

Prüfbericht-Nr.: <i>Test report no.:</i>	CN26WYCM 004	Auftrags-Nr.: <i>Order no.:</i>	27227126	Seite 1 von 12 Page 1 of 12
Kunden-Referenz-Nr.: <i>Client reference no.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	2026-04-02	
Auftraggeber: <i>Client:</i>	fünfeinhalb Funksysteme GmbH Chemnitzer Straße 78A, 01187 Dresden, Germany			
Prüfgegenstand: <i>Test item:</i>	Access Point			
Bezeichnung / Typ-Nr.: <i>Identification / Type no.:</i>	BlitzFunk AW32R (Trademark: BlitzFunk)			
Auftrags-Inhalt: <i>Order content:</i>	Test Report			
Prüfgrundlage: <i>Test specification:</i>	CFR Title 47 FCC Part 1.1310 CFR Title 47 FCC Part 2.1091 RSS-102 Issue 6 December 2023			
Wareneingangsdatum: <i>Date of sample receipt:</i>	2026-04-28	(Please refer to photo documents)		
Prüfmuster-Nr.: <i>Test sample no.:</i>	A004250609-003			
Prüfzeitraum: <i>Testing period:</i>	2026-04-28 - 2026-07-25			
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>	Hardy <i>X</i>  Suo		genehmigt von: <i>authorized by:</i>	Lin Lin <i>X</i> 
Datum: <i>Date:</i>	2026-07-29		Ausstellungsdatum: <i>Issue date:</i>	2026-07-29
Stellung / Position:	Sachverständige(r)/Expert		Stellung / Position:	Sachverständige(r)/Expert
Sonstiges / <i>Other:</i>	FCC ID: 2BUWU-AW32R IC: 35239-AW32R, HVIN: BlitzFunk AW32R This is a RF Exposure report with evaluation on BlitzFunk AW32R.			
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: <i>* Legend:</i>	P(ass) = entspricht o.g. Prüfgrundlage(n) <i>P(ass) = passed a.m. test specification(s)</i>			
	F(ail) = entspricht nicht o.g. Prüfgrundlage(n) <i>F(ail) = failed a.m. test specification(s)</i>			
	N/A = nicht anwendbar <i>N/A = not applicable</i>			
	N/T = nicht getestet <i>N/T = not tested</i>			
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>				

Prüfbericht-Nr.: CN26WYCM 004
Test report no.:

Seite 2 von 12
Page 2 of 12

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>

Prüfbericht - Nr.: CN26WYCM 004
Test Report No.:

Seite 3 von 12
Page 3 of 12

TEST SUMMARY

3.1.1 RF EXPOSURE COMPLIANCE

RESULT: Pass

TABLE OF CONTENTS

1. TEST SITES	5
1.1 TEST FACILITIES	5
1.2 TRACEABILITY	5
1.3 CALIBRATION	5
1.4 LOCATION OF ORIGINAL DATA	5
1.5 STATUS OF FACILITY USED FOR TESTING	5
2. GENERAL PRODUCT INFORMATION	6
2.1 GENERAL DESCRIPTION	6
2.2 RATING AND SYSTEM DETAILS	6
3. TEST RESULTS	10
3.1 RF EXPOSURE EVALUATION	10
3.1.1 RF Exposure Compliance	10

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 Certificate Number: 5162.01

FCC Test Site Number: CN1260

ISED Test Lab CAB identifier: CN0078

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. 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.

2. General Product Information

2.1 General Description

The Product is an access point which supports 2.4 GHz Wi-Fi, 5 GHz Wi-Fi and 6 GHz Wi-Fi and is intended for industrial environments. It assembles three identical wireless module #1 (Model AMLGA7921), wireless module #2 (Model AMLGA7921) and wireless module #3 (Model AMLGA7921).

The wireless module #1 (Model AMLGA7921) has one TX & RX ANT 1 and one RX ANT 3, they are for user data function.

