Prüfbericht-Nr.: *Test report no.*:	**CN24XGL3 004**	**Auftrags-Nr.:** *Order no.*:	168485882	Seite 1 von 13 *Page 1 of 13*
Kunden-Referenz-Nr.: *Client reference no.*:	N/A	**Auftragsdatum:** *Order date:*	2024-05-22	
Auftraggeber: *Client*:	**Anhui Wenxiang Information Technology Co.,Ltd.** Wenxiang Technology Park, South West Fengming Avenue, Wanjiang Jiangnan Emerging Industry Concentration Zone, Chizhou, Anhui, China			
Prüfgegenstand: *Test item*:	Portable Recording and Broadcasting Host			
Bezeichnung / Typ-Nr.: *Identification / Type no.*:	WX-AX60, WX-AX70, WX-AX80, WX-AX90, WX-********** (* = 0-9, a-z, A-Z, "-", "/", or blank)			
Auftrags-Inhalt: *Order content*:	Test Report			
Prüfgrundlage: *Test specification*:	CFR47 FCC Part 2: Section 2.1091 CFR47 FCC Part 1: Section 1.1310 RSS-102 Issue 6 December 2023			

Wareneingangsdatum: *Date of sample receipt*:	2024-06-27	Please refer to Photo Document
Prüfmuster-Nr.: *Test sample no:*	A003726002-009	
Prüfzeitraum: *Testing period*:	2024-07-26 - 2024-10-18	
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:	X Hardy Suo	**genehmigt von:** *authorized by*:	X Lin Lin
Datum: *Date:*	2025-07-29	**Ausstellungsdatum:** *Issue date:*	2025-07-29
Stellung / Position:	Sachverständige(r)/Expert	**Stellung** / Position:	Sachverständige(r)/Expert

Sonstiges / *Other*: FCC ID: 2BLCSWX-AX, IC: 33002-WXAX, HVIN: WX-AX

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*

Prüfbericht-Nr.: CN24XGL3 004
Test report no.:

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. *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.*
2	Wie vertraglich vereinbart, wurde dieses Dokument nur digital unterzeichnet. Der TÜV Rheinland hat nicht überprüft, welche rechtlichen oder sonstigen diesbezüglichen Anforderungen für dieses Dokument gelten. Diese Überprüfung liegt in der Verantwortung des Benutzers dieses Dokuments. Auf Verlangen des Kunden kann der TÜV Rheinland die Gültigkeit der digitalen Signatur durch ein gesondertes Dokument bestätigen. Diese Anfrage ist an unseren Vertrieb zu richten. Eine Umweltgebühr für einen solchen zusätzlichen Service wird erhoben. Informationen zur Verifizierung der Authentizität unserer Dokumente erhalten Sie auf folgender Webseite: go.tuv.com/digital-signature *As contractually agreed, this document has been signed digitally only. TUV Rheinland has not verified and unable to verify which legal or other pertaining requirements are applicable for this document. Such verification is within the responsibility of the user of this document. Upon request by its client, TUV Rheinland can confirm the validity of the digital signature by a separate document. Such request shall be addressed to our Sales department. An environmental fee for such additional service will be charged. For information on verifying the authenticity of our documents, please visit the following website: go.tuv.com/digital-signature*
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. *Test clauses with remark of * are subcontracted to qualified subcontractors and descripted under the respective test clause in the report.* *Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.*
4	Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnisen 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 bezueglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019. *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.*

Test Summary

3.1.1 RF EXPOSURE COMPLIANCE

RESULT: Pass

Contents

1. Test Sites

1.1 Test Facilities

SHANGHAI ATBL TECHNOLOGY CO., LTD.

5-6/F., Unit 1, No 8, Free Trade One Life Science and Sci-Tech Industrial Park, No. 160, Basheng Road, Pudong New District, Shanghai City, People's Republic of China

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 basics 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 SHANGHAI ATBL TECHNOLOGY CO., LTD. facility located at 5-6/F., Unit 1, No 8, Free Trade One Life Science and Sci-Tech Industrial Park, No. 160, Basheng Road, Pudong New District, Shanghai City, 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 General Description

The EUT is a Portable Recording and Broadcasting Host which supports 2.4GHz Generic (for connecting with wireless MIC), 5GHz Generic (for connecting with wireless camera), 2.4G/5GHz Wi-Fi wireless technologies.

