

TEST REPORT

Product Name : CONNECT-XIP
Model Number : CONNECT-XIP-M-Z
FCC ID : U5X-CXIPRFZ
Contains FCC ID : XMR202005BG95M5

Prepared for : Alula, LLC
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1. TEST RESULT CERTIFICATION

Applicant : Alula, LLC
Address : 428 Minnesota Street, Suite 300, Saint Paul, MN 55101
Manufacturer : Alula, LLC
Address : 428 Minnesota Street, Suite 300, Saint Paul, MN 55101
Factory : Residence Control, LTD
Address : 1 Kukush Str, Building M8 1309 Sofia
EUT : CONNECT-XIP
Model Name : CONNECT-XIP-M-Z
Trademark : N/A

Measurement Procedure Used:

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
§ 15.247(i), § 2.1091	PASS

The above equipment was tested by EMTEK (DONGGUAN) CO., LTD. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10 (2020) and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules FCC § 15.247(i), § 2.1091.
The test results of this report relate only to the tested sample identified in this report

Date of Test : Feb 24, 2026 to Apr 07, 2026

Prepared by :

Jessica Zhang
Jessica Zhang /Editor

Reviewer :

Warren Deng
Warren Deng /Supervisor

Approve & Authorized Signer :

Sam Lv
Sam Lv / Manager



Modified History

Version	Report No.	Revision Date	Summary
	EDG2510310206E00104R	/	Original Report



2. EUT Specification

Characteristics	Description
Product:	CONNECT-XIP
Model Number:	CONNECT-XIP-M-Z
Sample:	2#
Device Type:	2.4G WIFI/Z-wave/433
Data Rate:	802.11b 802.11g 802.11n(20MHz channel bandwidth) GFSK modulation FSK modulation OOK modulation
Modulation:	DSSS with DBPSK/DQPSK/CCK for 802.11b; OFDM with BPSK/QPSK/16QAM/64QAM for 802.11g/n; GFSK, FSK, OOK
Operating Frequency Range(s) :	2412-2462MHz for 802.11b/g/n(HT20); 908.4-916MHz 433.92MHz
Number of Channels:	11 channels for 802.11b/g/n(HT20); Z-WAVE: 3channels 433:1 channels
Transmit Power Max:	2.4G WIFI:15.08 dBm(0.032211 W)
Max Field Strength	Z-WAVE: 106.17 dBuV@3m 433:100.73 dBuV@3m
Antenna Type:	External Antenna
Antenna Gain:	2.4G WIFI: 3dBi Z-WAVE: 2.82 dBi 433:5 dBi
Power supply:	DC 13.5V from adapter Adapter:Model:RE012-20 INPUT:100-240V~ 50/60Hz 1.3A Output: 13.5V= 3000mA 40.5W DC 12V built-in battery
Evaluation applied:	☒ MPE Evaluation ☐ SAR Evaluation

3. Test Requirement:

RF EXPOSURE EVALUATION

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency(RF) Radiation as specified in §1.1307(b)

Limits for Maximum Permissible Exposure (MPE)

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density(mW/cm ²)	Average Time
(A) Limits for Occupational/Control Exposures				
300-1500	--	--	F/300	6
1500-100000	--	--	5	6
(B) Limits for General Population/Uncontrol Exposures				
300-1500	--	--	F/1500	6
1500-100000	--	--	1	30

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * R^2)$

Where

P_d = Power density in mW/cm²

P_{out} =output power to antenna in mW

G = Numeric gain of the antenna relative to isotropic antenna

π =3.1416

R =20, distance between observation point and center of the radiator in cm

P_d the limit of MPE, 1mW/cm². If we know the maximum gain of the nd total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