The wireless module #2 (Model AMLGA7921) has one TX & RX ANT 2, it is only for device setup operating on 5745MHz.

The wireless module #3 (Model AMLGA7921) has one TX & RX ANT 4 and one RX ANT 5, they are for user data function.

Note: The wireless module #1, wireless module #2 and wireless module #3 are incapable of transmitting on the same frequency channel simultaneously.

ANT information for Wireless module #1 AMLGA7921		ANT information for Wireless module #2 AMLGA7921	ANT information for Wireless module #3 AMLGA7921	
ANT 1	ANT 3	ANT 2	ANT 4	ANT 5
TX & RX	RX	TX & RX	TX & RX	RX

The wireless module #1, The wireless module #2 and The wireless module #3 have identical hardware, including same antennas and same power setting level in firmware.

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:	Access Point
Type Designation:	BlitzFunk AW32R
Trademark:	BlitzFunk
FCC ID:	2BUWU-AW32R
IC:	35239-AW32R
HVIN:	BlitzFunk AW32R
Operating Voltage:	DC 12-48 V, max. 0.5 A
Testing Voltage:	AC 120 V, 60 Hz (power supply external adapter)
Adapter:	M/N: E80120 Input: AC 100-240 V, 50/60 Hz Output: DC 24V, 1.0 A, 24 W
Operating Temperature Range:	-20 °C ~ +60 °C
Radiofrequency operating mode:	1) 2.4 GHz Wi-Fi: operating within 2400-2483.5 MHz, supports IEEE 802.11 g 2) 5 GHz Wi-Fi: operating within 5150 - 5250 MHz, 5725 - 5850 MHz, 5850-5895 MHz supports IEEE 802.11 a 3) 6 GHz Wi-Fi: operating within 5925 - 7125 MHz, supports IEEE 802.11 ax20
Technical Specification of 2.4 GHz Wi-Fi	

Prüfbericht - Nr.: CN26WYCM 004

Test Report No.:

Seite 7 von 12
Page 7 of 12

Operating Frequency:	2412 - 2462 MHz of IEEE 802.11 g
Type of Modulation:	OFDM
Channel Number:	3 channels
Channel Bandwidth:	20 MHz
Data Rate:	IEEE 802.11g: 54/48/36/24/18/12/9/6 Mbps
Antenna Type:	Integral Antenna
Antenna Number:	1Tx1Rx (1TX: ANT1 or ANT2 or ANT4; 1RX: ANT 3 or ANT 5)
Antenna Gain:	2.1 dBi for ANT1, ANT2, ANT4 (Provided by the Client)
Technical Specification of 5 GHz Wi-Fi	
Operating Frequency:	• U-NII-1 band: 5180 - 5240 MHz of IEEE 802.11 a • U-NII-3 band: 5745 - 5825 MHz of IEEE 802.11 a • U-NII-4 band: 5845 - 5864 MHz of IEEE 802.11 a
Type of Modulation:	OFDM
Channel Number:	4 channels for U-NII-1 band: 5180 - 5240 MHz 5 channels for U-NII-3 band: 5745 - 5825 MHz 2 channels for U-NII-4 band: 5845 - 5865 MHz
Channel Bandwidth:	20 MHz
Data Rate:	802.11a: 54/48/36/24/18/12/9/6 Mbps
Antenna Type:	Integral Antenna
Antenna Number:	1Tx1Rx (1TX: ANT1 or ANT2 or ANT4; 1RX: ANT 3 or ANT 5)
Antenna Gain:	3.1 dBi for ANT1, ANT2, ANT4 (Provided by the Client)
DFS device type:	Master
Technical Specification of 6 GHz Wi-Fi	
Operating Frequency:	• U-NII-5 band: 5955 - 6415 MHz of IEEE 802.11 ax20 • U-NII-6 band: 6435 - 6515 MHz of IEEE 802.11 ax20 • U-NII-7 band: 6535 - 6855 MHz of IEEE 802.11 ax20 • U-NII-8 band: 6875 - 7115 MHz of IEEE 802.11 ax20
Type of Modulation:	OFDMA
Channel Number:	24 channels for U-NII-5 band: 5955 - 6415 MHz 5 channels for U-NII-6 band: 6435 - 6515 MHz 18 channels for U-NII-7 band: 6535 - 6855 MHz 12 channels for U-NII-8 band: 6875 - 7115 MHz
Channel Bandwidth:	20 MHz
Data Rate:	IEEE 802.11ax: up to 2402 Mbps
Antenna Type:	Integral Antenna
Antenna Number:	1Tx1Rx (1TX: ANT1 or ANT2 or ANT4; 1RX: ANT 3 or ANT 5)
Antenna Gain:	3.3 dBi for ANT1, ANT2, ANT4 (Provided by the Client)
Equipment class:	Low-power indoor access points

