# Onyx WiFi Adapter Information Guide

This version of Intel® PROSet/Wireless WiFi Software is compatible with the adapters listed below. However, note that newer features provided in this software release are generally not supported for older, legacy adapters.

The following adapters are supported on this release for Windows* 10:
    Intel Dual Band Wireless-AC 9260

# Adapter Settings

The **Advanced** tab displays the device properties for the WiFi adapter installed on your computer.

## How to Access

At the Intel® PROSet/Wireless WiFi Connection Utility, Advanced Menu click **Adapter Settings**. Select the **Advanced** tab.

## WiFi Adapter Settings Description

| Name | Description |
|------|-------------|
| **802.11ac Mode** <br><br> **(5GHz)** | The 802.11ac standard builds on 802.11n standard. 802.11ac Mode delivers up to 867Mbps (theoretical) by increasing channel bandwidth to 80MHz and adding higher density modulation (256 QAM). Select **Enabled** or **Disabled** to set the 802.11ac mode of the WiFi adapter. Enabled is the default setting. This setting applies to 802.11ac capable adapters only. |
| **802.11n Channel Width (2.4 GHz)** | Set high throughput channel width to maximize performance. Set the channel width to **Auto** or **20MHz**. Use 20MHz if 802.11n channels are restricted. This setting applies to 802.11n capable adapters only. |
| **802.11n Channel Width (5.2 GHz)** | Set high throughput channel width to maximize performance. Set the channel width to **Auto** or **20MHz**. Use 20MHz if 802.11n channels are restricted. This setting applies to 802.11n capable adapters only. |
| **802.11n Mode** | The 802.11n standard builds on previous 802.11 standards by adding multiple-input multiple-output (MIMO). MIMO increases data throughput to improve transfer rate. Select **Enabled** or **Disabled** to set the 802.11n mode of the WiFi adapter. Enabled is the default setting. This setting applies to 802.11n capable adapters only. <br><br> **NOTE**: To achieve transfer rates greater than 54 Mbps on 802.11n connections, WPA2*-AES security must be selected. No security (**None**) can be selected to enable network setup and troubleshooting. <br><br> An administrator can enable or disable support for high throughput mode to reduce power-consumption or conflicts with other bands or compatibility issues. |
| **Ad Hoc Channel 802.11b/g** | Select **Enabled** or **Disabled**. |
| **Ad Hoc QoS Mode** | Quality of Service (QoS) control in ad hoc networks. QoS provides prioritization of traffic from the access point over a wireless LAN based on traffic classification. WMM (Wi-Fi Multimedia) is the QoS certification of the Wi-Fi Alliance (WFA). When WMM is enabled, the WiFi adapter uses WMM to support priority tagging and queuing capabilities for Wi-Fi networks. <br><br> &bull; **WMM Enabled** <br> &bull; **WMM Disabled** (Default) |

