

Prüfbericht-Nr.: Test report no.:	CN25WPRG 002	Auftrags-Nr.: Order no.:	168557586	Seite 1 von 10 Page 1 of 10
Kunden-Referenz-Nr.: Client reference no.:	N/A	Auftragsdatum: Order date:	2025-06-05	
Auftraggeber: Client:	AzureWave Technologies, Inc. 8F., No. 94, Baozhong Rd., Xindian Dist., New Taipei City, 23144 Taiwan			
Prüfgegenstand: Test item:	IEEE 802.11 b/g/n Wireless LAN and Bluetooth			
Bezeichnung / Typ-Nr.: Identification / Type no.:	AW-NM372SM			
Auftrags-Inhalt: Order content:	Test Report			
Prüfgrundlage: Test specification:	CFR Title 47 FCC Part 2.1091			
Wareneingangsdatum: Date of sample receipt:	2025-06-07	Please refer to Photo Document		
Prüfmuster-Nr.: Test sample no.:	A004000487-002			
Prüfzeitraum: Testing period:	2025-06-07 - 2025-06-18			
Ort der Prüfung: Place of testing:	Refer to section 2.1			
Prüflaboratorium: Testing laboratory:	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: Test result*:	Pass			
geprüft von: tested by:			genehmigt von: authorized by:	
Datum: Date: 2025-07-16	Signed by: Bell Hu		Ausstellungsdatum: Issue date: 2025-07-16	Signed by: Jonathan Li
Stellung / Position:	Sachverständige(r)/Expert		Stellung / Position:	Sachverständige(r)/Expert
Sonstiges / Other:	FCC ID: TLZ-NM372SM This report is under FCC C2PC application for the module integration into the Host (Product: Lymow One, Model: Lymow One, Manufacturer: Changzhou Lymow Technology Co., Ltd.), the antennas changed.			
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:	Prüfmuster vollständig und unbeschädigt Test item complete and undamaged			
* Legende:	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
* Legend:	P(ass) = passed a.m. test specification(s)	F(ail) = failed a.m. test specification(s)	N/A = not applicable	N/T = not tested
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. This test report only relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.				

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Anmerkungen
Remarks

1	Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfbedingungen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden. <i>The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system. Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.</i>
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3	Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt. <i>Test clauses with remark of * are subcontracted to qualified subcontractors and described under the respective test clause in the report.</i> <i>Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.</i>
4	Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnissen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2023, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezüglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019. <i>The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2023, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.</i>

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Test Summary

3.1.1 RF EXPOSURE COMPLIANCE
RESULT: Pass

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1. Test Sites

1.1 Test Facilities

TÜV Rheinland (Shenzhen) Co., Ltd.

2-3F, 101 & 102, No.2, Nuclear Power Industrial Park, Fuming Community, Fucheng Street,
Longhua District, Shenzhen 518000, People's Republic of China

A2LA Cert. No.: 5162.01

1.2 Traceability

All measurement equipment calibrations are traceable to NIST or where calibration is performed outside the United States, to equivalent nationally recognized standards organizations.

1.3 Calibration

Equipment requiring calibration is calibrated periodically by the manufacturer or according to manufacturer's specifications. Additionally all equipment is verified for proper performance on a regular basis using in house standards or comparisons.

1.4 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendixes of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for certification follow-up purposes.

1.5 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. facility located at 2-3F, 101 & 102, No.2, Nuclear Power Industrial Park, Fuming Community, Fucheng Street, Longhua District, Shenzhen 518000, People's Republic of China is listed on the US Federal Communications Commission list of facilities approved to perform measurements.

2. General Product Information

2.1 Product Function and Intended Use

The product is Wi-Fi & Bluetooth module which supports 2.4GHz Wi-Fi and BLE functions.

This report is under FCC C2PC application for the module integration into the Host (Product: Lymow One, Model: Lymow One, Manufacturer: Changzhou Lymow Technology Co., Ltd.), the antennas changed.

For details refer to the User Manual, Technical Description and Circuit Diagram.

