

Prüfbericht-Nr.: <i>Test report no.:</i>	CN26NHAO 003	Auftrags-Nr.: <i>Order no.:</i>	168585292	Seite 1 von 21 Page 1 of 21
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	2025-11-16	
Auftraggeber: <i>Client:</i>	Odyssey Robot LLC Address: 21 Miller Alley Suite210, Pasadena, CA 91103			
Prüfgegenstand: <i>Test item:</i>	Remote Controller			
Bezeichnung / Typ-Nr.: <i>Identification / Type no.:</i>	YMAWZOD			
Auftrags-Inhalt: <i>Order content:</i>	Test Report			
Prüfgrundlage: <i>Test specification:</i>	CFR Title 47 FCC Part 15: Subpart E Section 15.407 CFR Title 47 FCC Part 15: Subpart C Section 15.209			
Wareneingangsdatum: <i>Date of sample receipt:</i>	2025-11-16	Please refer to Photo Document		
Prüfmuster-Nr.: <i>Test sample no.:</i>	A004155498-001~008			
Prüfzeitraum: <i>Testing period:</i>	2025-11-20 - 2025-12-29			
Ort der Prüfung: <i>Place of testing:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüflaboratorium: <i>Testing laboratory:</i>	TÜV Rheinland (Shenzhen) Co., Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von: <i>tested by:</i>	<u>X Bell Hu</u>		genehmigt von: <i>authorized by:</i>	<u>X Jonathan Li</u>
Datum: <i>Date:</i> 2025-11-29	Signed by: Bell Hu		Ausstellungsdatum: <i>Issue date:</i> 2025-11-29	Signed by: Jonathan Li
Stellung / Position:	Sachverständige(r)/Expert		Stellung / Position:	Sachverständige(r)/Expert
Sonstiges / <i>Other:</i>	FCC ID: 2BSYT-YMAWZOD This report is for 5.8GHz NII.			
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>	Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>			
* 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. <i>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.</i>				

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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 Prüfkonditionen, 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 115:2021, 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 115:2021, 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

5.1.1 ANTENNA REQUIREMENT

RESULT: Pass

5.1.2 MAXIMUM OUTPUT POWER

RESULT: Pass

5.1.3 CONDUCTED POWER SPECTRAL DENSITY

RESULT: Pass

5.1.4 FREQUENCY STABILITY

RESULT: Pass

5.1.5 6dB BANDWIDTH

RESULT: Pass

5.1.6 26dB BANDWIDTH

RESULT: Pass

5.1.7 99% BANDWIDTH

RESULT: Pass

5.1.8 RADIATED SPURIOUS EMISSION

RESULT: Pass

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1 General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

Appendix A: Photographs of the Test Set-up.

Appendix B: Test Results of 5.8GHz band

2 Test Sites

2.1 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

FCC Accreditation Designation No.: 694916

ISED wireless device testing laboratory: 25069

2.2 List of Test and Measurement Instruments

Table 1: List of Test and Measurement Equipment

Radio Spectrum Testing (Band-Tonscend)					
Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. until
EXA Signal Analyzer, Multi-touch	Keysight	N9010B	MY60241175	23.09.2025	22.09.2026
MXG X-Series RF Vector Signal Generator	Keysight	N5182B	MY61250137	23.09.2025	22.09.2026
EXG X-Series Microwave Analog Signal Generator	Keysight	N5173B	MY61250141	23.09.2025	22.09.2026
DC Power Supply	Keysight	E3642A	MY61276100	23.09.2025	22.09.2026
Wireless Connectivity Tester	R&S	CMW270	102505	23.09.2025	22.09.2026
Power Control Unit	Tonscend	JS0806-4ADC	N/A	23.09.2025	22.09.2026
Automation Control Unit	Tonscend	JS0806-2	21C8060396	23.09.2025	22.09.2026
Test Software	Tonscend	JS1120-3	N/A	N/A	N/A
Control PC	Lenovo	TianYi510S-071MB	YLX23JMF	N/A	N/A
Humid & Temp Programmable Tester	BOST	NTH090-60	19040801	25.02.2025	24.02.2026
Unwanted Emission Testing (TS9975)					
Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. until
EMI Test Receiver	R&S	ESR 7	102021	22.09.2025	21.09.2026
Signal Analyzer	R&S	FSV 40	101439	22.09.2025	21.09.2026
System Controller Interface	R&S	SCI-100	S10010038	N/A	N/A
Filterbank	R&S	Wlan	100759	22.09.2025	21.09.2026
OSP	R&S	OSP 120	102040	N/A	N/A
Pre-amplifier	R&S	SCU08F1	08320031	22.09.2025	21.09.2026
Amplifier	R&S	SCU-18F	180070	22.09.2025	21.09.2026

