TEST REPORT

APPLICANT	:	PRISMXR PTE LTD
PRODUCT NAME	:	PrismXR Puppis S1 Lite
MODEL NAME	:	P1431
BRAND NAME	:	PRISMXR
FCC ID	:	2BCGS-P1431
STANDARD(S)	:	FCC CFR Title 47 Part 2.1091
RECEIPT DATE	:	2025.07.22
TEST DATE	:	2025.07.22~2025.08.26
ISSUE DATE	:	2025.08.26

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REVISION HISTORY

Rev.	Issue Date	Revisions	Revised by
A0	2025.08.26	Initial Release	Shen Junsheng

DECLARATION OF REPORT

1. The device has been tested by Morlab, and the test results show that the equipment under test (EUT) is in compliance with the requirements of 47 CFR Part 2.1091. And it is applicable only to the tested sample identified in the report.

2. This report shall not be reproduced except in full, without the written approval of Morlab, this document only be altered or revised by Morlab, personal only, and shall be noted in the revision of the document.

3. The general information of EUT in this report is provided by the customer or manufacture, Morlab is only responsible for the test data but not for the information provided by the customer or manufacture.

4. The results in this report is only apply to the sample as tested under conditions. The customer or manufacturer is responsible for ensuring that the additional production units of this model have the same electrical and mechanical components.

5. In this report, '☐' indicates that EUT does not support content after '☐', and '☑' indicates that it supports content after '☑'

1. GENERAL DESCRIPTION

1.1.Applicant

Name : PRISMXR PTE LTD

Address : 60 PAYA LEBAR ROAD #12-03 PAYA LEBAR SOUARE, SINGAPORE, 409051

1.2.Manufacturer

Name : PRISMXR PTE LTD

Address : 60 PAYA LEBAR ROAD #12-03 PAYA LEBAR SOUARE, SINGAPORE, 409051

1.3.Factory

Name : Dongguan Yueshun Electronic Technology Co., Ltd.

Address : Building 2, No. 321, Tangxia Section, Dongshen Road, Lincun Community, Tangxia Town, Dongguan City

1.4.General Information of EUT

General Information			
Equipment Name	PrismXR Puppis S1 Lite		
Brand Name	PRISMXR		
Model Name	P1431		
Series Model	N/A		
Model Difference	N/A		
Operation Frequency	WiFi 2.4GHz:2400MHz - 2483.5MHz WiFi 5GHz: 5180 ~ 5240MHz;5260 ~ 5320MHz;5500 ~ 5700MHz;5745 ~ 5825MHz;		
Modulation Type	WiFi 2.4GHz: 802.11b: DSSS (DBPSK/DQPSK/CCK) 802.11g/n(HT): OFDM (BPSK/QPSK/16QAM/64QAM)		
	WiFi 5GHz: 802.11a/n(HT): OFDM (BPSK/QPSK/16QAM/64QAM) 802.11ac: OFDM (BPSK/QPSK/16QAM/64QAM/256QAM) 802.11ax: OFDMA (BPSK/QPSK/16QAM/64QAM/256QAM)		
Antenna Information	☑SISO	Antenna Type:	PCB
		Antenna 1 Gain:	2.4GHz WIFI :3.72dBi; 5GHz WIFI :3.63dBi;
		Antenna 2 Gain:	2.4GHz WIFI :3.26dBi 5GHz WIFI :3.67dBi
	☑Beam Forming	Beam Forming Gain:	2.4GHz WIFI :2.3dBi 5GHz WIFI :2.0dBi
Adapter:	Manufacturer:Shenzhen Keyu Power Supply Technology Co. Ltd. Model:BS12A-1201000US Input:100~240V~50/60Hz 0.4A Max; Output: DC 12V 1000mA		
Hardware Version	V1.0		
Software Version	2.00		

1.5.Laboratory Information

Laboratory Name	Shenzhen Morlab Communications Technology Co., Ltd.
Laboratory Address	FL.3, Building A, FeiYang Science Park, No.8 LongChang Road, Block 67, BaoAn District, ShenZhen, GuangDong Province, P. R. China
Telephone	+86 755 36698555
Facsimile	+86 755 36698525
FCC Designation Number	CN1192
FCC Test Firm Registration Number	226174

2. FCC 47CFR §2.1091 Requirement

2.1.Test Standards

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

According to §1.1310 and §2.1091 RF exposure is calculated.