| | |
|---|---|
| **Bluetooth® AMP** | Enable or disable Bluetooth® AMP. AMP stands for alternate MAC/PHY and uses the 802.11 (Wi-Fi) as the high-speed transport. If disabled, Bluetooth HS is turned off. |
| **HT Mode/VHT Mode/Disabled** | This settings lets you select HT Mode (High Throughput mode), VHT Mode (Very High Throughput Mode) or to disable both modes. HT Mode supports 802.11n compatibility, whereas VHT Mode supports 802.11ac compatibility. |
| **Fat Channel Intolerant** | This setting communicates to access points that this WiFi adapter does not prefer 40MHz channels in the 2.4GHz band. The default setting is for this to be turned off (disabled), so that the adapter does not send this notification. If the access point continues to use 40MHz channels, the WiFi adapter will also use 40MHz channels if the 802.11n Channel Width (2.4GHz) setting is AUTO. |
| **Mixed mode protection** | Use to avoid data collisions in a mixed 802.11b and 802.11g environment. Request to Send/Clear to Send (RTS/CTS) should be used in an environment where clients may not hear each other. CTS-to-self can be used to gain more throughput in an environment where clients are in close proximity and can hear each other. |
| **Preferred Band** | In an environment with other radiating devices nearby (such as microwave ovens, cordless telephones, access points, or client devices), in order to reduce interference you may prefer the 5GHz band over the 2.4GHz band, or vice-versa. Your choices are:<br><br>• No Preference<br>• Prefer 2.4GHz band<br>• Prefer 5GHz band<br><br>Here are the various Wi-Fi bands:<br><br>• 802.11 legacy - 2.4GHz<br>• 802.11a - 5GHz<br>• 802.11b - 2.4GHz<br>• 802.11g - 2.4GHz<br>• 802.11n - 2.4GHz and 5GHz<br>• 802.11ac - 5GHz<br>• |
| **Roaming Aggressiveness** | This setting lets you define how aggressively your wireless client roams to improve connection to an access point. There are five available settings.<br><br>• **3. Medium**: This is the default. A balanced setting between not roaming and performance.<br>• **1. Lowest**: Your wireless client will not roam. Only significant link quality degradation causes it to roam to another access point.<br>• **5. Highest**: Your wireless client continuously tracks the link quality. If any degradation occurs, it tries to find and roam to a better access point. |
| **Transmit Power** | **Default Setting**: Highest power setting.<br><br>**Lowest: Minimum Coverage**: Set the adapter to the lowest transmit power. Enables you to expand the number of coverage areas or confine a coverage area. Reduces the coverage area in high traffic areas to improve overall transmission quality and avoids congestion and interference with other devices.<br><br>**Highest: Maximum Coverage**: Set the adapter to a maximum transmit power level. Select for maximum performance and range in environments with limited additional WiFi radio devices.<br><br>**NOTE**: The optimal setting is for a user to always set the transmit power at the lowest |

| | |
|---|---|
| | possible level that is still compatible with the quality of their communication. This allows the maximum number of wireless devices to operate in dense areas and reduce interference with other devices that it shares the same radio spectrum with.<br><br>**NOTE**: This setting takes effect when either Network (Infrastructure) or Device to Device (ad hoc) mode is used. |
| **Wake on Magic Packet** | This setting, enabled, wakes the computer from a sleep state when it receives a "magic packet" from a sending computer. The magic packet contains the MAC address of the intended destination computer.<br><br>Enabling turns on Wake on Magic Packet. Disabling turns off Wake on Magic Packet. Disabling this only disables the magic packet feature, not Wake on Wireless LAN. |
| **Wake on Pattern Match** | This feature wakes the computer from a sleep state when a particular wake pattern is received at the adapter. This feature is supported by the Window* 7 and Windows 8. Such patterns typically are:<br><br>• Wake on new incoming TCP connection for IPv4 and IPv6 (TCP SYN IPv4 and TCP SYN IPv6).<br>• Wake on 802.1x re-authentication packets.<br><br>Disabling this only disables the pattern match feature, not Wake on Wireless LAN. |
| **Wireless Mode** | Select which mode to use for connection to a wireless network:<br><br>• **802.11a only**: Connect the wireless WiFi adapter to 802.11a networks only. Not applicable for all adapters.<br>• **802.11b only**: Connect the wireless WiFi adapter to 802.11b networks only. Not applicable for all adapters.<br>• **802.11g only**: Connect the wireless WiFi adapter to 802.11g networks only.<br>• **802.11a and 802.11g**: Connect the WiFi adapter to 802.11a and 802.11g networks only. Not applicable for all adapters.<br>• **802.11b and 802.11g**: Connect the WiFi adapter to 802.11b and 802.11g networks only. Not applicable for all adapters.<br>• **802.11a, 802.11b, and 802.11g**: (Default) - Connect to either 802.11a, 802.11b or 802.11g wireless networks. Not applicable for all adapters. |
| **OK** | Saves settings and returns to the previous page. |
| **Cancel** | Closes and cancels any changes. |

# Regulatory Information

This section provides regulatory information for the following wireless adapters:
• Intel Dual Band Wireless-AC 9260

> **NOTE**: Due to the evolving state of regulations and standards in the wireless LAN field (IEEE 802.11 and similar standards), the information provided herein is subject to change. onyx Corporation assumes no responsibility for errors or omissions in this document.