Amplifier	R&S	SCU40A	100475	22.09.2025	21.09.2026
Trilog Broadband Antenna (30 MHz - 7 GHz)	Schwarzbeck	VULB 9162	193	28.09.2024	27.09.2026
Double-Ridged Antenna (1 -18 GHz)	ETS-LINDGREN	3117	00218717	28.09.2024	27.09.2026
Wideband Ridged Horn Antenna (18-40 GHz)	Steatite	QMS-00880	19067	28.09.2024	27.09.2026
Active Loop Antenna	Schwarzbeck	FMZB 1513	302	28.09.2024	27.09.2026
Test software	R&S	EMC32 (V10.60.10)	N/A	N/A	N/A
Control PC	Dell	OptiPlex 7050	36NV9P2	N/A	N/A
3m Semi-Anechoic Chamber	Albatross	SAC-3m	APC17151-SAC	14.09.2024	13.09.2027

2.3 Traceability

All measurement equipment calibrations are traceable to NIM (National Institute of Metrology) or where calibration is performed in other countries, to equivalent nationally recognized standards organizations.

2.4 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.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements as below table.

Table 2: Measurement Uncertainty

Parameter	Uncertainty (k=2)
RF output power, conducted	± 0.99 dB
Occupied Channel Bandwidth	± 2.08 %
RF power density, conducted	± 0.99 dB
Unwanted Emissions, conducted	± 0.89 dB
All emissions, radiated	± 4.17 dB

2.6 Location of Original Data

The original copies of all test data taken during actual testing were attached at Appendix A & B of this report and delivered to the applicant. A copy has been retained in the TÜV Rheinland (Shenzhen) file for

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certification follow-up purposes.

2.7 Status of Facility Used for Testing

The TÜV Rheinland (Shenzhen) Co., Ltd. Test 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.

3 General Product Information

3.1 Product Function and Intended Use

The **EUT** (Equipment Under Test) is Remote Controller. It supports 2.4GHz and 5.8GHz band.

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

3.2 Ratings and System Details

Table 3: Technical Specification of EUT

General Information of EUT	Value
Kind of Equipment	Remote Controller
Type Designation	YMAWZOD
FCC ID	2BSYT-YMAWZOD
Operating Voltage	AC 100-240V, 50/60Hz input via AC/DC adapter` or Battery operated (DC 3.6V)
Testing Voltage	AC 120V, 60Hz or Built-in battery
Operating Temperature Range	-10°C ~ 40 °C
Radiofrequency operating mode	1) 2.4GHz Band: operating within 2400-2483.5MHz 2) 5.8GHz Band: operating within 5725-5850MHz
Technical Specification of 5.8GHz band	
Operating Frequency	5732.48-5840.48MHz for 1.4MHz Bandwidth 5733.48-5838.48MHz for 3MHz Bandwidth 5742.48-5832.48MHz for 5MHz Bandwidth 5735.48-5830.48MHz for 10MHz Bandwidth 5740.48-5825.48MHz for 20MHz Bandwidth 5750.48-5815.48MHz for 40MHz Bandwidth
Type of Modulation	OFDM
Channel Number	55 channels for 1.4MHz Bandwidth 36 channels for 3MHz Bandwidth 19 channels for 5MHz Bandwidth 96 channels for 10MHz Bandwidth 86 channels for 20MHz Bandwidth 66 channels for 40MHz Bandwidth
Antenna Type	Integral Antenna
Antenna Number	1Tx1Rx for SISO mode (ANT1 or ANT2) 2Tx2Rx for MIMO mode (ANT1+ANT2, Completely uncorrelated signals)
Antenna Gain	3.9 dBi for ANT1/2(Provided by the Client)
The type of wideband data transmission equipment	NII

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.

3.3 Independent Operation Modes

The basic operation modes are:

- A. On, 5.8GHz band wireless transmitting mode
 - 1) Low Channel
 - 2) Middle Channel
 - 3) High Channel
- B. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to Circuit Diagram for further details.

