FCC RF EXPOSURE REPORT

FCC ID: 2BCGS-P1411

Product description	:	PrismXR Puppis S1
Model No.	:	P1411
Trade Mark	:	--
Product No.	:	POC230711014-S001; POC230711014-S002
Applicant	:	PRISMXR PTE LTD
Address	:	60 PAYA LEBAR ROAD #12-03 PAYA LEBAR SQUARE SINGAPORE, 409051
Receipt date	:	2023.07.15
Test date	:	2023.07.15~2023.09.23
Issued Date	:	2023.10.08

Prepared By:	Checked By:	Approved By:	
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History of this test report

Original Report Issue Date: 2023.10.08

● No additional attachment

○ Additional attachments were issued following record

Attachment No.	Issue Date	Description

1. TEST LOCATION

Company:	Shenzhen Haiyun Standard Technical CO., Ltd.
Address:	No. 110-113, 115, 116, Block B, Jinyuan Business Building, Bao'an District, Shenzhen, China
CNAS Registration Number:	CNAS L18252
CAB identifier	CN0145
A2LA Certificate Number	6823.01
Telephone:	0755-26024411

2. GENERAL INFORMATION

2.1 APPLICANT

PRISMXR PTE LTD

60 PAYA LEBAR ROAD #12-03 PAYA LEBAR SQUARE SINGAPORE, 409051

2.2 MANUFACTURER

PRISMXR PTE LTD

60 PAYA LEBAR ROAD #12-03 PAYA LEBAR SQUARE SINGAPORE, 409051

2.3 BASIC DESCRIPTION OF EQUIPMENT UNDER TEST

Equipment Name	PrismXR Puppis S1
Test Model No.	P1411
Trademark	N/A
Power Supply	DC 5V From USB
Hardware Version	--
Software Version	--
Operating Temperature	0℃-40℃
EUT Stage	○ Product Unit ●Final-Sample
Operating Band	2400MHz ~ 2483.5MHz 5150MHz ~5250MHz 5250MHz ~5350MHz 5470MHz ~5725MHz 5725MHz ~5850MHz
Product Type	2.4GHz: IEEE 802.11b: WLAN (2TX, 2RX) IEEE 802.11b: WLAN (2TX, 2RX) IEEE 802.11g: WLAN (2TX, 2RX) IEEE 802.11n: WLAN (2TX, 2RX) IEEE 802.11ax: WLAN (2TX, 2RX) 5GHz: IEEE 802.11a: WLAN (2TX, 2RX) IEEE 802.11n: WLAN (2TX, 2RX) IEEE 802.11ac: WLAN (2TX, 2RX) IEEE 802.11ax: WLAN (2TX, 2RX)
Nominal Bandwidth	20MHz / 40MHz / 80MHz/ 160MHz

Modulation	IEEE 802.11b: DSSS (DBPSK/DQPSK/CCK) IEEE 802.11g: OFDM (BPSK/QPSK/16QAM/64QAM) IEEE 802.11a: OFDM (BPSK / QPSK / 16QAM / 64QAM) IEEE 802.11n: OFDM (BPSK / QPSK / 16QAM / 64QAM) IEEE 802.11ac: OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM) IEEE 802.11ax: OFDMA (BPSK/QPSK/16QAM/64QAM/256QAM/1024QAM)

3. MPE CALCULATION METHOD

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi r^2} = \frac{EIRP}{4\pi r^2}$$

where:
S = power density
P = power input to the 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

Table for Filed Antenna

For 2.4GWiFi

Ant.	Antenna Type	Connector	Gain (dBi)
1	Internal	N/A	1.88
2	Internal	N/A	2.56

Transmit Operating Mode		Directional Gain (dBi)	
		Power spectral density	Power
802.11b	2TX With Beamforming	5.56	5.56
802.11g	2TX With Beamforming	5.56	5.56
802.11n(HT20MHz)	2TX With Beamforming	5.56	5.56
802.11n(HT40MHz)	2TX With Beamforming	5.56	5.56
802.11ax(HE20MHz)	2TX With Beamforming	5.56	5.56
802.11ax(HE40MHz)	2TX With Beamforming	5.56	5.56

