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FCC REPORT

For LTE

Report No. ..... :	**CHTW24080048**	Report Verification:
Project No.....:	**SHT2407082701W**	
FCC ID ..... :	**2AXLB-EAV-RC50**	
Applicant ..... :	**SUZHOU EAVISION ROBOTIC TECHNOLOGIES CO., LTD**	
Address.....:	Unit 1-A, No.3 Workshop, 28 Xiasheng Road, SIP Suzhou, Jiangsu China 215000	
Product Name ..... :	**Remote Controller**	
Trade Mark .....:	EAVISION	
Model No .....:	EAV-RC50	
Listed Model(s) .....:	-	
Standard ..... :	**FCC CFR Title 47 Part 2** **FCC CFR Title 47 Part 90**	
Date of receipt of test sample.....:	Jun. 21, 2024	
Date of testing.....:	Jul. 25, 2024- Aug. 02, 2024	
Date of issue.....:	Aug. 09, 2024	
Result.....:	**Pass**	

Compiled by (position+printedname+signature)...:	File administrators:Xiaodong Zhao	Xiaodong Zhao
Supervised by (position+printedname+signature)....:	Test Engineer: Xiaodong Zhao	Xiaodong Zhao
Approved by (position+printedname+signature)....:	Manager: Xu Yang	Xu Yang

Testing Laboratory Name ..... :	**Shenzhen Huatongwei International Inspection Co., Ltd.**
Address.....:	Building 7, Baiwang Idea Factory, No.1051, Songbai Road, Yangguang Community, Xili Subdistrict, Nanshan District, Shenzhen, Guangdong, China

Contents

1. TEST STANDARDS AND REPORT VERSION

1.1. Applicable Standards

The tests were performed according to following standards:

FCC CFR Title 47 Part 2: Frequency Allocations and Radio Treaty Matters; General Rules and Regulations

FCC CFR Title 47 Part 90: Private Land Mobile Radio Services

ANSI C63.26-2015: American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services

KDB 971168 D01 Power Meas License Digital Systems v03: MEASUREMENT GUIDANCE FOR CERTIFICATION OF LICENSED DIGITAL TRANSMITTERS

1.2. Report version information

Revision No.	Date of issue	Description
N/A	2024-08-09	Original

2. TEST DESCRIPTION

Section	Test Item	Section in CFR 47	Result #1	Test Engineer
5.1	Radiated Spurious Emissions	Part 2.1053 Part 90.691	Pass	Yifan Wang

Note:

1) #1: The test result does not include measurement uncertainty value.

3. SUMMARY

3.1. Client Information

Applicant:	SUZHOU EAVISION ROBOTIC TECHNOLOGIES CO., LTD
Address:	Unit 1-A, No.3 Workshop, 28 Xiasheng Road, SIP Suzhou, Jiangsu China 215000
Manufacturer:	SUZHOU EAVISION ROBOTIC TECHNOLOGIES CO., LTD
Address:	Unit 1-A, No.3 Workshop, 28 Xiasheng Road, SIP Suzhou, Jiangsu China 215000
Factory:	SUZHOU EAVISION ROBOTIC TECHNOLOGIES CO., LTD
Address:	Unit 1-A, No.3 Workshop, 28 Xiasheng Road, SIP Suzhou, Jiangsu China 215000

3.2. Product Description

Main unit information:	
Product Name:	Remote Controller
Trade Mark:	EAVISION
Model No.:	EAV-RC50
Listed Model(s):	-
Power supply:	Input: DC20V3.25A Battery Capacity:7.6V, 13100mAh
Hardware version:	N/A
Software version:	N/A

3.3. Radio Specification Description

Operation Band:	☒ FDD Band 26			
Operation Frequency Range:		Uplink	Downlink	
	FDD Band 26	814.7 – 823.3 MHz	859.7 – 868.3 MHz	
Channel bandwidth:	1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz			
Power Class:	☒ Class 3	☐ Class 4		
Uplink Modulation type:	☒ QPSK	☒ 16QAM	☐ 64QAM	☐ 256QAM
Downlink Modulation type:	☒ QPSK	☒ 16QAM	☐ 64QAM	☐ 256QAM

Note:

☒: means that this feature is supported; ☐: means that this feature is not supported

3.4. Testing Laboratory Information

Laboratory Name	Shenzhen Huatongwei International Inspection Co., Ltd.	
Laboratory Location	Building 7, Baiwang Idea Factory, No.1051, Songbai Road, Yangguang Community, Xili Subdistrict, Nanshan District, Shenzhen, Guangdong, China	
Contact information:	Phone: 86-755-26715499 E-mail: cs@szhtw.com.cn http://www.szhtw.com.cn	
Qualifications	Type	Accreditation Number
	FCC Registration Number	762235
	FCC Designation Number	CN1181

4. TEST CONFIGURATION

4.1. Test frequency list

FDD Band 26

Test Frequency ID	Banwidth[MHz]	N_{UL}	Frequency of Uplink [MHz]	N_{DL}	Frequency of Downlink [MHz]
Low Range	1.4	26997	814.7	8697	859.7
	3	26705	815.5	8705	860.5
	5	26715	816.5	8715	861.5
	10	-	-	-	-
	15	26765	821.5		
Mid Range	1.4/3/5/10	26740	819	8740	864
High Range	1.4	26783	823.3	8783	868.3
	3	26775	822.5	8775	867.5
	5	26765	821.5	8765	866.5
	10	-	-	-	-

4.2. Test mode

Test mode	Link mode

1) Antenna port conducted and radiated test items were performed according to KDB 971168 D01 Power Meas. License Digital Systems and ANSI C63.26 with maximum output power.
2) Radiated measurements were performed with rotating EUT in different three orthogonal test planes to find the maximum emission.