Measurement Result

Antenna gain:
2.4GWIFI: 3dBi

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density Limits
		(dBm)		tune-up power		Gain		(mW/cm2)	(mW/cm2)
				(dBm)	(mW)	(dBi)	Numeric		
2412	11B	15.06	15±1	16	39.811	3.00	2.00	0.0158	1
2437		14.61	14±1	15	31.623	3.00	2.00	0.0126	1
2462		15.08	15±1	16	39.811	3.00	2.00	0.0158	1
2412	11G	14.43	14±1	15	31.623	3.00	2.00	0.0126	1
2437		14.2	14±1	15	31.623	3.00	2.00	0.0126	1
2462		14.6	14±1	15	31.623	3.00	2.00	0.0126	1
2412	11N20SISO	13.45	13±1	14	25.119	3.00	2.00	0.0100	1
2437		13.21	13±1	14	25.119	3.00	2.00	0.0100	1
2462		13.62	13±1	14	25.119	3.00	2.00	0.0100	1

Channel Freq. (MHz)	modulation	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density Limits
		(dBm)		tune-up power		Gain		(mW/cm2)	(mW/cm2)
				(dBm)	(mW)	(dBi)	Numeric		
433.92	FSK	0.504	0±1	1	1.259	5	3.16	0.0008	0.3
908.40	FSK	9.938	10±1	11	12.589	2.82	1.91	0.0048	0.6
908.42	FSK	9.928	10±1	11	12.589	2.82	1.91	0.0048	0.6
916	GFSK	9.478	9±1	10	10.000	2.82	1.91	0.0038	0.6

BAND	peak output power (dBm)	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density Limits
			tune-up power		Gain		(mW/cm2)	(mW/cm2)
			(dBm)	(mW)	(dBi)	Numeric		
GSM 850	25.97	26±1	27	501.187	2.00	1.58	0.158	0.566
GSM 1900	22.97	23±1	24	251.189	2.00	1.58	0.079	1
LTE Band 2	25	25±1	26	398.107	2.00	1.58	0.126	1
LTE Band 4	25	25±1	26	398.107	2.00	1.58	0.126	1
LTE Band 5	25	25±1	26	398.107	2.00	1.58	0.126	0.566
LTE Band 12	25	25±1	26	398.107	2.00	1.58	0.126	0.477
LTE Band 13	25	25±1	26	398.107	2.00	1.58	0.126	0.525
LTE Band 25	25	25±1	26	398.107	2.00	1.58	0.126	1
LTE Band 26	25	25±1	26	398.107	2.00	1.58	0.126	0.566
LTE Band 66	25	25±1	26	398.107	2.00	1.58	0.126	1
LTE Band 85	25	25±1	26	398.107	2.00	1.58	0.126	0.477
NB-IOT Band 2	25	25±1	26	398.107	2.00	1.58	0.126	1
NB-IOT Band 4	25	25±1	26	398.107	2.00	1.58	0.126	1
NB-IOT Band 5	25	25±1	26	398.107	2.00	1.58	0.126	0.566
NB-IOT Band 12	25	25±1	26	398.107	2.00	1.58	0.126	0.477
NB-IOT Band 13	25	25±1	26	398.107	2.00	1.58	0.126	0.525
NB-IOT Band 25	25	25±1	26	398.107	2.00	1.58	0.126	1
NB-IOT Band 66	25	25±1	26	398.107	2.00	1.58	0.126	1

NB-IOT Band 71	25	25±1	26	398.107	2.00	1.58	0.126	0.465
NB-IOT Band 85	25	25±1	26	398.107	2.00	1.58	0.126	0.477

Co-Location - Summary of MPE: 433 TX + Z-Wave + 2.4g Wi-Fi + Cellular Module

Transmitter	FCC MPE Result (mW/cm2)	FCC Limit (mW/cm2)	Ratio FCC
433 TX	0.0008	0.3	0.003
Z-Wave	0.0048	0.6	0.008
Wi-Fi	0.0158	1	0.0158
Cellular	0.158	0.566	0.279
Sum of Ratios			0.3058

Rounding up the sum of the ratios per FCC RF exposure policies, the sum of the ratios must be <1.

The sum of ratios for both FCC = 0.3058<1

Thus, the EUT meets the uncontrolled exposure limit at 20 cm when all transmitters transmit simultaneously and does NOT require MPE measurement for FCC .

*** End of Report ***