Note: If antenna gains are not equal and each transmit antenna can be driven by more than one spatial stream, directional gain may be calculated by either of the following formulas:
☒Directional gain = $G_{ANT\ MAX}$ + 10 log(N_{ANT}/N_{SS}) dBi, where NSS = the number of independent spatial streams of data and $G_{ANT\ MAX}$ is the gain of the antenna having the highest gain (in dBi).
☐Directional gain = 10 log[($10^{G1/20}$ + $10^{G2/20}$ + … + $10^{GN/20}$) 2 /N_{ANT}] dBi [Note the “20”s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]
If all antennas have the same gain, GANT:
☐Directional gain = G_{ANT} + 10 log(N_{ANT}/N_{SS}) dBi, where NSS = the number of independent spatial streams of data and G_{ANT} is the antenna gain in dBi. (This formula can also be applied when antennas have different gains if the highest antenna gain is substituted for G_{ANT}.)
Ant gain provided by the manufacturer.

For 5GWiFi

Antenna gain(dBi)	Frequency (MHz)	5150~5350	5470~5725	5725~5850
	ANT1	2.33	3.72	3.71
	ANT2	2.94	3.90	3.01

Transmit Operating Mode		Frequency （MHz）	Directional Gain (dBi)	
			Power spectral density	Power
802.11a/802.11n(HT20MHz)/ 802.11n(HT40MHz)/ 802.11n(HT40MHz) 802.11ac(VHT20MHz)/ 802.11ac(VHT40MHz)/ 802.11ac(VHT80MHz)/ 802.11ac(VHT160MHz)/ 802.11ax(HE20MHz)/ 802.11ax(HE40MHz)/ 802.11ax(HE80MHz)/ 802.11ax(HE160MHz)	2TX With Beamforming	5150~5350	5.94	5.94
		5470~5725	6.90	6.90
		5725~5850	6.71	6.71

Note: If antenna gains are not equal and each transmit antenna can be driven by more than one spatial stream, directional gain may be calculated by either of the following formulas:
☒Directional gain = $G_{ANT\ MAX}$ + 10 log(N_{ANT}/N_{SS}) dBi, where NSS = the number of independent spatial streams of data and $G_{ANT\ MAX}$ is the gain of the antenna having the highest gain (in dBi).
☐Directional gain = 10 log[($10^{G1/20}$ + $10^{G2/20}$ + … + $10^{GN/20}$) ^{2} /N_{ANT}] dBi [Note the “20”s in the denominator of each exponent and the square of the sum of terms; the object is to combine the signal levels coherently.]
If all antennas have the same gain, GANT:
☐Directional gain = G_{ANT} + 10 log(N_{ANT}/N_{SS}) dBi, where N_{SS} = the number of independent spatial streams of data and G_{ANT} is the antenna gain in dBi. (This formula can also be applied when antennas have different gains if the highest antenna gain is substituted for G_{ANT}.)
Ant gain provided by the manufacturer.

1. TEST RESULTS

Worst case as below:
For 2.4GHz: IEEE 802.11n(HT20)_2437MHz

ANT No.	Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Tune up Power (dBm)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
1	5.56	3.87	21.37	22.50	0.1273	1	Complies

	Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Tune up Power (dBm)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
2	5.56	3.87	22.08	22.50	0.1273	1	Complies

For 5GHz: IEEE 802.11ax(HE20)_5745MHz

ANT No.	Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Tune up Power (dBm)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
1	6.71	4.69	23.77	24.00	0.1659	1	Complies

ANT No.	Directional Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Tune up Power (dBm)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
2	6.71	4.69	23.76	24.00	0.1659	1	Complies

For BLE

ANT No.	Ant Gain (dBi)	Directional Gain (numeric)	Max. Output Power (dBm)	Max. Tune up Power (dBm)	Power Density (S) (mW/cm^2)	Limit of Power Density (S) (mW/cm^2)	Test Result
1	0	1	0.70	0.70	0.0002	1	Complies

Note: 1. The calculated distance is 20 cm.
2. The 2.4G Wifi function can transmit at the same time with the 5G Wifi function.
3. Max. Tune up Power is declared by the manufacturer.
4. BLE power information is obtained from the RF related report in FCC ID:2AW30-BC204.

Simultaneous transmitting consideration

The ratio= MPE2.4GHz Wifi/limit+MPE5GHz Wifi/limit+ MPE 2.4GHz BLE/limit =(0.1273/1+0.1273/1)+ (0.1659/1+0.1659/1)+ 0.0002/1=0.5866<1.0

Result: Complies

（END OF REPORT）