KDB447498 D01: Mobile and Portable Devices RF Exposure Procedures and Equipment Authorization Policies

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2.2.Limit

Limits for Maximum Permissible Exposure (MPE)/Controlled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm^2)	Averaging Time (minute)
Limits for Occupational/Controlled Exposure				
0.3 – 3.0	614	1.63	(100) *	6
3.0 – 30	1842/f	4.89/f	($900/f^2$)*	6
30 – 300	61.4	0.163	1.0	6
300 – 1500	/	/	f/300	6
1500 – 100,000	/	/	5	6

Limits for Maximum Permissible Exposure (MPE)/Uncontrolled Exposure

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density (mW/cm^2)	Averaging Time (minute)
Limits for Occupational/Controlled Exposure				
0.3 – 3.0	614	1.63	(100) *	30
3.0 – 30	824/f	2.19/f	($180/f^2$)*	30
30 – 300	27.5	0.073	0.2	30
300 – 1500	/	/	f/1500	30
1500 – 100,000	/	/	1.0	30

F=frequency in MHz

*=Plane-wave equivalent power density

2.3.MPE Calculation Method

Predication of MPE limit at a given distance

Equation from page 18 of OET Bulletin 65, Edition 97-01

$S=PG/4\pi R^2$

Where: S=power density

P=power input to antenna

G=power gain of the antenna in the direction of interest relative to an isotropic radiator

R=distance to the center of radiation of the antenna

2.4.Antenna Information

EUT can only use antennas certificated as follows provided by manufacturer;

Transmitter Circuit	Peak Gain (dBi)	Antenna Type	Note
Antenna 1	3.72	PCB	For 2.4GHz WIFI
Antenna 2	3.26	PCB	For 2.4GHz WIFI
Antenna 1	3.63	PCB	For 5GHz WIFI
Antenna 2	3.67	PCB	For 5GHz WIFI
Beam Forming	2.3	PCB	For 2.4GHz WIFI
Beam Forming	2.0	PCB	For 5GHz WIFI

Only 802.11n/ac/ax mode support Beam forming mode.

Directional Gain for Power: WIFI 2.4G 3.72dBi, WIFI 5G 3.67dBi.

2.5 Max mode tune up power

Function		Max measure Power (dBm)	Max Target power with tune up (dBm)	Antenna Port
WiFi 2.4G Band	802.11n20_2412MHz	26.01	27.0	Antenna 1
	802.11n20_2462MHz	26.12	27.0	Antenna 2
WiFi 5G Band	802.11a_5745MHz	25.96	26.0	Antenna 1
	802.11ax20_5745MHz	25.06	26.0	
	802.11ax80_5775MHz	27.67	28.0	Antenna 2

Note:

1. The target power has included the maximum transmission power and tolerance values.

2.The above assessment is based on the maximum output power.

2.6.Test Result

As declared by the Applicant, the EUT is a wireless device used in a Mobile application, at least 20 cm from any body part of the user or nearby persons; from the maximum EUT RF output power, the minimum separation distance, r =20cm, as well as the gain of the used antenna is refer to section 4, the RF power density can be obtained.

Mode	Modulation Type	Max Target power with tune up (dBm)		Directional Gain (dBi)	Directional Gain (linear)	BF. Gain (dBi)	MPE (mW/cm^2)	MPE Limits (mW/cm^2)
		dBm	mW					
	SISO Transmit							
802.11n20_2412	WiFi 2.4GHz-Antenna 1	27.0	501.19	3.72	2.36	2.3	0.40	1.0000
802.11n20_2462	WiFi 2.4GHz-Antenna 2	27.0	501.19	3.72	2.36	2.3	0.40	1.0000
802.11ax20_5745	WiFi 5GHz-Antenna 1	26.0	398.107	3.67	2.33	2.0	0.30	1.0000
802.11ax80_5775	WiFi 5GHz-Antenna 2	28.0	630.957	3.67	2.33	2.0	0.46	1.0000

Simultaneous transmission：

2.4GHz WIFI Antenna 1+Antenna 2=0.40/1+0.4/01=0.80mW/cm^2 <1

5GHz WIFI Antenna 1+Antenna 2=0.30/1+0.46/1=0.76mW/cm^2 <1

Max. 2.4GHz+ 5GHz WIFI= 0.40/1+0.46/1=0.86mW/cm^2 <1

Note:

1. If nothing else, the report will only record the worst power.
2. The Maximum power is less than the limit, complies with the exemption requirements.
3. Max.WIFI Output power including turn-up tolerance.
4. The calculated distance is 20 cm.

※※※※※END OF THE REPORT※※※※※