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Monday, October 8, 2007

To Whom It May Concern:

Digi International would like to apply for Modular FCC approval. This letter is our application for such according to FCC public notice DA 00-1407.

XBEE PRO Series 2 Modular Transmitter Requirements

Modular Transmitter Requirements	Manufacturer Clarification
A – In order to be considered a transmitter module, the device must be a complete RF transmitter, i.e., it must have its own reference oscillator (e.g., VCO), antenna, etc. The only connectors to the module, if any, may be the power supply and modulation/data inputs.	The transmitter is complete with its own reference oscillator, antenna. The only connectors provided are the DC supply, Data, and RF ports.
B – Compliance with FCC RF Exposure requirements may, in some instances, limit the output power of a module and/or the final applications in which the approved module may be employed.	The radio complies with MPE per 2.1091 for use with mobile or fixed base stations.
C – While the applicant for a device into which an authorized module is installed is not required to obtain a new authorization for the module, this does not preclude the possibility that some other form of authorization or testing may be required for the device (e.g., a WLAN into which an authorized module is installed must still be authorized as a PC peripheral, subject to the appropriate equipment authorization).	The equipment complies with FCC Part 15, Subpart B, Class B – Unintentional radiators.
D – In the case of a modular transceiver, the modular approval policy only applies to the transmitter portion of such devices. Pursuant to Section 15.101(b), the receiver portion will either be subject to verification, or it will not be subject to any authorization requirements (unless it is a Scanning Receiver, in which case it is also subject to Certification, pursuant to Section 15.101(a)).	The receiver operates in the 2.400-2.485 GHz band and complies with FCC Part 15, Subpart B – Radio Receivers.
E – The holder of the grant of equipment authorization (Grantee) of the module is responsible for the compliance of the module in its final configuration, provided that the OEM, integrator, and/or end user	End users must conform with the following instructions stated in the users' manual: - Labeling requirement for equipment using this modular transmitter.

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has complied with all of the instructions provided by the Grantee which indicate installation and/or operating conditions necessary for compliance.	- RF Exposure information for compliance with FCC Rules 2.1091 or 2.1093 are specified in the user manual for OEM, integrator, and/or end user.
1. The modular transmitter must have its own RF shielding. This is intended to ensure that the module does not have to rely upon the shielding provided by the device into which it is installed in order for all modular transmitter emissions to comply with Part 15 limits… Such coupling may result in non-compliant operation.	The modular transmitter has its own RF shielding.
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.	The modular transmitter has buffered modulation/data inputs.
3. The modular transmitter must have its own power supply regulation. This is intended to ensure that the module will comply with Part 15 requirements regardless of the design of the power supplying circuitry in the device into which the module is installed.	The modular transmitter has its own power supply regulation.
4. The modular transmitter must comply with the antenna requirements of Section 15.203 and 15.204c. 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). Any antenna used with the module must be approved with the module; either at the time of initial authorization or through a Class II permissive change. The "professional installation" provision of Section 15.203 may not be applied to modules.	The radio complies with Rules 15.203 and 15.204c. The radio will have a unique antenna coupler (IPX or U.FL) for all approved antennas.
5. The modular transmitter must be tested in a stand-alone configuration, i.e., the module must not be inside another device during testing. This is intended to demonstrate that the module is capable of complying with Part 15 emission limits regardless of the device into which it is eventually installed…	The modular transmitter was tested in a stand-alone configuration.
6. The modular transmitter must be labeled	The modular transmitter is labeled with its

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with its own FCC ID number, and, if the FCC ID 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…	own FCC ID number. The label is fixed on the shield or printed on the PCB.
7. The modular transmitter must comply with any specific rule or operating requirements applicable to the transmitter and the manufacturer must provide adequate instructions along with the module to explain any such requirements.	The user manual for the XBEE contains adequate instructions relating to the usage, approved antennas, and power supply requirements of the modular transmitter.
8. The modular transmitter must comply with any applicable RF exposure requirements.	The modular transmitter was tested to applicable RF exposure requirements.

Sincerely,

David Steed, Jr.
Director, Engineering