# INFORMATION FOR THE USER

## Safety Notices

### USA FCC Radio Frequency Exposure

The FCC with its action in ET Docket 96-8 has adopted a safety standard for human exposure to radio frequency (RF) electromagnetic energy emitted by FCC certified equipment. The wireless adapter meets the Human Exposure requirements found in FCC Part 2, 15C, 15E.  Proper operation of this radio according to the instructions found in this manual will result in exposure substantially  below the FCC's recommended limits.

The following safety precautions should be observed:

- Do not touch or move antenna while the unit is transmitting or receiving.
- Do not hold any component containing the radio such that the antenna is very close or touching any exposed parts of the body, especially the face or eyes, while transmitting.
- Do not operate the radio or attempt to transmit data unless the antenna is connected; this behavior may cause damage to the radio.
- Use in specific environments:
    - The use of wireless adapters in hazardous locations is limited by the constraints posed by the safety directors of such environments.
    - The use of electronic devices equipped with wireless adapters on airplanes is governed by rules for each commercial airline operator.
    - The use of wireless adapters in hospitals is restricted to the limits set forth by each hospital.

### Explosive Device Proximity Warning

**Warning**: Do not operate a portable transmitter (including this wireless adapter) near unshielded blasting caps or in an explosive environment unless the transmitter has been modified to be qualified for such use.

### Antenna Warnings

**Warning**: The wireless adapter is not designed for use with high-gain directional antennas.

### Use On Aircraft Caution

**Caution**: Regulations of commercial airline operators may prohibit airborne operation of certain electronic devices equipped with radio-frequency wireless devices (wireless adapters) because their signals could interfere with critical aircraft instruments.

### Other Wireless Devices

**Safety Notices for Other Devices in the Wireless Network**: See the documentation supplied with wireless adapters or other devices in the wireless network.

### Local Restrictions on 802.11a, 802.11b, 802.11d, 802.11g, 802.11n, 802.11ac, and 802.16e Radio Usage

**Caution**: Due to the fact that the frequencies used by 802.11a, 802.11b, 802.11d, 802.11g, 802.11n, 802.11ac, and 802.16e wireless LAN devices may not yet be harmonized in all countries, 802.11a, 802.11b, 802.11d, 802.11g, 802.11n, 802.11ac, and 802.16e products are designed for use only in specific countries, and are not allowed to be operated in countries other than those of designated use. As a user of these products, you are responsible for

ensuring that the products are used only in the countries for which they were intended and for verifying that they are configured with the correct selection of frequency and channel for the country of use. The device transmit power control (TPC) interface is part of the Intel® PROSet/Wireless WiFi Connection Utility Software. Operational restrictions for Equivalent Isotropic Radiated Power (EIRP) are provided by the system manufacturer. Any deviation from the permissible power and frequency settings for the country of use is an infringement of national law and may be punished as such.

