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Leaders in Wireless Telecom

May 12, 2012

FEDERAL COMMUNICATIONS COMMISSION
7435 Oakland Mills Road
Columbia, MD 21046
U.S.A.

Subject: Request for Modular Approval

Applicant:	**Microhard Systems Inc.**	
	Product:	**2.4GHz 802.11bg 1W OEM Module**
	Model:	**n802.11bg-30**
	FCC ID:	**NS9NBG30**

Dear Sir/Madam,

We, **Microhard Systems Inc.**, request modular approval included below is a clarification on the modular compliance.

Hany Shenouda
Director of Engineering
Microhard Systems Inc.

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	Requirements for Modular Transmitters	**Manufacturer's Clarification**
(a)	In order to be considered a transmitter module, the device must be 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 power supply and modulation/data inputs	The transmitter is completed with its own reference oscillator, antenna. Only connectors provide are dc supply, data and rf ports are provided with the modular transmitter
(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 is intended for use in mobile and fixed applications. A minimum of 23cm separation distance is required from any user to meet FCC RF Exposure requirement
(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 the authorized module is installed still be authorized as PC peripheral, subject to the appropriate equipment authorization)	Instructions are provided in the user manual for the integrators to comply with FCC Part15, Subpart B, and any other applicable FCC requirements.
(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 if is a Scanning Receiver, in which case it is also subject to Certification, pursuant to Section 15.101(a)	The receiver is verified.
(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 has complied with all of the instructions provided by the Grantee which indicate installation and/or operating conditions necessary for compliance.	End-users must comply with the following instruction sated in the users' manual: - Labeling requirement for equipment using this modular transmitter. - RF Exposure compliance with FCC Rules 2.1091 and 1.1307 when the radio is used in a mobile or base system - Other Instructions provided by the manufacturer for third party integrators as stated in the User manual.
	Requirements for Modular Transmitters	**Manufacturer's Clarification**
1.	The modulator transmitter must have its own RF shielding. This is intended to ensure that the module does not have to reply 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. It is also intended to prevent coupling between the RF circuitry of the module and any wires or circuits in the device into which the module is installed. Such coupling may result in noncompliant operation.	The modular transmitter has its own RF shielding

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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 analog and digital power supply regulation.
4.	The modular transmitter must comply with the antenna requirements of section 15.203 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). 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 but can apply to limited modular approvals under paragraph (b) of this section.	The radio and its associated antennas are provided with a unique coupling antenna connector 'MMCX'.
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. Unless the transmitter module will be battery powered, it must comply with the AC conducted requirements found in Section 15.207. AC or DC power lines and data input/output lines connected to the module must not contain ferrites, unless they will marketed with the module (see Section 15.27(a)). The length of these lines shall be 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 or commercially available (See Section 15.31(I)).	The modular transmitter was tested in a stand-alone configuration
6.	The modular transmitter must be equipped with either a permanently affixed label or must be capable of electronically displaying its FCC identification number. (A) 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	The module transmitter is equipped with a permanently affixed label displaying its FCC identification number. A sample exterior label is shown on Page iii of the user manual submitted with filing.

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	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.	
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.	Please refer to the user manual for instructions provided by the manufacturer for third party integrators.
8.	The modular transmitter must comply with any applicable RF exposure requirements in its final configuration.	A minimum separation distance of 23 cm is required for both mobile and fixed installation of this module in order to satisfy the FCC RF Exposure requirement as stated on Page iii of the user manual.