2.2 Rating and System details

Table 1: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment	IEEE 802.11 b/g/n Wireless LAN and Bluetooth Module
Type Designation	AW-NM372SM
FCC ID	TLZ-NM372SM
Operating Voltage	3.3V DC
Testing Voltage	3.3V DC
Technical Specification of Bluetooth LE	
Operating Frequency:	2402 MHz to 2480 MHz
Type of Modulation:	GFSK
Channel Number:	BLE 1Mbps
Channel Separation:	2MHz
Data Rate:	1Mbps
Antenna Type:	Integral Antenna
Antenna Gain:	3.5 dBi (Provided by the Client)
Technical Specification of 2.4GHz Wi-Fi 802.11 b/g/n	
Operating Frequency	2412 - 2462MHz for 802.11b/g/n(HT20)
Type of Modulation	DSSS(DBPSK/DQPSK/CCK) OFDM(BPSK/QPSK/16QAM/64QAM)
Data Rate	1/2/5.5/11 Mbps for 802.11b 6/9/12/18/24/36/48/54 Mbps for 802.11g MCS0 ~ MCS7 for 802.11n(HT20)
Channel Number	11 channels for 802.11b/g/n(HT20)
Channel Separation	5 MHz
Antenna Type	Integral Antenna
Antenna Number	1Tx1Rx
Antenna Gain	3.5dBi (Provided by the Client)
The type of wideband data transmission equipment:	DTS

Note: The correctness of all data provided by customer in the test report is ensured and responsible of

the customer. Any misjudgment of the test results caused by the use of incorrect data provided by customer shall be borne by the customer.

Table 2: Technical Specification of Host

General Information	Description
Kind of Equipment:	Robot Lawn Mower
Type Designation:	Lymow One
Operating Voltage:	DC 35.2V by battery or 120V AC/60Hz by the adapter
Manufacturer:	Changzhou Lymow Technology Co., Ltd.

Note: Besides with this certificated Wi-Fi & Bluetooth module (FCC ID: TLZ-NM372SM), there is a certificated LTE single module also contained in the Robot Lawn Mower, details as below.

Modules	FCC ID	Remarks
LTE Module (Single module)	FCC ID: XMR202008EC25AFXD	Except for the antenna, there is no other changes on the module when integrated into the host (Robot Lawn Mower). And adherence to the grant conditions for RF exposure compliance and applicable maximum ERP/EIRP rules were observed, no authorization request is needed.

Note: As per KDB 996369 D01 section 7 and KDB 996369 D02 (Question 12), the EMC testing of the Module in simultaneous transmission operations were performed while integrated into the host. It is unnecessary to file the result of these simultaneous transmission test data since there is no emissions with increased amplitude and/or on different frequencies are detected compared to what is reported in the modular grant (that refers to single-transmitter operations testing).

3. Test Results

3.1 Transmitter Requirements & Test Suites

3.1.1 RF Exposure Compliance

RESULT:**Pass**

Test standard : CFR Title 47 FCC Part 2.1091
KDB 447498 D01 General RF Exposure Guidance v06

Limit : Table 1 of CFR Title 47 FCC Part 1.1310

Kind of test site : Shielded room

This device is mobile device, and the applicant declares that the minimum separation distance is greater than 20cm. Therefore MPE measurement or computational modelling should be used to determine compliance.

MPE Calculation is based on the conducted power, and considering maximum power and Antenna gain. The following formula is used to MPE evaluation.

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

where: S = power density (in appropriate units, e.g. mW/cm²)
P = power input to the antenna (in appropriate units, e.g., mW)
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 (appropriate units, e.g., cm)

or:

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

where: EIRP = equivalent (or effective) isotropically radiated power

3.1.1.1 RF Exposure Compliance Requirement for FCC

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
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
300-1500			f/300	6
1500-100,000			5	6
(B) 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
300-1500			f/1500	30
1500-100,000			1.0	30

Table 3: Test Results of RF Exposure Calculations for FCC, Stand-alone mode

Operating Mode	Max. EIRP incl. tune-up (dBm)	Distance (cm)	MPE (mW/cm ²)	Limit (mW/cm ²)	Verdict
Bluetooth LE*	13.0	20	0.004	1.0	Pass
2.4GHz Wi-Fi*	24.0	20	0.050	1.0	Pass
LTE B71**	30	20	0.199	0.45	Pass

*Refer the module FCC ID: TLZ-NM372SM, Antenna Gain: 3.5dBi Max

**Refer to certificated module FCC ID: XMR202008EC25AFXD, Antenna Gain: 5dBi Max

Table 4: Test Results of RF Exposure Calculations for FCC, Simultaneous mode

Operating Mode (Worst-case)	Distance (cm)	Sum of the ratios	Limit	Verdict
2.4GHz Wi-Fi +LTE B71*	20	0.50	1.0	Pass

*EIRP=Conducted Power (Refer to certificated module FCC ID: XMR202008EC25AFXD)+ antenna gain (5dBi Max as declared by the manufacturer)

➤ Conclusion

Therefore the maximum calculations result of above are meet the requirement of Radio Frequency Exposure (MPE) limit.

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