3.5 Submitted Documents

- | | |
|------------------------------|-------------------------|
| - Application Form | - User Manual |
| - ID Label and Location Info | - Operation Description |

4 Test Set-up and Operation Modes

4.1 Principle of Configuration Selection

Radio Spectrum: The equipment under test (EUT) was configured at its highest power output in order to measure its highest possible radiation and conducted level. The test modes were adapted accordingly in reference to the instructions for use.

Emission: The equipment under test (EUT) was configured to measure its highest possible radiation level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Test operation refers to test setup in chapter 5. All testing were performed according to the procedures in ANSI C63.10: 2020.

4.3 Special Accessories and Auxiliary Equipment

Table 4: List of Accessories and Auxiliary Equipment

Description	Manufacturer	Model	S/N	Rating
Laptop	Lenovo	T480	PF-16A6N8	/
AC/DC adapter	Shenzhen HONOR ELECTRONIC CO	PD-65US1	--	--

4.4 Countermeasures to Achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Technical Construction File (TCF).

No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test (Below 1GHz)

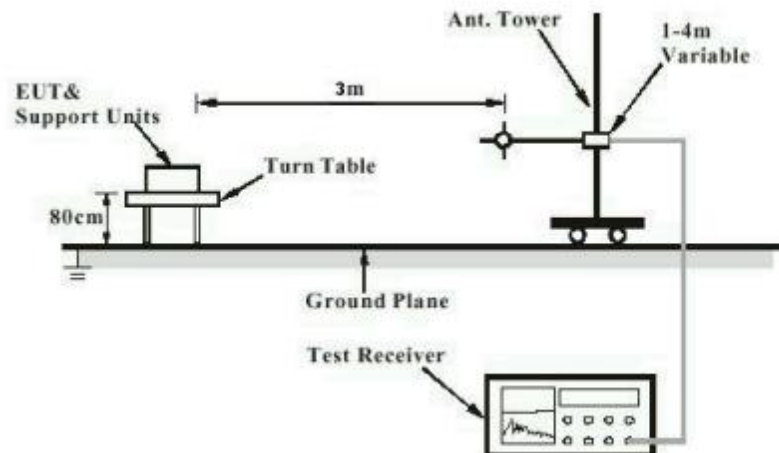


Diagram of Measurement Configuration for Radiation Test (Above 1GHz)

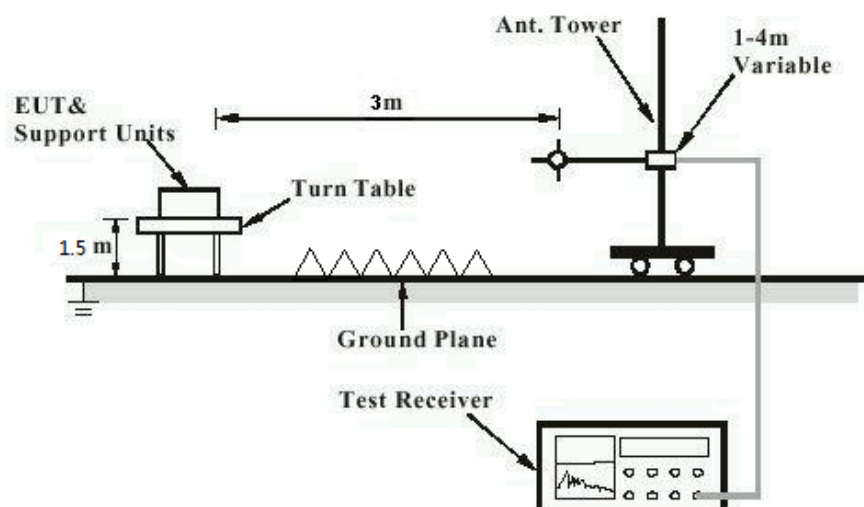
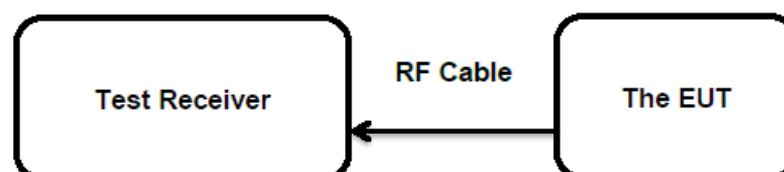


Diagram of Measurement Configuration for Conducted Transmitter Measurement



5 Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT:**Pass****Test Specification**

Test standard : FCC Part 15.203

Limit : the use of antennas with directional gains that do not exceed 6 dBi

According to the manufacturer declared, the EUT have Integral Antennas, permanent attachment and no consideration of replacement, refer to section 3.2 for details.

