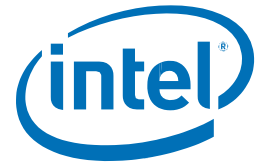




**PRODUCT BRIEF**  
**Intel® Dual Band Wireless-AC 3165**  
 2<sup>nd</sup> Gen 802.11ac, Dual Band, 1x1 Wi-Fi + Bluetooth 4.2



# 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 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 managed during the product lifecycle so users can travel worldwide without compliance issues.



## 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)]<br>M.2 1216: 12 mm x 16 mm x 1.7 mm   |
| Weight                                 | M.2 2230: 2.4g<br>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 <sup>1</sup> , Microsoft Windows 8.1 <sup>1</sup> , Microsoft Windows 10 <sup>1</sup> , Linux <sup>*</sup> (most features not available on Linux)  |
| Wi-Fi Alliance                         | Wi-Fi CERTIFIED <sup>*</sup> for 802.11ac, Wi-Fi CERTIFIED <sup>*</sup> a/b/g, Wi-Fi CERTIFIED <sup>*</sup> n, WMM <sup>*</sup> , WPA <sup>*</sup> , WPA2 <sup>*</sup> , and WPS, WPS 2.0, Protected Management Frames, Wi-Fi Direct <sup>*</sup> for peer to peer device connections<br>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>4</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 <sup>®</sup>                 | Dual Mode Bluetooth <sup>*</sup> 2.1, 2.1+EDR, 3.0, 4.0, 4.1,4.2 (BLE)   |

### Security<sup>5</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 <sup>*</sup> , MS-CHAPv2                        |
| Encryption  | 64-bit and 128-bit WEP, AES-CCMP, TKIP                                       |
| Wi-Fi Direct <sup>*</sup> 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>6</sup> , FISMA |
|------------|---------------------------|

| Product Name                                  | Model Number | Version  |
|---|--------------|--|
| Intel <sup>®</sup> Dual Band Wireless-AC 3165 | 3165NGW      | 802.11ac, 1x1, Bluetooth 4.2 <sup>®</sup> , PCIe, USB, M.2 2230        |
| Intel <sup>®</sup> Dual Band Wireless-AC 3165 | 3165D2WG     | 802.11ac, 1x1, Bluetooth 4.2 <sup>®</sup> , PCIe, USB, M.2 1216 (3.3V) |
| Intel <sup>®</sup> Dual Band Wireless-AC 3165 | 3165D2WG     | 802.11ac, 1x1, Bluetooth 4.2 <sup>®</sup> , PCIe, USB, M.2 1216 (1.8V) |



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

<sup>1</sup> Compared to Intel<sup>®</sup> 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> Roaming is supported only within each respective band and mode of access points.

<sup>5</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>6</sup> Microsoft Windows 7 and Microsoft Windows 8/8.1, 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.

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<sup>\*</sup>Other names and brands may be claimed as the property of others

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