FCC RF EXPOSURE REPORT

FCC ID: 2BCFYERO1X

Product description	:	HT Mesh
Model No.	:	ERO1X
Trade Mark	:	--
Product No.	:	POC230809002-S002
Applicant	:	Heights Telecom T LTD
Address	:	Ha-Sakhlav,6 Irus HaMerkaz 7680900 Israel
Receipt date	:	2023.08.10
Test date	:	2023.08.11~2023.09.06
Issued Date	:	2023.10.10

Prepared By:	Checked By:	Approved By:	
Black ding	Tim zhang	Misue Su	
Black Ding	Tim.zhang	Misue Su	

History of this test report

Original Report Issue Date: 2023.10.10

● 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

Heights Telecom T LTD

Ha-Sakhlav,6 Irus HaMerkaz 7680900 Israel

2.2 MANUFACTURER

Heights Telecom T LTD

Ha-Sakhlav,6 Irus HaMerkaz 7680900 Israel

2.3 BASIC DESCRIPTION OF EQUIPMENT UNDER TEST

Equipment Name	HT Mesh	
Test Model No.	ERO1X	
Trademark	N/A	
Power Supply	Input:100-240V AC 50/60Hz 0.5A Output (USB): 5V 0.4A	
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	3.29
2	Internal	N/A	3.33

Transmit Operating Mode		Directional Gain (dBi)	
		Power spectral density	Power
802.11b	2TX With Beamforming	6.33	6.33
802.11g	2TX With Beamforming	6.33	6.33
802.11n(HT20MHz)	2TX With Beamforming	6.33	6.33
802.11n(HT40MHz)	2TX With Beamforming	6.33	6.33
802.11ax(HE20MHz)	2TX With Beamforming	6.33	6.33
802.11ax(HE40MHz)	2TX With Beamforming	6.33	6.33

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).
If all antennas have the same gain, G_{ANT}:
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.

For 5GWiFi

/	Frequency (MHz)	5150~5850
Antenna gain(dBi)	ANT1	3.26
	ANT2	3.32

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	6.32	6.32
		5470~5725	6.32	6.32
		5725~5850	6.32	6.32

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 N_{SS} = the number of independent spatial streams of data and $G_{ANT\ MAX}$ is the gain of the antenna having the highest gain (in dBi).
If all antennas have the same gain, G_{ANT}:
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.

1. TEST RESULTS

Worst case as below:
For 2.4GHz: IEEE 802.11b_ Beamforming _2462MHz

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
6.33	4.30	24.88	25.00	0.1201	1	Complies
6.33	4.30	23.71	25.00	0.1201	1	Complies

For 5GHz: IEEE 802.11ax(HE20)_ Beamforming _5240MHz

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
6.32	4.29	25.16	25.50	0.1344	1	Complies
6.32	4.29	23.71	25.50	0.1344	1	Complies

Note: 1. The calculated distance is 30cm.
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.

Simultaneous transmitting consideration

The ratio= MPE2.4GHz Wifi/limit+MPE5GHz Wifi/limit= (0.1201/1+0.1201/1)+(0.1344/1+0.1344/1)=0.509<1.0

Result: Complies

（END OF REPORT）