



## MPE TEST REPORT

**Applicant** Lorex Technology Inc.

**FCC ID** UCZ-IC501

**Product** 2K INDOOR DUAL LENS PAN-TILT  
WI-FI SECURITY CAMERA

**Brand** LOREX

**Model** IC501A-PSW-AZ1, IC501A-PSW-AE1

**Report No.** EFTA25060103-IE-03-M1

**Issue Date** July 24, 2025

Eurofins TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **§2.1091 and FCC 47 CFR Part 1 1.1310**. The test results show that the equipment tested can demonstrate the compliance with the requirements as documented in this report.

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## 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.  
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### 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	Lorex Technology Inc.
Applicant address	250 Royal Crest Court, Markham, ontario L3R 3S1, Canada
Manufacturer	Qualvision Technology Co., Ltd.
Manufacturer address	2F~5F, Bldg B, No.37, ZhenXing Road, LiYuHe Industrial Park, LouCun, GongMing, ShenZhen, China, 518107

### General Technologies

EUT Description						
Model	IC501A-PSW-AZ1, IC501A-PSW-AE1					
Lab Internal SN	EFTA25060103-IE-03/S01					
Hardware Version	IOT71485HP13MPT VER.A					
Software Version	/					
Frequency	Band	TX (MHz)	RX (MHz)			
	Wi-Fi 2.4G	2400 ~ 2483.5	2400 ~ 2483.5			
	Wi-Fi 5GHz (U-NII-1)	5150 ~ 5250	5150 ~ 5250			
	Wi-Fi 5GHz (U-NII-2A)	5250 ~ 5350	5250 ~ 5350			
	Wi-Fi 5GHz (U-NII-2C)	5470 ~ 5600 5650 ~ 5725	5470 ~ 5600 5650 ~ 5725			
	Wi-Fi 5GHz (U-NII-3)	5725~5850	5725~5850			
	Bluetooth LE	2400 ~ 2483.5	2400 ~ 2483.5			
EUT Accessory						
Adapter	Manufacturer: Zhuzhou Dachuan Electronic Technology Co.,Ltd Model: DCT10W050150US-C1 Input: 100-240V-50/60Hz 0.3A Output: 5.0V---1.5A					
USB Cable	Manufacturer: Shenzhen Mingyuantong Tech Co., Ltd. Model: MYT-CP00010086B 200cm Cable, Shielded					
Date of Testing	June 16, 2025 ~ June 27, 2025					
Date of Sample Received	June 16, 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 Output Power (Measured) and Antenna Gain

The numeric gain (G) of the antenna with a gain specified in dB is determined by

Numeric gain (G)= $10^{\frac{G}{10}}$  (antenna gain/10)

Band	Maximum Output Power		Antenna Gain (dBi)	Numeric Gain
	(dBm)	(mW)		
Wi-Fi 2.4G	21.93	155.96	3.76	2.38
Wi-Fi 5GHz (U-NII-1)	14.78	30.06	0.05	1.01
Wi-Fi 5GHz (U-NII-2A)	14.99	31.55	0.74	1.19
Wi-Fi 5GHz (U-NII-2C)	14.58	28.71	2.66	1.85
Wi-Fi 5GHz (U-NII-3)	14.31	26.98	3.18	2.08
Bluetooth LE	14.11	25.76	3.76	2.38

## 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 <sup>2</sup> )	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 <sup>2</sup> )	<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 <sup>2</sup> )	<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 1500~100,000MHz is 1.0. So

Band	The Maximum Permissible Exposure (mW/cm <sup>2</sup> )
Wi-Fi 2.4GHz	1.000
Wi-Fi 5GHz	1.000
Bluetooth	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<sup>2</sup>)

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 Output Power (dBm)	Antenna Gain (dBi)	Maximum EIRP (dBm)	PG (mW)	Result (mW/cm <sup>2</sup> )	Limit Value (mW/cm <sup>2</sup> )	The MPE Ratio
Wi-Fi 2.4G	21.93	3.76	25.690	370.681	0.074	1.000	0.074
Wi-Fi 5GHz (U-NII-1)	14.78	0.05	14.830	30.409	0.006	1.000	0.006
Wi-Fi 5GHz (U-NII-2A)	14.99	0.74	15.730	37.411	0.007	1.000	0.007
Wi-Fi 5GHz (U-NII-2C)	14.58	2.66	17.240	52.966	0.011	1.000	0.011
Wi-Fi 5GHz (U-NII-3)	14.31	3.18	17.490	56.105	0.011	1.000	0.011
Bluetooth LE	14.11	3.76	17.870	61.235	0.012	1.000	0.012
Note: R = 20cm $\pi = 3.1416$ The MPE Ratio = Mac Result/Limit Value							

Bluetooth antenna and Wi-Fi 2.4GHz antenna and Wi-Fi 5GHz antenna can't transmit simultaneously.

So the simultaneous transmitting antenna pairs as below:

TER = Wi-Fi 2.4GHz Antenna MPE ratio + Wi-Fi 5GHz Antenna MPE ratio = 0.074 + 0.011 = 0.085 < 1

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

## ANNEX A: The EUT Appearance

The EUT Appearance are submitted separately.

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