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**Subject: Single Limited Modular Approval Request**  
**FCC: HLH-BISC6XX**

We **Balluff Inc** are applying for a **single limited modular approval** for our device with;  
**FCC ID: HLH-BISC6XX**

Please note that, this module is to be installed only by us on our end products and will not be marketed to any other party. Installation will be under our control and therefore full compliance of the end product is always ensured.

The following information is being provided regarding **limited modular approval** per the requirements of CFR 47 FCC 15.212(b).

This transceiver is a complete RF module responsible for carrier generation, modulation/demodulation, signal forming and amplification. The module provides external connections for power supply, digital signals and RF output to feed the antenna coil that is external to our module.

The following numbered items correspond to requirements listed in 15.212 of the FCC rules.

1) *The radio elements of the modular transmitter must have their own shielding. The physical crystal and tuning capacitors may be located external to the shielded radio elements.*

There is no shielding on the module PCB and this is the reason for our limited modular approval request.

2) *The modular transmitter must have buffered modulation/data inputs (if such inputs are provided) to ensure that the module will comply with part 15 requirements under conditions of excessive data rates or over-modulation.*

Our module complies with this requirement.

3) *The modular transmitter must have its own power supply regulation.*

We confirm that the modular transmitter has its own power supply regulation.

4) *The modular transmitter must comply with the antenna and transmission system requirements of Sec. Sec. 15.203, 15.204(b) and 15.204(c). The antenna must either be permanently attached or employ a "unique" antenna coupler (at all connections between the module and the antenna, including the cable). The "professional installation" provision of Sec. 15.203 is not applicable to modules but can apply to limited modular approvals under paragraph (b) of this section.*

Our module complies with this requirement since installation of this module will always be under our control.

5) *The modular transmitter must be tested in a stand-alone configuration, i.e., the module must not be inside another device during testing for compliance with part 15 requirements. Unless the transmitter module will be battery powered, it must comply with the AC line conducted requirements found in Sec. 15.207. AC or DC power lines and data input/output lines connected to the module must not contain ferrites unless they will be marketed with the module (see Sec. 15.27(a)). The length of these lines shall be the length typical of actual use or, if that length is unknown, at least 10 centimeters to insure that there is no coupling between the case of the module and supporting equipment. Any accessories, peripherals, or support equipment connected to the module during testing shall be unmodified and commercially available (see Sec. 15.31(i)).*

The module was tested in the housing of one of our end products (Converter BIS C-901). This is another reason for our limited modular approval request.

6) *The modular transmitter must be equipped with either a permanently affixed label or must be capable of electronically displaying its FCC identification number. If using a permanently affixed label, the modular transmitter must be labeled with its own FCC identification number, and, if the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains Transmitter Module FCC ID: XYZMODEL1" or "Contains FCC ID: XYZMODEL1". Any similar wording that expresses the same meaning may be used. The Grantee may either provide such a label, an example of which must be included in the application for equipment authorization, or, must provide adequate instructions along with the module which explain this requirement. In the latter case, a copy of these instructions must be included in the application for equipment authorization.*

The module has a permanently affixed label on it and end products will follow the labeling requirements above.

7) *The modular transmitter must comply with any specific rules or operating requirements that ordinarily apply to a complete transmitter and the manufacturer must provide adequate instructions along with the module to explain any such requirements. A copy of these instructions must be included in the application for equipment authorization.*

Our module complies with this requirement since installation of this module will always be under our control.

8) *The modular transmitter must comply with any applicable RF exposure requirements in its final configuration.*

Our module complies with this requirement since installation of this module will always be under our control.

Sincerely,

By:

  
EUSTOMIZING *manager*  
\_\_\_\_\_  
\_\_\_\_\_  
(Signature/Title) Jim Ramler  
(Print name)