Therefore the EUT is considered sufficient to comply with the provision.

Refer to EUT Photo for further details.

- 1) The cable loss is taken into account in results, e.i.r.p.= $P_{(power)} + G$
- 2) Antenna gain(G) 5.8GHz band: 3.9dBi..

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5.1.3 Conducted Power Spectral Density

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.407 (a)
Basic standard : ANSI C63.10: 2020
Limits : <11dBm/MHz (5150-5250MHz)
 <30dBm/500kHz (5725-5850MHz)
Kind of test site : Shielded Room

Test Setup

Date of testing : 2025-11-20 - 2025-12-28
Input voltage : DC 3.6V by battery
Operation mode : A
Test channel : Low / Middle / High
Ambient temperature : 25 °C
Relative humidity : 45 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix B.

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5.1.4 Frequency Stability

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.407 (g)
Basic standard : ANSI C63.10: 2020
Limits : Within assigned bands
Kind of test site : Shielded Room

Test Setup

Date of testing : 2025-11-20 - 2025-12-28
Input voltage : DC 3.6V by battery
Operation mode : A
Test channel : Low / Middle / High
Ambient temperature : 25 °C
Relative humidity : 45 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix B.

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5.1.5 6dB Bandwidth

RESULT:**Pass****Test Specification**

Test standard	: FCC Part 15.407 (e)
Basic standard	: ANSI C63.10: 2020
Limits	: At least 500kHz (5725-5850MHz)
Kind of test site	: Shielded Room

Test Setup

Date of testing	: 2025-11-20 - 2025-12-28
Input voltage	: DC 3.6V by battery
Operation mode	: B
Test channel	: Low / Middle / High
Ambient temperature	: 25 °C
Relative humidity	: 45 %
Atmospheric pressure	: 101 kPa

For the measurement records, refer to the appendix B.

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5.1.6 26dB Bandwidth

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.407
Basic standard : ANSI C63.10: 2020
Limits : N/A
Kind of test site : Shielded Room

Test Setup

Date of testing : 2025-11-20 - 2025-12-28
Input voltage : DC 3.6V by battery
Operation mode : A
Test channel : Low / Middle / High
Ambient temperature : 25 °C
Relative humidity : 45 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix B.

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5.1.7 99% Bandwidth

RESULT:

Pass

Test Specification

Test standard : FCC Part 15.407
Basic standard : ANSI C63.10: 2020
Limits : N/A
Kind of test site : Shielded Room

Test Setup

Date of testing : 2025-11-20 - 2025-12-28
Input voltage : DC 3.6V by battery
Operation mode : A
Test channel : Low / Middle / High
Ambient temperature : 25 °C
Relative humidity : 45 %
Atmospheric pressure : 101 kPa

For the measurement records, refer to the appendix B.

5.1.8 Radiated Spurious Emission

RESULT:**Pass****Test Specification**

Test standard : FCC Part 15.407(b) & FCC Part 15.205 & FCC Part 15.209
Basic standard : ANSI C63.10: 2020

Limits :

- For transmitters operating in the 5.15-5.25 GHz band: All emissions outside of the 5.15-5.35 GHz band shall not exceed an e.i.r.p. of -27 dBm/MHz.
- For transmitters operating in the 5.725-5.85 GHz band: All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.
- Restricted Bands meet the requirement of 15.209 limit

Kind of test site : 3m Semi-anechoic Chamber

Test Setup

Date of testing : 2025-11-20 - 2025-12-28
Input voltage : DC 3.6V by battery
Operation mode : A
Test channel : Low / Middle / High
Ambient temperature : Refer to test result
Relative humidity : Refer to test result
Atmospheric pressure : 101 kPa

Remark:

Testing was carried out within frequency range 9kHz to the tenth harmonics. Only the worst case spurious emissions configuration of the each mode were reported.

For the measurement records, refer to the appendix B.

6 Photographs of the Test Set-Up

For photographs of the test set-up, refer to the appendix A.

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