi-Fi CERTIFIED® for 802.11ac, Wi-Fi CERTIFIED® a/b/g, Wi-Fi CERTIFIED® n, WMM®, WPA®, WPA2®, and WPS, WPS 2.0, Protected Management Frames, Wi-Fi Direct® for peer to peer device connections, Wi-Fi Miracast 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, 4.0, 4.1, 4.2 (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
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Product Name	Model Number	Version
Intel® Dual Band Wireless-AC 3165	3165NGW	802.11ac, 1x1, Bluetooth 4.2®, PCIe, USB, M.2 2230
Intel® Dual Band Wireless-AC 3165	3165D2WG	802.11ac, 1x1, Bluetooth 4.2®, PCIe, USB, M.2 1216 (3.3V)
Intel® Dual Band Wireless-AC 3165	3165D2WG	802.11ac, 1x1, Bluetooth 4.2®, PCIe, USB, M.2 1216 (1.8V)



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

<sup>1</sup> Compared to Intel® Dual Band Wireless-AC 3160.

<sup>2</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>3</sup> Intel Dynamic Regulatory Solution

<sup>4</sup> Intel® Wireless Display requires an Intel® Wireless Display enabled PC, tablet, or smartphone, a compatible adapter, and a TV. 1080p and Blu-Ray® or other protected content playback only available on select Intel® processors with built-in visuals enabled. Consult your PC manufacturer. For more information, see [www.intel.com/go/widi](http://www.intel.com/go/widi)

<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 8/8., and Microsoft Windows 10.

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. No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document. Except as provided in Intel's Terms and Conditions of Sale for such products, Intel assumes no liability whatsoever, and Intel disclaims any express or implied warranty, relating to sale and/or use of Intel products including without limitation, liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright or other intellectual property right. Intel products are not intended for use in medical, lifesaving, or life sustaining applications. Intel may make changes to specifications and product descriptions at any time, without notice. For the most current product information, please visit: <http://www.intel.com/wireless>

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