**Wireless Interoperability**

The wireless adapter is designed to be interoperable with other wireless LAN products that are based on direct sequence spread spectrum (DSSS) radio technology and to comply with the following standards:

- IEEE Std. 802.11b compliant Standard on Wireless LAN
- IEEE Std. 802.11g compliant Standard on Wireless LAN
- IEEE Std. 802.11a compliant Standard on Wireless LAN
- IEEE Std. 802.11n draft 2.0 compliant on Wireless LAN
- Wireless Fidelity certification, as defined by the Wi-Fi Alliance

**The Wireless Adapter and Your Health**

The wireless adapter, like other radio devices, emits radio frequency electromagnetic energy. The level of energy emitted by the wireless adapter, however, is less than the electromagnetic energy emitted by other wireless devices such as mobile phones. The wireless adapter operates within the guidelines found in radio frequency safety standards and recommendations. These standards and recommendations reflect the consensus of the scientific community and result from deliberations of panels and committees of scientists who continually review and interpret the extensive research literature. In some situations or environments, the use of the wireless adapter may be restricted by the proprietor of the building or responsible representatives of the applicable organization. Examples of such situations may include:

- Using the wireless adapter on board airplanes, or
- Using the wireless adapter in any other environment where the risk of interference with other devices or services is perceived or identified as being harmful.

If you are uncertain of the policy that applies to the use of wireless adapters in a specific organization or environment (an airport, for example), you are encouraged to ask for authorization to use the adapter before you turn it on.

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# REGULATORY INFORMATION

# USA - Federal Communications Commission (FCC)

This wireless adapter is restricted to indoor use due to its operation in the 5.15 to 5.25 and 5.470 to 5.75GHz frequency ranges. No configuration controls are provided for Intel® wireless adapters allowing any change in the frequency of operations outside the FCC grant of authorization for U.S. operation according to Part 15.407 of the FCC rules.

.This wireless adapter complies with Part 15 of the FCC Rules. Operation of the device is subject to the following two conditions:

- This device may not cause harmful interference.
- This device must accept any interference that may cause undesired operation.

**Class B Device Interference Statement**

This wireless adapter has been tested and found to comply with the limits for a Class B digital device, pursuant to

Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This wireless adapter generates, uses, and can radiate radio frequency energy. If the wireless adapter is not installed and used in accordance with the instructions, the wireless adapter may cause harmful interference to radio communications. There is no guarantee, however, that such interference will not occur in a particular installation. If this wireless adapter does cause harmful interference to radio or television reception (which can be determined by turning the equipment off and on), the user is encouraged to try to correct the interference by taking one or more of the following measures:

- Reorient or relocate the receiving antenna of the equipment experiencing the interference.
- Increase the distance between the wireless adapter and the equipment experiencing the interference.
- Connect the computer with the wireless adapter to an outlet on a circuit different from that to which the equipment experiencing the interference is connected.
- Consult the dealer or an experienced radio/TV technician for help.

   **NOTE**: The adapter must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product. Any other installation or use will violate FCC Part 15 regulations.

## Safety Approval Considerations

This device has been safety approved as a component and is for use only in complete equipment where the acceptability of the combination is determined by the appropriate safety agencies. When installed, consideration must be given to the following:

- It must be installed into a compliant host device meeting the requirement of UL/EN/IEC 60950-1 2nd edition including the general provisions of enclosure design 1.6.2 and specifically paragraph 1.2.6.2 (Fire Enclosure).
- The device shall be supplied by a SELV source when installed in the end-use equipment.
- A heating test shall be considered in the end-use product for meeting the requirement of UL/EN/IEC 60950-1 2nd edition.

## Low Halogen

Applies only to brominated and chlorinated flame retardants (BFRs/CFRs) and PVC in the final product. Intel components as well as purchased components on the finished assembly meet JS-709 requirements, and the PCB / substrate meet IEC 61249-2-21 requirements. The replacement of halogenated flame retardants and/or PVC may not be better for the environment.