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:	Portable Recording and Broadcasting Host
Type Designation:	WX-AX60, WX-AX70, WX-AX80, WX-AX90, WX-********** (* = 0-9, a-z, A-Z, "-", "/", or blank) Remark: WX-AX70, WX-AX80, WX-AX90, WX-********** (* = 0-9, a-z, A-Z, "-", "/", or blank) are the same with the model: WX-AX60 in circuitry and electrical, mechanical and physical construction.
Operating Voltage:	DC 48V via AC/DC Adapter
Testing Voltage:	AC 120V, 60Hz (Power supply to AC/DC Adapter)
Operating Temperature Range:	0 °C ~ +40 °C
Technical Specification of 2.4GHz Generic (for connecting with wireless MIC)	
Operating Frequency:	2402 MHz to 2480 MHz
Type of Modulation:	GFSK
Channel Number:	40 channels
Channel Separation:	2MHz
Data Rate:	1Mbps
Antenna Type:	External Antenna
Antenna Number:	1
Antenna Gain:	1.29 dBi (Provided by the Client)
The type of wideband data transmission equipment:	DTS
Technical Specification of 2.4GHz Wi-Fi 802.11 b/g/n	
Operating Frequency	2412 - 2462 MHz for 802.11 b/g/n HT20 2422 - 2452 MHz for 802.11 n HT40
Type of Modulation	DSSS(DBPSK/DQPSK/CCK) OFDM(BPSK/QPSK/16QAM/64QAM)
Channel Number	11 channels for 802.11 b/g/n HT20 7 channels for 802.11 n HT40
Channel Separation	5 MHz
Antenna Type:	External Antenna

Antenna Number:	2
Antenna Gain:	1.29 dBi (Provided by the Client)
Technical Specification of 5GHz Generic (for connecting with wireless camera)	
Operating Frequency:	U-NII-1& U-NII-2A band: 5180 – 5320 MHz for 802.11 a/n-HT20/n-HT40 U-NII-3 band: 5745 – 5825 MHz for 802.11 a/n-HT20/n-HT40
Type of Modulation:	OFDM(BPSK/QPSK/16QAM/64QAM/256QAM)
Channel Number:	12 channels for U-NII-1& U-NII-2A band: 5180 – 5320 MHz 7 channels for U-NII-3 band: 5745 – 5825 MHz
Channel Separation:	20 MHz / 40 MHz
Type of Product:	Master device
TX Power Control (TPC):	Not Supports
Antenna Type:	External Antenna
Antenna Number:	2
Antenna Gain:	5150-5350MHz: 2.58dBi 5725-5850MHz: 4.16dBi (Provided by the Client)
The type of wideband data transmission equipment:	DTS
Technical Specification of 5GHz Wi-Fi	
Operating Frequency:	U-NII-1& U-NII-2A band: 5180 – 5320 MHz for 802.11 a/n-HT20/n-HT40/ac HT20/ac HT40/ac HT80 U-NII-2C band: 5500 – 5720 MHz for 802.11 a/n-HT20/n-HT40/ac HT20/ac HT40/ac HT80 U-NII-3 band: 5745 – 5825 MHz for 802.11 a/n-HT20/n-HT40/ac HT20/ac HT40/ac HT80
Type of Modulation:	OFDM(BPSK/QPSK/16QAM/64QAM/256QAM)
Channel Number:	14 channels for U-NII-1& U-NII-2A band: 5180 – 5320 MHz 21 channels for U-NII-2C band: 5500 – 5720 MHz 8 channels for U-NII-3 band: 5745 – 5825 MHz
Channel Separation:	20 MHz / 40 MHz / 80 MHz
Type of Product:	Slave device without radar detection
TX Power Control (TPC):	Not Supports
Antenna Type:	External Antenna
Antenna Number:	2
Antenna Gain:	5150-5350MHz: 2.58dBi 5470-5725MHz: 3.27dBi 5725-5850MHz: 4.16dBi (Provided by the Client)
The type of wideband data transmission equipment:	DTS

Table 2: RF Channel and Frequency of 2.4GHz generic

RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)	RF Channel	Frequency (MHz)
0	**2402**	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468

4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	**19**	**2440**	29	2460	**39**	**2480**

Table 3: RF Channel and Frequency of 2.4GHz Wi-Fi 802.11 b/g/n

RF Channel	802.11 b/g/n (HT20)	802.11 b/g/n (HT40)
	Frequency (MHz)	Frequency (MHz)
01	2412	
02	2417	
03	2422	2422
04	2427	2427
05	2432	2432
06	2437	2437
07	2442	2442
08	2447	2447
09	2452	2452
10	2457	
11	2462	

Table 4: RF Channel and Frequency of 5GHz Generic

U-NII-1 and U-NII-2A			
20MHz Bandwidth		**40MHz Bandwidth**	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	38	5190
40	5200	46	5230
44	5220	54	5270
48	5240	62	5310
52	5260		
56	5280		
60	5300		
64	5320		

U-NII-3			
20MHz Bandwidth		**40MHz Bandwidth**	
Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	151	5755
153	5765	159	5795
157	5785		
161	5805		
163	5825		

Table 5: RF Channel and Frequency of 5GHz Wi-Fi

U-NII-1 and U-NII-2A					
20MHz Bandwidth		**40MHz Bandwidth**		**80MHz Bandwidth**	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
36	5180	38	5190	42	5210
40	5200	46	5230	58	5290

44	5220	54	5270
48	5240	62	5310
52	5260		
56	5280		
60	5300		
64	5320		

U-NII-2C					
20MHz Bandwidth		**40MHz Bandwidth**		**80MHz Bandwidth**	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
100	5500	102	5510	106	5530
104	5520	110	5550	122	5610
108	5540	118	5590	138	5690
112	5560	126	5630		
116	5580	134	5670		
120	5600	142	5710		
124	5620				
128	5640				
132	5660				
136	5680				
140	5700				
144	5720				

U-NII-3					
20MHz Bandwidth		**40MHz Bandwidth**		**80MHz Bandwidth**	
Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
149	5745	151	5755	155	5775
153	5765	159	5795		
157	5785				
161	5805				
163	5825				

3. Test Results

3.1 RF Exposure Evaluation

3.1.1 RF Exposure Compliance

RESULT: **Pass**

Test standard	:	47 CFR FCC Part 2.1091 RSS-102 Issue 6
Limit	:	Table 1 of 47 CFR FCC Part 1.1310 Section 6.6 of RSS-102 Issue 6

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.

