Ben Botros Manager – Regulatory Compliance
Panasonic Corporation of North America

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| **Applicant/Grantee** | **Panasonic Corporation of North America** | | |
| **FCC ID:** | **ACJ-V2CA** | | |
| **KDB 996369 D01 and Part 15.212 Modular Transmitters** | | | |
| **Request for Modular Approval** | ☒ | **Request for Limited Modular Approval** | ☐ |

| ***Items to be covered by Single modular transmitters.*** | ***Answer from applicant*** |
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| 1. The modular transmitter must have its own RF shielding. | YES<br>Please refer to External Photos. |
| 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. | YES<br>RTL8720CM is used for the function. |
| 3. The modular transmitter must have its own power supply regulation. | YES<br>The modular has its own power supply regulation. |
| 4. The modular transmitter must comply with the antenna requirements of Section 15.203 and 15.204(b)(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). | YES, it is Printed antenna. |
| 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. | Yes,<br>The module is tested in a stand-alone configuration as the test photos show. |
| 6. The modular transmitter must be equipped with either a permanently affixed label or must be capable of electronically displaying its FCC identification number in accordance with 15.212 (a)(1)(vi)(A) / (B). | YES,<br>Please refer to the exhibition label sample for this module. |
| 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. A copy of these instructions must be included in the application for equipment authorization. For example, there are very strict operational and timing requirements that must be met before a transmitter is authorized for operation under Section 15.231. For instance, data transmission is prohibited, except for operation under Section 15.231(e), in which case there are separate field strength level and timing requirements. Compliance with these requirements must be assured. | YES,<br>Please refer to the user manual. |
| 8. The modular transmitter must comply with any applicable RF exposure requirements. For example, FCC Rules in Sections 1.1310, 2.1091, 2.1093, and specific Sections of Part 15, including 15.319(i), 15.407(f), 15.253(f) and 15.255(g), require that Unlicensed PCS, UNII and millimeter wave devices perform routine environmental evaluation for RF Exposure to demonstrate compliance. In addition, spread spectrum transmitters operating under Section 15.247 are required to address RF Exposure compliance. Modular transmitters approved under other Sections of Part 15, when necessary, may also need to address certain RF Exposure concerns, typically by providing specific installation and operating instructions for users, installers and other interested parties to ensure compliance. | YES,<br>RF exposure statement is attached in the user manual. |
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Panasonic Corporation of North America
Two Riverfront Plaza, Newark, NJ 07102-5490
Tel/Fax: 201-348-7760 / Ben.Botros@us.panasonic.com

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| ***Items to be covered by Split modular transmitters.*** | |
|---|---|
| 1. The modular transmitter must comply with all requirements of a single modular transmitter except for items (1) & (5) of the above single modular approval requirements. | |
| 2. Only the radio front end must be shielded. The physical crystal and tuning capacitors may be located external to the shielded radio elements. The interface between the split sections of the modular system must be digital with a minimum signalling amplitude of 150 mV peak-to-peak. | |
| 3. Control information and other data may be exchanged between the transmitter control elements and radio front end. | |
| 4. The sections of a split modular transmitter must be tested installed in a host device(s) similar to that which is representative of the platform(s) intended for use. | |
| 5. Manufacturers must ensure that only transmitter control elements and radio front end components that have been approved together are capable of operating together. The transmitter module must not operate unless it has verified that the installed transmitter control elements and radio front end have been authorized together. Manufacturers may use means including, but not limited to, coding in hardware and electronic signatures in software to meet these requirements, and must describe the methods in their application for equipment authorization. | |

Sincerely,

Ben Botros
Manager – Regulatory & Compliance
Panasonic Corporation of North America

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