## Antenna Type and Gains

antenna peak gain. w/ cable loss (dBi)

| Antenna Type | Antenna Location (Main/Aux) | 2.4GHz Peak Gain in dBi* | | 5.2GHz Peak Gain in dBi* | 5.5GHz Peak Gain in dBi* | 5.7GHz Peak Gain in dBi* |
|---|---|---|---|---|---|---|
| Dipole | Main | 2.5 | | 3.5 | 3.5 | 3.5 |
| | Aux | 2.5 | | 3.5 | 3.5 | 3.5 |
| | MIMO | | | | | |

| Antenna Type | Antenna Location (Main/Aux) | 2.4GHz Peak Gain in dBi* | | 5.2GHz Peak Gain in dBi* | 5.5GHz Peak Gain in dBi* | 5.7GHz Peak Gain in dBi* |
|---|---|---|---|---|---|---|
| PIFA | Main | | | | | |
| | Aux | 3.24 | | 3.73 | 4.77 | 4.77 |
| | MIMO | | | | | |

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## Local Restriction of 802.11a, 802.11b, 802.11g, 802.11n, and 802.11e Radio Usage

The following statement on local restrictions must be published as part of the compliance documentation for all 802.11a, 802.11b, 802.11g and 802.11n products.

⚠️ **Caution**: Due to the fact that the frequencies used by 802.11a, 802.11b, 802.11g, 802.11n, and 802.16e wireless LAN devices may not yet be harmonized in all countries, 802.11a, 802.11b, 802.11g, 802.11n, and 802.16e products are designed for use only in specific countries, and are not allowed to be operated in countries other than those of designated use. As a user of these products, you are responsible for ensuring that the products are used only in the countries for which they were intended and for verifying that they are configured with the correct selection of frequency and channel for the country of use. Any deviation from the permissible power and frequency settings for the country of use is an infringement of national law and may be punished as such.

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# Onyx WiFi Adapters, 802.11n and 802.11ac Compliant

The information in this section applies to the following products:
* Intel Dual Band Wireless-AC 9260

See [Specifications](#) for complete wireless adapter specifications.

> **NOTE**: In this section, all references to the "wireless adapter" refer to all adapters listed above.

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## INFORMATION FOR THE USER

## Safety Notices

### USA FCC Radio Frequency Exposure

The FCC with its action in ET Docket 96-8 has adopted a safety standard for human exposure to radio frequency (RF) electromagnetic energy emitted by FCC certified equipment. The wireless adapter meets the Human Exposure requirements found in FCC Part 2, 15C, 15E.  Proper operation of this radio according to the instructions found in this manual will result in exposure substantially  below the FCC's recommended limits.

The following safety precautions should be observed:

* Do not touch or move antenna while the unit is transmitting or receiving.
* Do not hold any component containing the radio such that the antenna is very close or touching any exposed parts of the body, especially the face or eyes, while transmitting.
* Do not operate the radio or attempt to transmit data unless the antenna is connected; this behavior may cause damage to the radio.
* Use in specific environments:
    * The use of wireless adapters in hazardous locations is limited by the constraints posed by the safety directors of such environments.
    * The use of wireless adapters on airplanes is governed by the Federal Aviation Administration (FAA).
    * The use of wireless adapters in hospitals is restricted to the limits set forth by each hospital.

### Explosive Device Proximity Warning

**Warning**: Do not operate a portable transmitter (including this wireless adapter) near unshielded blasting caps or in an explosive environment unless the transmitter has been modified to be qualified for such use.

### Antenna Warnings

**Warning**: The wireless adapter is not designed for use with high-gain directional antennas.

### Use On Aircraft Caution

**Caution**: Regulations of commercial airline operators may prohibit airborne operation of certain electronic devices equipped with radio-frequency wireless devices (wireless adapters) because their signals could interfere with critical aircraft instruments.

### Other Wireless Devices

**Safety Notices for Other Devices in the Wireless Network**: See the documentation supplied with wireless adapters or other devices in the wireless network.

