

MPE TEST REPORT

Applicant COBAN Technologies, Inc.
FCC ID ZPJBL-M8852CU1
Product 802.11a/b/g/n/ac/ax 2402Mbps WLAN +
Bluetooth v5.3 Combo USB Card
Model BL-M8852CU1
Report No. EFTA25080223-IE-03-M1
Issue Date January 30, 2026

Eurofins TA Technology (Shanghai) Co., Ltd. tested the above equipment in accordance with the requirements in **FCC 47 CFR Part 1 §1.1310, §2.1091**. 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	COBAN Technologies, Inc.
Applicant address	9411 S. Sam Houston Parkway W. #300 Missouri City Texas 77489 United States
Manufacturer	Shenzhen Bilian Electronic Co.,Ltd.
Manufacturer address	Room 501, Building 3, No. 32, Dafu Road, Zhangge Community, Fucheng Street, Longhua District, Shenzhen City,China

General Technologies

EUT Description			
Model	BL-M8852CU1		
Lab Internal SN	250815-12-015		
Hardware Version	V1.0		
Software Version	V2.0.30		
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 ~ 5725	5470 ~ 5725
	Wi-Fi 5GHz (U-NII-3)	5725~5850	5725~5850
	Bluetooth	2400 ~ 2483.5	2400 ~ 2483.5
Date of Testing	August 15, 2025 ~ September 15, 2025		
Date of Sample Received	August 15, 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

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

Band	Maximum Tune up Tolerance		Antenna Gain (dBi)	Numeric Gain
	(dBm)	(mW)		
Wi-Fi 2.4G	25.00	316.23	2.30	1.70
Wi-Fi 5GHz (U-NII-1)	22.00	158.49	5.00	3.16
Wi-Fi 5GHz (U-NII-2A)	23.00	199.53	5.00	3.16
Wi-Fi 5GHz (U-NII-2C)	23.00	199.53	5.00	3.16
Wi-Fi 5GHz (U-NII-3)	23.00	199.53	5.00	3.16
Bluetooth	10.00	10.00	2.30	1.70
Bluetooth LE	8.00	6.31	2.30	1.70

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 1500~100,000MHz is 1.0. So

Band	The Maximum Permissible Exposure (mW/cm ²)
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/cm²)

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
Wi-Fi 2.4G	25.000	2.300	27.300	537.032	0.107	1.000	0.107
Wi-Fi 5GHz	23.000	5.000	28.000	630.957	0.126	1.000	0.126
Bluetooth	10.000	2.300	12.300	16.982	0.003	1.000	0.003
Note: R = 20cm $\pi = 3.1416$ The MPE Ratio = Mac Result ÷ Limit Value							

This device only supports simultaneous transmission via Wi-Fi 2.4GHz and Wi-Fi 5GHz and Bluetooth.

So, the simultaneous transmitting antenna max pairs as below:

TER = Wi-Fi 2.4GHz Antenna MPE Ratio + Wi-Fi 5GHz Antenna MPE Ratio + Bluetooth Antenna MPE Ratio = 0.107 + 0.126 + 0.003 = 0.236 < 1

So, the limit is kept.

Note: For this device, 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 *****