MPE TEST REPORT

Applicant	Deer Management System LLC
FCC ID	2BBNQ-RVU3
Product	X Ultra 3.0
Brand	Reveal
Model	X Ultra 3.0
Report No.	EFTA25010044-IE-05-M1V1
Issue Date	March 4, 2025

Eurofins TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC 47 CFR Part 1 1.1310.** The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Prepared by: Wei Fangying *Approved by: Xu Kai*

Eurofins TA Technology (Shanghai) Co., Ltd.

Building 3, No.145, Jintang Rd, Pudong Shanghai, P.R.China
TEL: +86-021-50791141/2/3
FAX: +86-021-50791141/2/3-8000

Table of Contents

Version	Revision Description	Issue Date
Rev.0	Initial issue of report.	February 14, 2025
Rev.1	Updated information.	March 4, 2025
Note: This revised report (Report No.: EFTA25010044-IE-05-M1V1) supersedes and replaces the previously issued report (Report No.: EFTA25010044-IE-05-M1). Please discard or destroy the previously issued report and dispose of it accordingly.		

1 Test Laboratory

1.1 Notes of the Test Report

This report shall not be reproduced in full or partial, without the written approval of **Eurofins TA Technology (Shanghai) Co., Ltd.** The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. Measurement Uncertainties were not taken into account and are published for informational purposes only. This report is written to support regulatory compliance of the applicable standards stated above.

1.2 Test Facility

FCC (Designation number: CN1179, Test Firm Registration Number: 446626)

Eurofins TA Technology (Shanghai) Co., Ltd. has been listed on the US Federal Communications Commission list of test facilities recognized to perform measurements.

1.3 Testing Location

Company:	Eurofins TA Technology (Shanghai) Co., Ltd.
Address:	Building 3, No.145, Jintang Rd, Pudong Shanghai, P.R.China
City:	Shanghai
Post code:	201201
Country:	P. R. China
Contact:	Xu Kai
Telephone:	+86-021-50791141/2/3
Fax:	+86-021-50791141/2/3-8000
Website:	https://www.eurofins.com/electrical-and-electronics
E-mail:	Kain.Xu@cpt.eurofinscn.com

1.4 Laboratory Environment

Temperature	Min. = 18°C, Max. = 25°C
Relative humidity	Min. = 20%, Max. = 80%
Ground system resistance	< 0.5 Ω
Ambient noise is checked and found very low and in compliance with requirement of standards. Reflection of surrounding objects is minimized and in compliance with requirement of standards.	

2 Description of Equipment Under Test

Client Information

Applicant	Deer Management System LLC
Applicant address	1668 Jordan West Rd Decorah Iowa United States 52101
Manufacturer	AsiaTelco Technologies Co.
Manufacturer address	No. 68 Huatuo Road, Building-8, Zhangjiang Hi-Tech Park, Pudong, Shanghai 201203, China

General Technologies

EUT Description			
Model	X Ultra 3.0		
Lab internal SN	EFTA25010044-IE-05/S01		
HW Version	P2		
Software Version	1.0		
Frequency	Band	TX (MHz)	RX (MHz)
	LTE Band 2	1850 ~ 1910	1930 ~ 1990
	LTE Band 4	1710 ~ 1755	2110 ~ 2155
	LTE Band 5	824 ~ 849	869 ~ 894
	LTE Band 12	699 ~ 716	729 ~ 746
	LTE Band 13	777 ~ 787	746 ~ 756
	LTE Band 25	1850 ~ 1915	1930 ~ 1995
	LTE Band 26	814 ~ 849	859 ~ 894
	Wi-Fi 2.4GHz	2400 ~ 2483.5	2400 ~ 2483.5
	Bluetooth LE	2400 ~ 2483.5	2400 ~ 2483.5
Date of Testing	January 7, 2025 ~ January 14, 2025		
Date of Sample Received	January 6, 2025		
Note: 1. The EUT is sent from the applicant to Eurofins TA and the information of the EUT is declared by the applicant. 2. All indications of Pass/Fail in this report are opinions expressed by Eurofins TA Technology (Shanghai) Co., Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only.			