### Local Restrictions on 802.11a, 802.11b, 802.11d, 802.11g, 802.11n, and 802.11ac Radio Usage

**Caution**: Due to the fact that the frequencies used by 802.11a, 802.11b, 802.11d, 802.11g, 802.11n, and 802.11ac wireless LAN devices may not yet be harmonized in all countries, 802.11a, 802.11b, 802.11d, 802.11g, 802.11n, and 802.11ac products are designed for use only in specific countries, and are not allowed to be operated in countries other than those of designated use. As a user of these products, you are responsible for ensuring that

the products are used only in the countries for which they were intended and for verifying that they are configured with the correct selection of frequency and channel for the country of use. The device transmit power control (TPC) interface is part of the Intel® PROSet/Wireless WiFi Connection Utility Software. Operational restrictions for Equivalent Isotropic Radiated Power (EIRP) are provided by the system manufacturer. Any deviation from the permissible power and frequency settings for the country of use is an infringement of national law and may be punished as such.

## Wireless Interoperability

The wireless adapter is designed to be interoperable with other wireless LAN products that are based on direct sequence spread spectrum (DSSS) radio technology and to comply with the following standards:

- IEEE Std. 802.11b compliant Standard on Wireless LAN
- IEEE Std. 802.11g compliant Standard on Wireless LAN
- IEEE Std. 802.11a compliant Standard on Wireless LAN
- IEEE Std. 802.11n compliant Standard on Wireless LAN
- IEEE Std. 802.11ac draft compliant on Wireless LAN
- Wireless Fidelity certification, as defined by the Wi-Fi Alliance

## The Wireless Adapter and Your Health

The wireless adapter, like other radio devices, emits radio frequency electromagnetic energy. The level of energy emitted by the wireless adapter, however, is less than the electromagnetic energy emitted by other wireless devices such as mobile phones. The wireless adapter operates within the guidelines found in radio frequency safety standards and recommendations. These standards and recommendations reflect the consensus of the scientific community and result from deliberations of panels and committees of scientists who continually review and interpret the extensive research literature. In some situations or environments, the use of the wireless adapter may be restricted by the proprietor of the building or responsible representatives of the applicable organization. Examples of such situations may include:

- Using the wireless adapter on board airplanes, or
- Using the wireless adapter in any other environment where the risk of interference with other devices or services is perceived or identified as being harmful.

If you are uncertain of the policy that applies to the use of wireless adapters in a specific organization or environment (an airport, for example), you are encouraged to ask for authorization to use the adapter before you turn it on.

⚠**CAUTION:**

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

**RF Exposure warning**

This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

⚠**CAUTION: WiFi 5GHz device :**
This device meets all the other requirements specified in Part 15E, Section 15.407 of the FCC Rules.

**Per KDB 996369 D03 v01r01 OEM Manual section 2.2 to 2.12, this module is intended for OEM integrators under the following conditions:**
2.2 List of applicable FCC rules
This module has been tested for compliance to FCC Part 15 Subpart C (15.247) and Subpart E (15.407).
2.3 Summarize the specific operational use conditions
The module is tested for standalone mobile RF exposure use condition. Any other usage conditions such as co-location with other transmitter(s) will need a separate reassessment through a class II permissive change application or new certification.
2.4 Limited module procedures
Not applicable, this device is a single modular approval and meets FCC 47 CFR 15.212 requirement.

Not applicable. This module has its own antenna, and does not need a host's printed board micro strip trace antenna, etc.
2.6 RF exposure considerations
This equipment complies with FCC mobile radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator & your body. A separate SAR/Power Density evaluation is required to confirm compliance with relevant FCC portable RF exposure rules.
2.7 Antennas
This module has been approved to operate with the antenna types listed below, with the maximum permissible gain indicated.

| No. | Manufacturer | Part No. | Antenna Type | Peak Gain (dBi) | Freq. Range (GHz) | Connector Type |
|---|---|---|---|---|---|---|
| 1 | Aristotle enterprises inc | RFA-25-L14M3-B70 | dipole | 2.5 | 2.4 | |
| 2 | Aristotle enterprises inc | RFA-25-L14M3-B70 | dipole | 3.5 | 5.2 | |
| 3 | Aristotle enterprises inc | RFA-25-L14M3-B70 | dipole | 3.5 | 5.3 | |
| 1 | Aristotle enterprises inc | RFA-25-L14M3-B70 | dipole | 3.5 | 5.6 | |
| 2 | Aristotle enterprises inc | RFA-25-L14M3-B70 | dipole | 3.5 | 5.8 | |

