



Federal Communications Commission
 Equipment Authorization Branch
 7435 Oakland Mills Road
 Columbia, MD 21046

Company name: Horizon Hobby, LLC
FCC ID: BRWX1TXP1UC

Gentlemen,

In accordance with 47CFR 15.212 Modular Transmitters and KDB 996369 D01 'Module Certification Guide v01r04' **BRWX1TXP1UC** has been examined against the following requirements.

| Essential Elements of 15.212(a)(1) | Yes | No |
|--|---|----|
| The radio elements must have the radio frequency circuitry shielded. Physical components and tuning capacitor(s) may be located external to the shield, but must be on the module assembly | The RF portions of the module are completely contained within a metal shielding can. The module does not depend on any other shielding. | |
| The module must have buffered modulation/data inputs to ensure that the device will comply with Part 15 requirements with any type of input signal | All data communication with the module is digital. A microprocessor then converts the digital information into the analog RF signal. | |
| The module must contain power supply regulation on the module | The module has on-board voltage regulation which allows it to accept input power between 4-volts and 10-volts DC. | |
| The module must contain a permanently attached antenna, or contain a unique antenna connector, and be marketed and operated only with specific antenna(s), per Sections 15.203, 15.204(b), 15.204(c), 15.212(a), 2.929(b) | The module and antenna design is not user serviceable. It utilizes non-standard micro-coaxial connectors and antennas with approximate gain of 2 dBi. | |
| The module must demonstrate compliance in a stand-alone configuration | The module was tested in a stand-alone configuration. | |
| The module must be labelled with its permanently affixed FCC ID label, or use an electronic display (See KDB Publication 784748 about labelling requirements) | The FCC ID label format is included in the filing. The product will always be inside another enclosure during actual use. A label will be placed on the outside of the product if the FCC ID is not visible | |
| The module must comply with all specific rules applicable to the transmitter including all the conditions provided in the integration instructions by the grantee | The operation description and user guides provide this detail. | |
| The module must comply with RF exposure requirements | The transmitter meets requirements. | |

Sincerely,

HORIZON HOBBY, LLC
 4105 Fieldstone Road, Champaign, IL 61822 USA



Name: William Vallee

Title: Executive Vice President Global Operations



Modular Transmitter Approval Request

Certification and Engineering Bureau
 3701 Carling Avenue Bldg. 94
 P.O. Box 11490, Station "H"
 Ottawa, Ontario
 K2H 8S2
 CANADA

Company name: Horizon Hobby, LLC
IC: 6157A-BRWX1TXP1UC

Gentlemen,
 In accordance with RSP-100 Section 7.3 Equipment Certification Requirements for Modular Apparatus IC: 6157A-BRWX1TXP1UC has been examined against the following requirements.

| Modular Approval Checklist | Explanation (Provide a detailed explanation if answer is "No.") |
|---|---|
| a) The radio elements shall have the radio frequency circuitry shielded. Physical / discrete and tuning capacitors may be located external to the shield, but must be on the module assembly. | RF circuitry is shielded |
| 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 | All data communication with the module is digital. A microprocessor then converts the digital information into the analog RF signal. |
| 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. | The module has on-board voltage regulation which allows it to accept input power between 4-volts and 10-volts DC. |
| d) The module shall comply with the provisions for external power amplifiers and antennas detailed in the applicable RSS standard. The equipment certification submission shall contain a detailed description of the configuration of all antennas that will be used with the module. | The module and antenna design is not user serviceable. It utilizes non-standard micro-coaxial connectors and antennas with approximate gain of 2 dBi. |
| e) The module shall be tested for compliance with the applicable standard in a stand-alone configuration, i.e. the module must not be inside another device during testing. | The module was tested in a stand-alone configuration. |
| f) The module shall comply with the Category I equipment labelling requirements. | The IC ID label format is included in the filing. The product will always be inside another enclosure during actual use. A label will be placed on the outside of the product if the IC ID is not visible |
| g) The module shall comply with applicable RSS-102 exposure requirements, in its final configuration which are based on the intended use/configurations. | Refer to RF exposure Exhibit. The transmitter meets RSS-102. The antenna gain is less than 6 dB |
| h) Is the modular device for an Industry Canada licence-exempt service? | No, the device is not for an Industry Canada license-exempt service. |

Name: William Vallee

Date: 5/03/17


Title: Executive Vice President Global Operations

Signature of applicant

HORIZON HOBBY, LLC

4105 Fieldstone Road, Champaign, IL 61822 USA

RSP-100 Annex D – Modular Approval Attestation

| Product Information | | | |
|---|---|------------------------|---|
| PMN: | X1TXP | FVIN: | |
| HMN: | | ISED CN: | |
| HVIN: | | UPN: | |
| Modular Checklist/Information | | | |
| <p>For Modular Approval, the module shall meet all the requirements listed below. Please Check (☒) if the module complies with the stated requirements.</p> <p><input checked="" type="checkbox"/> The radio elements shall have the radio frequency circuitry shielded. Physical and tuning capacitors may be located external to the shield, but must be on the module assembly.</p> <p><input checked="" type="checkbox"/> If the module has modulation/data inputs(s), they shall be buffered in order to ensure that the module will comply with the requirements set out in the applicable Radio Standards Specification (RSS) under conditions of excessive data rates or over-modulation.</p> <p><input checked="" type="checkbox"/> The module shall have its own power supply regulation on the module itself. 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 product which houses the module.</p> <p><input checked="" type="checkbox"/> The module shall comply with the provisions for external power amplifiers and antennas detailed in the applicable RSS. The equipment certification submission shall contain a detailed description of the configuration of highest antenna gain for each type of antenna</p> <p><input checked="" type="checkbox"/> The module shall be tested for compliance with the applicable standard in a stand-alone configuration, i.e. the module must not be inside another product during testing.</p> <p><input checked="" type="checkbox"/> The module complies or will comply with applicable RSS-102 exposure requirements in its intended configuration/integration in a host.</p> <p>If a module(s) does NOT meet one or more of the above requirements, the applicant may request Limited Modular Approval (LMA). For LMA, provide details regarding why the above requirement(s) could not be met; and state how control of the end product, into which the module will be installed, will be maintained by the applicant/manufacturer, such that full compliance of the end product is always ensured:</p> | | | |
| Applicant/Agent Name: | William Vallee | Applicant/Agent Title: | Executive Vice President Global Operations |
| Applicant/Agent Signature: |  | Signature Date: | 5/03/17 |