3 Maximum Tune up and Antenna Gain

The numeric gain (G) of the antenna with a gain specified in dB is determined by
Numeric gain (G)=10^(antenna gain/10)

Band	Maximum Tune up Power		Antenna Gain (dBi)	Numeric Gain
	(dBm)	(mW)		
LTE Band 2	24	251.189	4.50	2.818
LTE Band 4	24	251.189	3.00	1.995
LTE Band 5	24	251.189	4.40	2.754
LTE Band 12	24	251.189	0.70	1.175
LTE Band 13	24	251.189	3.60	2.291
LTE Band 25	24	251.189	4.50	2.818
LTE Band 26	24	251.189	4.40	2.754
Wi-Fi 2.4GHz	15	31.623	3.39	2.183
Bluetooth (Low Energy)	4	2.512	2.56	1.803

4 MPE Limit

According to section 1.1310 of FCC 47 CFR Part 1, limits for maximum permissible exposure (MPE) are as following.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
(i) 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
300-1,500			f/300	<6
1,500-100,000			5	<6
(ii) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	<30
1.34-30	824/f	2.19/f	*($180/f^2$)	<30
30-300	27.5	0.073	0.2	<30
300-1,500			f/1500	<30
1,500-100,000			1.0	<30

*f = frequency in MHz. * = Plane-wave equivalent power density.*

Note1. Occupational/controlled limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. Limits for occupational/controlled exposure also apply in situations when an individual is transient through a location where occupational / controlled limits apply provided he or she is made aware of the potential for exposure.

Note2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or can not exercise control over their exposure.

The maximum permissible exposure for 300~1500 MHz is f/1500, for 1500~100,000MHz is 1.0. So

Band	The Maximum Permissible Exposure (mW/cm^2)
LTE Band 2	1.000
LTE Band 4	1.000
LTE Band 5	0.549
LTE Band 12	0.466
LTE Band 13	0.518
LTE Band 25	1.000
LTE Band 26	0.543
Wi-Fi 2.4GHz	1.000
Bluetooth (Low Energy)	1.000

5 RF Exposure Evaluation Result

RF exposure evaluation method is based on KDB 447498 D01，this calculation is based on the conducted power, maximum power and antenna gain with provides the minimum separation distance. The formula shown below is from OET Bulletin 65 Edition 97-01 Per KDB 447498 D01:

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

Where: S = power density (in appropriate units, e.g. mW/cm^2)
P = Time-average maximum tune up procedure (in appropriate units, e.g., mW)
G = the numeric gain of the antenna
R = distance to the center of radiation of the antenna (20 cm = limit for MPE)

Band	Maximum Tune up (dBm)	Antenna Gain (dBi)	Maximum EIRP (dBm)	PG (mW)	Result (mW/cm^2)	Limit Value (mW/cm^2)	The MPE Ratio
LTE Band 2	24	4.50	28.500	707.946	0.140	1.000	0.140
LTE Band 4	24	3.00	27.000	501.187	0.099	1.000	0.099
LTE Band 5	24	4.40	28.400	691.831	0.137	0.549	0.250
LTE Band 12	24	0.70	24.700	295.121	0.058	0.466	0.125
LTE Band 13	24	3.60	27.600	575.440	0.114	0.518	0.220
LTE Band 25	24	4.50	28.500	707.946	0.140	1.000	0.140
LTE Band 26	24	4.40	28.400	691.831	0.137	0.543	**0.252**
Wi-Fi 2.4GHz	15	3.39	18.390	69.024	0.014	1.000	**0.014**
Bluetooth (Low Energy)	4	2.56	6.560	4.529	0.001	1.000	**0.001**
Note: **R** = 20cm **π**= 3.1416 The MPE Ratio = Mac Result÷Limit Value							

So the simultaneous transmitting antenna pairs as below:
TER = WWAN Antenna MPE ratio + Wi-Fi 2.4GHz Antenna MPE ratio + Bluetooth LE Antenna MPE ratio = 0.252 + 0.014 + 0.001= 0.267<1

Note: For transmitters, minimum separation distance is 20cm, even if calculations indicate MPE distance is less.

IMPORTANT NOTE: To comply with the FCC RF exposure compliance requirements, the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. No change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.

ANNEX A: The EUT Appearance

The EUT Appearance are submitted separately.

********END OF REPORT ********