

## Modular Approval Request FCC (KDB 996369 D01 & Part 15.212)

FCC ID: WAP3058

	s to be covered by Single modular transmitters.	Answer from applicant
1.	The modular transmitter must have its own RF shielding.	YES
	The module contains a metal shield which covers all RF components and circuitry. The shield is located on the top of the board next to antenna connector	
2.	The modular transmitter must have buffered modulation/data inputs (if such inputs	YES
	are provided) to ensure that the module will comply with Part 15 requirements	
	under conditions of excessive data rates or over-modulation.	
	Data to the modulation circuit is buffered as described in the operational description provided with the application	
3.	The modular transmitter must have its own power supply regulation.	YES
with	The module contains its own power supply regulation. Please refer to schematic filed this application	
4.	The modular transmitter must comply with the antenna requirements of Section	YES
	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).	
	The module connects to its antenna using an UFL connector which is considered a non-	
	standard connector. A list of antennas tested and approved with this device may be found in users manual provided with the application	
5.	The modular transmitter must be tested in a stand-alone configuration, i.e., the	YES
	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.	
	The module was tested stand-alone as shown in test setup photographs filed with this application	
6.	The modular transmitter must be equipped with either a permanently affixed label	YES
	or must be capable of electronically displaying its FCC identification number in accordance with 15.212 (a)(1)(vi)(A) / (B).	
	There is a label on the module as shown in the labeling exhibit filed with this	
	application. Host specific labeling instructions are shown in the installation manual filed with this application.	
7.	The modular transmitter must comply with any specific rule or operating	YES
	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.	
	The module complies with FCC Part 15C requirements. Instructions to the OEM installer are provided in the installation manual filed with this application.	
8.	The modular transmitter must comply with any applicable RF exposure	YES
٠.	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.	
The module meets Portable exclusion levels as shown in the RF exposure information filed with this application	

Ite	ms to be covered by Split modular transmitters.	Answer from applicant
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.	

Note: A limited modular approval (LMA) may be granted for *single* or *split* modular transmitters that comply partially with the requirements above.

Name and surname of applica	nt (or <u>authorized</u> representative): Xuejiao Zhang	
Date:2019/11/29	Signature:	_
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