**IMPORTANT:** The final host product must have an integral antenna which is not removable by the end-user.
2.8 Label and compliance information
Label of the end product:
The final end product must be labeled in a visible area with the following: "Contains FCC ID: RZ5-MEDPC-2100". The grantee's FCC ID can be used only when all FCC compliance requirements are met
2.9 Information on test modes and additional testing requirements
This transmitter is tested in a standalone mobile RF exposure condition and any co-located or simultaneous transmission with other transmitter(s) class II permissive change re-evaluation or new certification.
2.10 Additional testing, Part 15 Subpart B disclaimer
This transmitter module is tested as a subsystem and its certification does not cover the FCC Part 15 Subpart B (unintentional radiator) rule requirement applicable to the final host. The final host will still need to be reassessed for compliance to this portion of rule requirements if
applicable. As long as all conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirements required with this module installed.
**IMPORTANT NOTE:** In the event that these conditions cannot be met (for example certain laptop configurations or co-location with another transmitter), then the FCC authorization is no longer considered valid and the FCC ID cannot be used on the final product. In these circumstances, the OEM integrator will be responsible for re-evaluating the end product (including the transmitter) and obtaining a separate FCC authorization.
**Manual Information To the End User**
The OEM integrator has to be aware not to provide information to the end user regarding how to install or remove this RF module in the user's manual of the end product which integrates this module.The end user manual shall include all required regulatory information/warning as show in this manual.
**OEM/Host manufacturer responsibilities**
OEM/Host manufacturers are ultimately responsible for the compliance of the Host and Module. The final product must be reassessed against all the essential requirements of the FCC rule such as FCC Part 15 Subpart B before it can be placed on the US market. This includes reassessing the transmitter module for compliance with the Radio and EMF essential requirements of the FCC rules. This module must not be incorporated into any other device or system without retesting for compliance as multi-radio and combined equipment.

**Class B Device Interference Statement**

This wireless adapter has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This wireless adapter generates, uses, and can radiate radio frequency energy. If the wireless adapter is not installed and used in accordance with the instructions, the wireless adapter may cause harmful interference to radio communications. There is no guarantee, however, that such interference will not occur in a particular installation. If this wireless adapter does cause harmful interference to radio or television reception (which can be determined by turning the equipment off and on), the user is encouraged to try to correct the interference by taking one or more of the following measures:

- Reorient or relocate the receiving antenna of the equipment experiencing the interference.
- Increase the distance between the wireless adapter and the equipment experiencing the interference.
- Connect the computer with the wireless adapter to an outlet on a circuit different from that to which the equipment experiencing the interference is connected.
- Consult the dealer or an experienced radio/TV technician for help.

  **NOTE**: The adapter must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product. Any other installation or use will violate FCC Part 15 regulations.

# Safety Approval Considerations

This device has been safety approved as a component and is for use only in complete equipment where the acceptability of the combination is determined by the appropriate safety agencies. When installed, consideration must be given to the following:

- It must be installed into a compliant host device meeting the requirement of UL/EN/IEC 60950-1 2nd edition including the general provisions of enclosure design 1.6.2 and specifically paragraph 1.2.6.2 (Fire Enclosure).
- The device shall be supplied by a SELV source when installed in the end-use equipment.
- A heating test shall be considered in the end-use product for meeting the requirement of UL/EN/IEC 60950-1 2nd edition.