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: RF Channel and Frequency of 2.4GHz Wi-Fi

2.4GHz Wi-Fi 2412 – 2462 MHz, 20MHz Bandwidth	
Channel	Frequency (MHz)
01	2412
06	2437
11	2462

Table 3: RF Channel and Frequency of 5GHz Wi-Fi

U-NII-1 5150-5250 MHz, 20MHz Bandwidth	
Channel	Frequency (MHz)
36	5180
40	5200
44	5220
48	5240

U-NII-3 5725-5850 MHz, 20MHz Bandwidth	
Channel	Frequency (MHz)
149	5745
153	5765
157	5785
161	5805
165	5825

*Note: 5745MHz is for device setup, it keeps transmitting.

U-NII-4 5850-5895 MHz, 20MHz Bandwidth	
Channel	Frequency (MHz)
169	5845
173	5865

Table 4: RF Channel and Frequency of 6GHz Wi-Fi

U-NII-5 5925-6425 MHz, 20MHz Bandwidth	
Channel	Frequency (MHz)
1	5955
5	5975
9	5995
13	6015
17	6035
21	6055
25	6075
29	6095
33	6115
37	6135
41	6155
45	6175
49	6195
53	6215
57	6235
61	6255
65	6275
69	6295
73	6315
77	6335
81	6355
85	6375
89	6395
93	6415

Prüfbericht - Nr.: CN26WYCM 004

Test Report No.:

Seite 9 von 12
Page 9 of 12

U-NII-6 6425-6525 MHz, 20MHz Bandwidth	
Channel	Frequency (MHz)
97	6435
101	6455
105	6475
109	6495
113	6515

U-NII-7 6525-6875 MHz, 20MHz Bandwidth	
Channel	Frequency (MHz)
117	6535
121	6555
125	6575
129	6595
133	6615
137	6635
141	6655
145	6675
149	6695
153	6715
157	6735
161	6755
165	6775
169	6795
173	6815
177	6835
181	6855
185	6875

U-NII-8 6875-7125 MHz, 20MHz Bandwidth	
Channel	Frequency (MHz)
189	6895
193	6915
197	6935
201	6955
205	6975
209	6995
213	7015
217	7035
221	7055
225	7075
229	7095
233	7115

3. Test Results

3.1 RF Exposure Evaluation

3.1.1 RF Exposure Compliance

RESULT:

Pass

Test standard : CFR Title 47 FCC Part 2.1091
RSS-102 Issue 6
KDB 447498 D01 General RF Exposure Guidance v06

Limit : Table 1 of CFR Title 47 FCC Part 1.1310
Section 5 table 7 of RSS-102 Issue 6

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/cm ²)	Average Time (minutes)
(A) 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	--	--	1.0	<6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-3.0	614	1.63	*100	<30
3.0-30	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.

