



THE POWER OF **CONNECTED**

Safety and Productivity Solutions

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Modular Approval Letter

Applicant		Honeywell International Inc		
FCC ID:		HD5-IM21		
Section 15.212 Modular Transmitters				
Request for Single Modular Approval		Yes	Request for Limited Modular Approval	No
SL No	Requirement	EUT Condition		Comply (Y/N)
1	The radio elements of the modular transmitter must have their own shielding. The physical crystal and tuning capacitors may be located external to the shielded radio elements	The Radio elements of the modular transmitter is within the dedicated shield. Also, the physical crystal and tuning capacitors are within the shield.		Yes
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 communication to the radio uses digital technology. The communication buffering eliminates the ability to over-modulate the radio under all conditions. Also, under no circumstances the end user will be able to change any of the modulation parameters which are built into the firmware.		Yes
s3	The modular transmitter must have its own power supply regulation	There is a on board regulation using buck-boost converters to regulate the 3.3VDC supplies provided the internals of the Transmitter module.		Yes
4	The modular transmitter must comply with the antenna and transmission system requirements of §§15.203, 15.204(b) 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). The “professional installation” provision of §15.203 is not applicable to modules but can apply to limited modular approvals under paragraph (b) of this section	There is no onboard antenna on the module. The RF Trace from the chipset gets connected to the antenna terminals using 50 ohms matching trace. The Antenna terminals are specially designed so that it gets fixed to host board. The module uses U.FL Connector’s.		Yes
5	The modular transmitter must be tested in a stand-alone configuration, i.e., the module must not be inside another device during testing for compliance with part 15 requirements. Unless the transmitter module will be battery powered, it must comply with the AC line conducted requirements found in §15.207. AC or DC power lines and data input/output lines connected to the module must not contain ferrites, unless they will be marketed with the module (see §15.27(a)). The length of these lines shall be the 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	The Module was tested in a stand-alone configuration using the test board. For all the conducted & radiated Testing, the module was plugged or inserted on the test board with using M.2 connector without any additional loose wires. Also, there was no-additional enclosure for the test board. The module was exposed for the entire duration of the testing to comply with regulations. The laptop was used to power the Module using +5.0VDC from the USB port and the same port was		Yes.

	accessories, peripherals, or support equipment connected to the module during testing shall be unmodified and commercially available (see §15.31(i))	also used for communication purpose to the module. There were no additional ferrites used for any cables connected to Module. There was no accessories, peripherals or support equipment connected to the module.	
6	The modular transmitter must be equipped with either a permanently affixed label or must be capable of electronically displaying its FCC identification number	The Label is affixed on the Module displaying the FCC ID HD5-IM21	Yes
7	The module must comply with all specific rules applicable to the transmitter, including all the conditions provided in the integration instructions by the grantee	The module is meant only for Honeywell Product lines, not to be sold independently outside. All the rules and application operating conditions are mentioned the operating Manual of the module.	Yes
8	The module must comply with RF exposure requirements	The module complies to the RF Exposure Requirements and exposure report is also submitted for the approval along with the other relevant reports and documents.	Yes

A full modular approval may be granted for single or split modular transmitters that do not comply with all of the above requirements, e.g., shielding, minimum signaling amplitude, buffered modulation/data inputs, or power supply regulation, if the manufacturer can demonstrate by alternative means in the application for equipment authorization that the modular transmitter meets all the applicable Part 15 requirements under the operating conditions in which the transmitter will be used. Limited modular approval also may be granted in those instances where compliance with RF exposure rules is demonstrated only for product configurations. The applicant for certification must state how control of the end product into which the module will be installed will be maintained such that full compliance of the end product is always ensured

Sincerely,



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