



SOLVING A WAVE OF EMI COMPLIANCE PROBLEMS

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Federal Communications Commission
Authorization and Evaluation Division

APPLICANT: Aclara Power Line systems

Modular approval Requirements Characteristics

Item	Requirement	EUT Justification
1	Have its own RF shielding	The RF portions of the module are completely contained within a metal shielding can. The module does not depend on any other shielding.
2	Have buffered modulation/data inputs (if such inputs are provided),	Please refer to electrical schematic Y70080. The U4 EM260 radio integrated circuit generates all RF signals based on the 24 MHz crystal, Y1. The transmitter RF output from U4 is impedance-matched in balun Z2, amplified on power amplifier U5, and filtered by ceramic filter Z3. Switch U3 connects the antenna to either the U4 receiver through Z1 or to Z3 during transmission. Additional harmonic filtering is provided by a low pass filter comprised of C16, C17, and L1.
3	Have its own power supply regulation	On-board power supply regulation is implemented via U8 and U9, which ensure part 15 compliance without regard to external power supply variations.
4	Meet the antenna requirements of Section 15.203	The antenna is a planar inverted 'F' structure etched on the PCB. It has an approximate gain of 0 dBi. No other antennas are used with the module.
5	Be tested in a stand-alone configuration, i.e., the antenna, AC or DC power and data input/output lines must be connected to the module but, the module must not be inside another case during testing	Device was tested with an external power supply and serial cable to a laptop computer. It had no additional shielding.
6	Be labeled 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.	The FCC ID label format is included in the filing. The product will always be inside another enclosure during actual use.
7	The modular transmitter is manufactured so that the user cannot influence the operation of the transmitter that will operate outside of the scope of the regulations.	Refer to Users Manual

8	Address compliance with the Commission's RF exposure limits in Sections 1.1310 and 2.1093. In addition, spread spectrum transmitters operating under Section 15.247 are required to address RF exposure compliance in accordance with Section 15.247(b)(4).	Refer to RF exposure Exhibit. The transmitter meets MPE calculations of 47 CFR 1.1310. This is not a portable device
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Please do not hesitate to contact me if there are any further questions with the submittal.

Sincerely,

Joseph Strzelecki, NCE
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Authorized Agent for Aclara systems
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