Prüfbericht - Nr.: CN26WYCM 004

Test Report No.:

Seite 11 von 12

Page 11 of 12

For IC:

Frequency range (MHz)	Electric field (V _{RMS} /m)	Magnetic field (A _{RMS} /m)	Power density (W/m ²)	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 × 10 ⁻⁴ $f^{0.5}$	6.67 × 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/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

c) Antenna information

The EUT has five integral antennas, three antennas are TX&RX, other two antennas for RX only, refer to the table below for details:

ANT information for Wireless module #1 AMLGA7921		ANT information for Wireless module #2 AMLGA7921	ANT information for Wireless module #3 AMLGA7921	
ANT 1	ANT 3	ANT 2	ANT 4	ANT 5
TX & RX	RX	TX & RX	TX & RX	RX
Identical ANT gain for each antenna: 1) 2.1dBi, 2400-2500MHz 2) 3.1dBi, 5150-5895MHz 3) 3.3dBi, 5925-7125MHz The wireless module #1 (Model AMLGA7921) has one TX & RX ANT 1 and one RX ANT 3, they are for user data function. The wireless module #2 (Model AMLGA7921) has one TX & RX ANT 2, it is only for device setup operating on 5745MHz. The wireless module #3 (Model AMLGA7921) has one TX & RX ANT 4 and one RX ANT 5, they are for user data function. Note: The wireless module #1, wireless module #2 and wireless module #3 are incapable of transmitting on the same frequency channel simultaneously.				

d) Stand-alone mode RF exposure calculation
Table 5: Result of Stand-alone mode

Mode	Max. Tune up power (dBm)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	FCC Limit (mW/cm ²)	Power Density (W/m ²)	IC Limit (W/m ²)
2.4 GHz Wi-Fi	25.0	2.1	20	0.102	1.0	1.020	5.3
5 GHz Wi-Fi	20.0	3.1	20	0.041	1.0	0.406	9.0
6 GHz Wi-Fi	15.0	3.3	20	0.013	1.0	0.132	9.9

Note:

- The calculated distance is 20cm.
- Output power for 2.4 GHz Wi-Fi, refer to test report CN26WYCM 001 (TÜV Rheinland (Shenzhen) Co., Ltd.)
- Output power for 5 GHz Wi-Fi, refer to test report CN26WYCM 002 (TÜV Rheinland (Shenzhen) Co., Ltd.)
- Output power for 6 GHz Wi-Fi, refer to test report CN26WYCM 003 (TÜV Rheinland (Shenzhen) Co., Ltd.)

e) Simultaneous Transmission Scenario

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

Simultaneous Tx Combination	Configuration
1	2.4 GHz Wi-Fi + 5 GHz Wi-Fi +2.4 GHz Wi-Fi
2	5 GHz Wi-Fi + 5 GHz Wi-Fi +5 GHz Wi-Fi
3	6 GHz Wi-Fi + 5 GHz Wi-Fi +6 GHz Wi-Fi
4	2.4 GHz Wi-Fi + 5 GHz Wi-Fi +6 GHz Wi-Fi

Table 6: Result of Simultaneous Transmission Scenario

FCC			
Operating Mode	Sum Ratio	Limit	Verdict
2.4 GHz Wi-Fi + 5 GHz Wi-Fi +2.4 GHz Wi-Fi	0.245	<1	Pass
5 GHz Wi-Fi + 5 GHz Wi-Fi +5 GHz Wi-Fi	0.123	<1	Pass
6 GHz Wi-Fi + 5 GHz Wi-Fi +6 GHz Wi-Fi	0.067	<1	Pass
2.4 GHz Wi-Fi + 5 GHz Wi-Fi +6 GHz Wi-Fi	0.156	<1	Pass
IC			
Operating Mode	Sum Ratio	Limit	Verdict
2.4 GHz Wi-Fi + 5 GHz Wi-Fi +2.4 GHz Wi-Fi	0.429	<1	Pass
5 GHz Wi-Fi + 5 GHz Wi-Fi +5 GHz Wi-Fi	0.135	<1	Pass
6 GHz Wi-Fi + 5 GHz Wi-Fi +6 GHz Wi-Fi	0.071	<1	Pass
2.4 GHz Wi-Fi + 5 GHz Wi-Fi +6 GHz Wi-Fi	0.251	<1	Pass

f) 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.