**Waste Electrical and Electronic Equipment Directive (WEEE)**
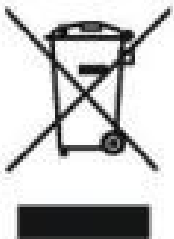


**Restriction of Hazardous Substances Directive (RoHS) Compliant**

# Intel Dual Band Wireless-AC 9260 (Model 9260NGW)

| General | | |
|---|---|---|
| Dimensions (H x W x D) | • M.2 2230: 22 mm x 30 mm x 2.4 mm | |
| Weight | • M.2 2230: 2.6g | |
| Antenna Diversity | Supported | |
| Radio ON/OFF Control | Supported | |
| Connector Interface | M.2: PCIe, USB | |
| Operating Temperature | 0 to +80 degrees Celsius | |
| Humidity | 50% to 90% RH non-condensing (at temperatures of 25 ºC to 35 ºC) | |
| Operating Systems | Microsoft Windows 10*, Linux* (limited feature support), Chrome* | |
| Wi-Fi Alliance* certification | Wi-Fi CERTIFIED* a/b/g/n/ac with wave 2 features, WMM*, WMM-PS*, WPA*, WPA2*, WPS2*, Protected Management Frames, Wi-Fi Miracast* as Source, and Wi-Fi Direct*. | |
| IEEE WLAN Standard | IEEE 802.11a/b/g/n/ac, 802.11d, 802.11e, 802.11h, 802.11i, 802.11w; 802.11r, 802.11k, 802.11v pending OS support; Fine Timing Measurement based on 802.11REVmc | |
| Roaming | Supports seamless roaming between access points | |
| Bluetooth | Bluetooth* 5 | |
| **Security** | | |
| Authentication | WPA* and WPA2*, 802.1X (EAP-TLS, TTLS, PEAP, EAP-SIM, EAP-AKA, EAP-AKA) | |
| Authentication Protocols | PAP, CHAP, TLS, MS-CHAP*, MS-CHAPv2* | |
| Encryption | 64-bit and 128-bit WEP, 128-bit AES-CCMP | |
| Wi-Fi Direct* Encryption and Authentication | WPA2-PSK, AES-CCMP | |
| **Compliance** | | |
| US Government | FIPS, FISMA | |
| Product Safety | UL, C-UL, CB (IEC 60950-1) | |
| **Model Numbers** | | |
| Model | 9260NGW | 802.11ac wave 2, 2x2, Bluetooth* 5, PCIe, USB, M.2 2230 |
| **Frequency Modulation** | **5GHz (802.11ac/n)** | **2.4GHz (802.11b/g/n)** |
| Frequency band | 5.15GHz - 5.85GHz (dependent on country) | 2.400 - 2.4835GHz (dependent on country) |
| Modulation | BPSK, QPSK, 16 QAM, 64 QAM, 256 QAM | CCK, DQPSK, DBPSK |
| Wireless Medium | 5GHz UNII: Orthogonal Frequency Division Multiplexing (OFDM) | 2.4GHz ISM: Orthogonal Frequency Division Multiplexing (OFDM) |
| Channels | All channels as defined by the relevant specification and country rules. | |
| Spatial streams | Intel Dual Band Wireless-AC 9260: 2 X 2 | |
| **Data Rates** | All data rates are theoretical maximums. | |
| IEEE 802.11ac Data Rates | 1.73 Gbps when using 160MHz channels | |

| | |
|---|---|
| IEEE 802.11n Data Rates | Tx/Rx (Mbps): 300, 270, 243, 240, 216.7, 195, 180, 173.3, 150, 144, 135, 130, 120, 117, 115.5, 90, 86.667, 72.2, 65, 60, 57.8, 45, 43.3, 30, 28.9, 21.7, 15, 14.4, 7.2 |
| IEEE 802.11a Data Rates | 54, 48, 36, 24, 18, 12, 9, 6 Mbps |
| IEEE 802.11g Data Rates | 54, 48, 36, 24, 18, 12, 9, 6 Mbps |
| IEEE 802.11b Data Rates | 11, 5.5, 2, 1 Mbps |