3.1.1.1 RF Exposure Compliance Requirement

a) Radio Frequency Exposure Limit

For FCC:

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm²)
300-1,500	--	--	f/1500
1,500-100,000	--	--	1.0

For IC:

Frequency range (MHz)	**Electric field (V_{RMS}/m)**	**Magnetic field (A_{RMS}/m)**	**Power density (W/m²)**	**Reference period (minutes)**
10-20	27.46	0.0728	2	6
20-48	$58.07 / f^{0.25}$	$0.1540 / f^{0.25}$	$8.944 / f^{0.5}$	6
48-300	22.06	0.05852	1.291	6
300-6000	$3.142\ f^{0.3417}$	$0.008335\ f^{0.3417}$	$0.02619\ f^{0.6834}$	6
6000-15000	61.4	0.163	10	6
15000-150000	61.4	0.163	10	$616000/f^{1.2}$
150000-300000	$0.158\ f^{0.5}$	$4.21 \times 10^{-4}\ f^{0.5}$	$6.67 \times 10^{-5}\ f$	$616000/f^{1.2}$

Note: f is frequency in MHz.

b) Radio Frequency Exposure Calculation Formula

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

where: S = power density (in appropriate units, e.g. mW/cm^2)
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

c) RF Exposure Calculation, stand-alone mode

Mode	Measured RF Output Power (dBm)	Max. EIRP (dBm)	Distance (cm)	Power Density (mW/cm²)	FCC Limit (mW/cm²)	Power Density (W/m²)	IC Limit (W/m²)
2.4GHz Generic	8.42	9.71	20	0.002	1.0	0.019	5.3
2.4GHz Wi-Fi	9.80	11.09	20	0.003	1.0	0.026	5.3
5GHz Generic	12.88	18.47	20	0.014	1.0	0.139	9.7
5GHz Wi-Fi	12.95	17.23	20	0.011	1.0	0.104	9.7

Note: Refer to test report CN24XGL3 002 and CN24XGL3 003 for output power.

Per-to RSS-102 section 6.6, Field reference level (FRL) exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm (i.e. mobile devices), except when the device operates as follows:

- at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than 1.31×10−2f0.6834 W (adjusted for tune-up tolerance), where f is in MHz

The time-averaged maximum EIRP limit of 2.4GHz band is 2.6W, EIRP of EUT for 2.4GHz Generic is 9.71dBm=0.0094W, for 2.4GHz Wi-Fi is 11.09 dBm=0.0129W that are less than 2.6W.

The time-averaged maximum EIRP limit of 5GHz band is 4.5W, EIRP of EUT for 5GHz Generic is 18.47dBm=0.0703W, for 5GHz Wi-Fi is 17.23dBm=0.0528W that are less than 4.5W.

d) Simultaneous transmission MPE

The product has multiple transmitters, the Simultaneous Transmission possibilities are listing below:

Simultaneous Tx Combination	Configuration
1	2.4GHz Generic+2.4GHz Wi-Fi+5GHz Generic
2	2.4GHz Generic+5GHz Wi-Fi+5GHz Generic

Per KDB 447498 D01 v06, simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneous transmitting antennas incorporated in a host device, based on calculated or measured field strengths or power density, is ≤ 1.0.

For FCC

No.	Test Mode	Calculation (mW/cm²)	Limit (mW/cm²)	Calculation	Limit	Result
1	2.4GHz Generic+2.4GHz Wi-Fi+5GHz Generic	0.002	1	0.019	1	Pass
		0.003	1			
		0.014	1			
2	2.4GHz Generic+5GHz Wi-Fi+5GHz Generic	0.002	1	0.027	1	Pass
		0.011	1			
		0.014	1			

For IC

No.	Test Mode	Calculation (W/m²)	Limit (W/m²)	Calculation	Limit	Result
1	2.4GHz Generic+2.4GHz Wi-Fi+5GHz Generic	0.019	5.3	0.023	1	Pass
		0.026	5.3			
		0.139	9.7			
2	2.4GHz Generic+5GHz Wi-Fi+5GHz Generic	0.019	5.3	0.029	1	Pass
		0.104	9.7			
		0.139	9.7			

e) Conclusion

Therefore the maximum calculations result of above are meet the requirement of Radio Frequency Exposure (MPE) limit. This Transmitter must be installed to provide a separation distance of at least 20 cm from all persons.

4. List of Tables