



May 28, 2022

Federal Communications Commission
7435 Oakland Mills Road
Columbia, Maryland 21046
USA

Subject: Model AX211NGW Wireless LAN Adapter Card
FCC ID: PD9AX411E2
IC: 1000M-AX411E2

Gentlemen:

Please be advised that the Model AX411E2W 802.11a/b/g/n/ac/ax + BT Wireless LAN mini-PCIe card is manufactured for the global market but when marketed in the U.S. under FCC ID: PD9AX411E2 and in Canada under IC: 1000M-AX411E2. The nonvolatile memory (NVM) will be programmed at the factory to only actively scan and operate on these specific channels during normal WLAN operation. During Wi-Fi Direct mode the device may act as a group owner (GO) to establish a peer-to-peer (P2P) network including conditions when no master device is present on these specific channels

Channels 1-13, 2412-2472MHz 802.11b mode
Channels 1-13, 2412-2472MHz 802.11g mode
Channels 1-13, 2412-2472MHz 802.11n mode (20MHz channel)
Channels 3-11, 2422-2462MHz 802.11n mode (40MHz channel)

The device operates as a client without radar detection capability and will be programmed at the factory to passively scan on the following dynamic frequency selection (DFS) channels and will only listen for a master device and cannot send a probe request to initiate communication on these DFS channels. Accordingly passive scanning provides protection for TDWR operations and preventing transmission in the 5600MHz – 5650MHz frequency band. Client software and drivers will never enable the device to act as a master or GO for operation in DFS frequency bands and therefore ad-hoc mode is always disabled on these passive scan DFS channels.

Channels 52-64, 5260-5320MHz 802.11a mode
Channels 52-64, 5260-5320MHz 802.11n mode (20 MHz channel)
Channels 52-64, 5260-5320MHz 802.11ac mode (20 MHz channel)
Channels 54-62, 5270-5310MHz 802.11n mode (40MHz channel)
Channels 54-62, 5270-5310MHz 802.11ac mode (40MHz channel)
Channel 58, 5290MHz 802.11ac mode (80MHz channel)
Channel 50, 5250MHz 802.11ac mode (160MHz channel)
Channels 100-140, 5500-5700MHz 802.11a mode
Channels 100-140, 5500-5700MHz 802.11n mode (20 MHz channel)

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Channels 100-144, 5500-5720MHz 802.11ac mode (20 MHz channel)
Channels 102-134, 5510-5670MHz 802.11n mode (40MHz channel)
Channels 102-142, 5510-5710MHz 802.11ac mode (40MHz channel)
Channels 106 & 138, 5540 & 5690MHz 802.11ac mode (80MHz channel)
Channel 114, 5570MHz 802.11ac mode (160MHz channel)

This device meets the requirements of FCC Part 15.202 and accordingly will be programmed at the factory to active scan on the following non-DFS channels to initiate communication during normal WLAN operation. When operating in Wi-Fi Direct mode on these non-DFS channels, it may operate as a P2P client device or GO to establish a P2P network if, and only if, a master device is present and network communication is maintained between a master device and the GO.

Channels 36-48, 5180-5240MHz 802.11a mode
Channels 36-48, 5180-5240MHz 802.11n mode (20 MHz channel)
Channels 36-48, 5180-5240MHz 802.11ac mode (20 MHz channel)
Channels 38-46, 5190-5230MHz 802.11n mode (40MHz channel)
Channels 38-46, 5190-5230MHz 802.11ac mode (40MHz channel)
Channel 42, 5210MHz 802.11ac mode (80MHz channel)
Channels 149-165, 5745-5825MHz 802.11a mode
Channels 149-165, 5745-5825MHz 802.11n mode (20 MHz channel)
Channels 149-165, 5745-5825MHz 802.11ac mode (20 MHz channel)
Channels 151-159, 5755-5795MHz 802.11n mode (40MHz channel)
Channels 151-159, 5755-5795MHz 802.11ac mode (40MHz channel)
Channel 155, 5775MHz 802.11ac mode (80MHz channel)

This device meets the requirements of FCC Part 15.202 and 15.407 as a 5.9GHz band Indoor client module (UNII) and accordingly will be programmed at the factory to passive scan on the following channels. On these channels, a) the client device will not directly connect to another client device, b) will only associate and connect with an indoor Access Point (AP) or indoor subordinate, and c) the Client device (EUT) will always be under the control of an indoor AP. However, there may exist situations where the client may transmit brief messages, prior to being under the control of an AP, to join an AP network. But these brief messages will only occur if the client has detected a signal confirming that an AP is operating on a particular channel. These brief messages will have a time-out mechanism if it does not receive a response from an AP.

Channels 169-177, 5845-5885MHz 802.11a mode
Channels 169-177, 5845-5885MHz 802.11n mode (20 MHz channel)
Channels 169-177, 5845-5885MHz 802.11ac mode (20 MHz channel)
Channels 167-175, 5835-5875MHz 802.11n mode (40MHz channel)
Channels 167-175, 5835-5875MHz 802.11ac mode (40MHz channel)
Channel 171, 5855MHz 802.11ac mode (80MHz channel)
Channel 163, 5815MHz 802.11ac mode (160MHz channel)



This device meets the requirements of FCC Part 15.202 and 15.407 as a 6GHz band Low Power Indoor client module (6XD) and accordingly will be programmed at the factory to passive scan (listen before talk) on the following channels. This client may initiate a brief message to associate with a low power indoor access point or subordinate and establish a connection only after receiving a confirmation signal confirming that an AP is present and operating on a particular channel. After being associated, the indoor client can only initiate transmission with that access point. Indoor client devices cannot make a direct air interface connection to other clients.

5925MHz - 6425MHz, 802.11a/n/ac/ax mode (all channel BWs)

6425MHz - 6525MHz, 802.11a/n/ac/ax mode (all channel BWs)

6525MHz - 6875MHz, 802.11a/n/ac/ax mode (all channel BWs)

6875MHz - 7125MHz, 802.11a/n/ac/ax mode (all channel BWs)

This information when programmed into the NVM will not be accessible and cannot be changed by the end user. The transmitter is approved as a non-software defined radio and OEMs and third party system integrators do not have the ability through software to allow configuration controls that would permit the device to operate outside the grant conditions per FCC KDB 594280.

Sincerely

A handwritten signature in black ink, appearing to read "Steven C. Hackett".

Steven C. Hackett
Wireless Regulatory Engineer
Intel Corporation – Mobile Wireless Group