



June 22, 2020

FCC ID: PGR-NVG5XDBAX  
IC ID: 3439B-NVG5XDBAX

## **Limited Module Approval Request**

To Whom It May Concern:

In accordance with FCC 47 CFR 15.212 (b) and ISED RSP-100, ARRIS hereby requests Limited Modular Approval for FCC ID PGR-NVG5XDBAX and IC ID 3439B-NVG5XDBAX.

Specifically, the Limited Modular Approval criteria are addressed as follows:

<b>FCC Checklist</b>
1. The module has SPTe tin plated steel shields covering all critical RF components. This can be seen in the photographs included in the accompanying test report.
2. The modulation/data inputs are controlled via the PCIe interface by the Broadcom BCM43684 Wi-Fi compliant SoC's (U2 & U3) meeting all IEEE 802.11 modulation and PCIe data bus requirements.
3. The 40MHz RF reference oscillator is integrated in each Broadcom BCM43684 SoC contained within the module. The 5V/3.3V/1.2V power requirements are supplied by on-board regulation. 12 vdc is supplied from the host.
4. As described in the Description of Operation, this module employs 8 antenna U.FL miniature RF connectors: Four for the 2.4 GHz radio and four for the 5 GHz radio. The integrated antennas are a dipole design, which is, in essence, a balun fed dipole mounted on a common plastic carrier integrated into the enclosure and are not accessible by the end user. All integrated antennas used in the host device have been verified at the time of initial authorization.
5. This module is designed to be installed into an ARRIS host-based product. The test data contained in this application is for the device tested in a stand-alone configuration using a host board as a carrier sitting in a plastic housing to simulate the position of the antennas as they would be used in a typical end product. All other circuits not applicable to the operation of the module were disabled in this carrier. This module does not employ any ferrites to reduce unintended emissions. Radiated spurious emissions data and AC conducted emissions data demonstrating compliance with the requirements of Part 15 of the FCC rules for intentional radiators and RSS GEN/RSS 210 has been provided.
6. The module is marked with its own part number ID. The FCC and ISED ID's are marked on the module and are displayed on the ARRIS host label. The FCC and ISED label and location are outlined in the user manual.
7. The module has been tested to comply with all rules under Part 15. The compliance is assured by the design of the device. In this implementation the end user is unable to intervene to cause the device to operate incorrectly. These safeguards are outline in more detail in the Software Security requirements for U-NII devices attestation.
8. The module meets the requirements for a mobile device that may be used at separation distances of more than 20cm from the human body. Refer to the MPE calculation in the report and statements in the user manual.



<b>ISED Checklist</b>	
(a) The radio elements must have the radio frequency circuitry must be shielded. Physical/discrete and tuning capacitors may be located external to the shield but must be on the module assembly.	YES
(b) The module shall have buffered modulation/data input(s) (if such inputs are provided) to ensure that the module will comply with the requirements set out in the applicable RSS standard under conditions of excessive data rates or over-modulation.	YES
(c) The module shall have its own power supply regulation on the module. This is to ensure that the module will comply with the requirements set out in the applicable standard regardless of the design of the power supplying circuitry in the host device which houses the module.	YES
(d) The module shall comply with the provisions for external power amplifiers and antennas detailed in this standard. The equipment certification submission shall contain a detailed description of the configuration of all antennas that will be used with the module.	YES
(e) The module shall be tested for compliance with the applicable standard in a standalone configuration, i.e. the module must not be inside another device during testing.	YES
(f) The module shall comply with the Category I equipment labelling requirements.	YES
(g) The module shall comply with applicable RSS-102 exposure requirements, which are based on the intended use/configurations.	YES
(h) Is the modular device for an Industry Canada licensed exempt service?	YES

As noted above, this module complies the limited modular approval requirements in 47 CFR 15.212 and RSP-100. ARRIS ensures compliance through manufacturing of its end products and through professional installation and user manuals controlled by ARRIS and its customers (service providers).

If you have any questions regarding the authorization, please don't hesitate to contact us.

Sincerely,

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