

Xetawave LLC

FCC Limited Single-Modular Approval Declaration

FCC ID.: PEJ-9382010

Product Name: XETA1-M2

Modular Approval Requirement	Explanation of Compliance	Explanation of Limitation
1. The radio elements of the modular transmitter must have their own shielding, except the crystal and tuning capacitors may be external to the shield.	The transmitter RF section is entirely shielded.	
2. The modular transmitter must have buffered modulation/data inputs to ensure that the module will comply with Part 90 requirements under conditions of excessive data rates or over-modulation.	Modulation inputs are not provided. Data inputs are buffered and formatted by a digital signal processor so that over-modulation is not possible.	
3. The modular transmitter must have its own power supply regulation.	The power supplies used on the XETA1-M2 are regulated, with the exception of the final PA power supply. However, the final PA is powered with a regulated power supply by the product in which the module is integrated.	The power supply for the final PA isn't regulated in the module, but is regulated at the product level. Xetawave controls all product designs in which the XETA1-M2 is integrated, and all products have an internal regulated power supply that supplies power to the XETA1-M2. The power supply supplies 10 volts DC at 3 amperes minimum, and it has 0.01% load and line regulation, consistent with the power supply used in the testing. In addition, the input voltage is monitored by the DSP, and it will disable transmit operation when the input voltage is outside of the range where specified performance is tested and guaranteed.

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4. The modular transmitter must comply with the antenna and transmission requirements of §§ 15.203, 15.204(b) and 15.204(c).	Not applicable to a radio module that operates under Part 90 in licensed frequency bands.	
5. The modular transmitter must be tested in a standalone configuration.... AC or DC power lines and data input/output lines connected to the module must not contain ferrites unless they are marketed with the module..., and the length of these lines shall be the length typical in actual use.... Any accessories, peripherals, or support equipment shall be unmodified and commercially available.	The XETA1-M2 was tested in a standalone configuration without peripherals or other support equipment. The power source was a regulated lab power supply. Xetawave controls the design of all products in which the module is integrated. In these product designs, the module has no DC/signal cable since it is plugged directly into an interface board.	
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 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.	The XETA1-M2 has a permanently affixed label with the FCC ID shown. Xetawave controls the design of products in which the module is integrated, and the FCC ID number of the module is shown on the exterior of these end-products.	

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<p>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.</p>	<p>The XETA1-M2 complies with the applicable sections of Part 90 for 150-174 MHz operation.</p>	<p>The module is integrated only in end-products that are designed and manufactured by Xetawave, and the configuration of the module is controlled at the end-product level. All internal module parameters and calibration data are controlled by password and cannot be accessed by professional installers or end-users. The installers are permitted to select only the frequency and modulation type, but the selection is limited to frequencies and modulation types in the equipment authorization. Once configured, these parameters are protected by a password selected by the installer and cannot be changed by the user. Since the module is not available to other parties, there are no separate integration instructions provided. However, the instructions for the end-product describe how to configure it according to the specific requirements of the user's license.</p>
<p>8. The modular transmitter must comply with any applicable RF exposure requirements in its final configuration.</p>	<p>Please refer to the MPE calculations in the user manual. The MPE calculations are identical to the calculation that applies to the end-product in which the XETA1-M2 is integrated. This information is included in the end-product user manual.</p>	