Test configuration is as follow:

Test Items	Band	Bandwidth (MHz)					Modulation		RB #		
		1.4	3	5	10	15	QPSK	16QAM	1	Half	Full
Radiated Spurious Emission	26	○	○	○	○	○	○	○	○	-	-
Remark	1. The mark " ○"means that this configuration is chosen for testing 2. The mark "-"means that this bandwidth is not test. 3. The device is investigatedfrom 30MHz to10 times offundamental signal for radiated spurious emission test under different bandwidth,modulations and RB size/offset in exploratory test. Subsequently, only the worst case emissions(highest bandwidth,QPSK,and 1RB0) are reported.										

4.3. Test sample information

Test item	HTW sample no.
Radiated test items	YPHT24060629001

Note:

Radiated test items: Radiated Spurious Emission

4.4. Support unit used in test configuration and system

The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application.

The following peripheral devices and interface cables were connected during the measurement:

Whether support unit is used?				
✓ No				
Item	Equipment	Trade Name	Model No.	Other
1				
2				

4.5. Testing environmental condition

Voltage	VN=Nominal Voltage	DC 7.6V
Temperature	TN=Normal Temperature	25 °C
Humidity	30~60 %	
Air Pressure	950-1050 hPa	

4.6. Statement of the measurement uncertainty

No.	Test Items	Measurement Uncertainty
1	Transmit Radiated Spurious Emission	4.54dB for 30MHz-1GHz 5.10dB for above 1GHz

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

4.7. Equipments Used during the Test

● Radiated Spurious Emission							
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Semi-Anechoic Chamber	Albatross projects	HTWE0122	SAC-3m-01	C11121	2023/04/17	2026/04/16
●	Spectrum Analyzer	R&S	HTWE0098	FSP40	100597	2023/08/22	2024/08/21
●	Spectrum Analyzer	R&S	HTWE0385	N9020A	MY54486658	2023/08/22	2024/08/21
●	Ultra-Broadband Antenna	SCHWARZBECK	HTWE0123	VULB9163	538	2024/04/08	2027/04/07
●	Horn Antenna	SCHWARZBECK	HTWE0126	BBHA 9120D	1011	2023/02/14	2026/02/13
●	Pre-Amplifer	CD	HTWE0071	PAP-0102	12004	2024/06/06	2025/06/05
●	Broadband Pre-amplifier	SCHWARZBECK	HTWE0201	BBV 9718	9718-248	2024/06/06	2025/06/05
●	Test Software	Audix	N/A	E3	N/A	N/A	N/A

● Auxiliary Equipment							
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Radio communication tester	R&S	HTWE0287	CMW500	137688-Lv	2023/08/25	2024/08/24
●	High pass filter	Wainwright	HTWE0297	WHKX3.0/18G-10SS	38	2024/03/26	2025/03/25
●	Band Stop filter	-	HTWE0039	N/A	N/A	2024/01/23	2025/01/24

5. TEST CONDITIONS AND RESULTS

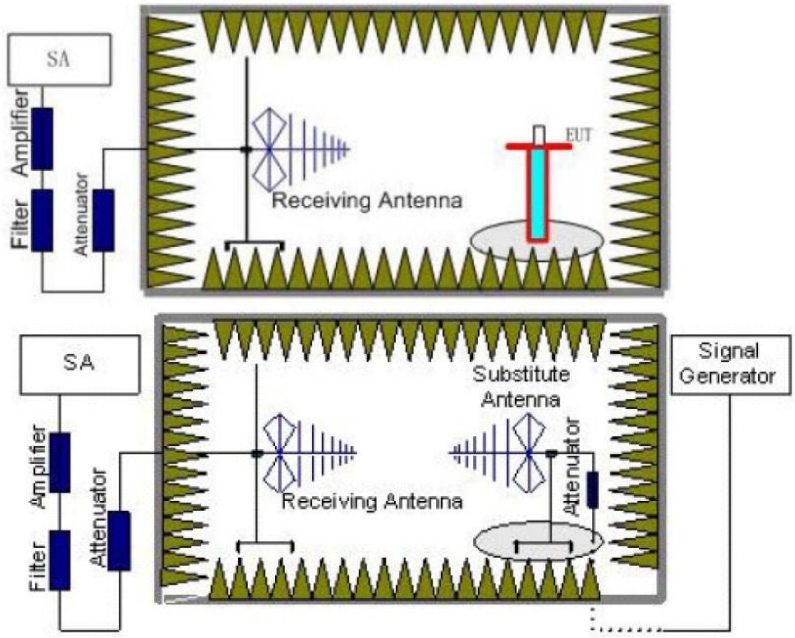
5.1. Radiated Spurious Emission

LIMIT

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 $Log_{10}(f/6.1)$ decibels or 50 + 10 $Log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.

(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10$Log_{10}(P)$ decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

TEST CONFIGURATION



TEST PROCEDURE

1. Place the EUT in the center of the turntable.
   a) For radiated emissions measurements performed at frequencies less than or equal to 1 GHz, the EUT shall be placed on a RF-transparent table at a nominal height of 80 cm above the reference ground plane
   b) For radiated measurements performed at frequencies above 1 GHz, the EUT shall be placed on an RF transparent table at a nominal height of 1.5 m above the ground plane.
2. Unless the EUT uses an integral antenna, the EUT shall be terminated with a non-radiating transmitter load. In cases where the EUT uses an adjustable antenna, the antenna shall be adjusted through typical positions and lengths to maximize emissions levels.
3. The EUT shall be tested while operating on the frequency per manufacturer specification. Set the transmitter to operate in continuous transmit mode.
4. Receiver or Spectrum set as follow:
   Below 1GHz, RBW=100kHz, VBW=300kHz, Detector=Peak, Sweep time=Auto
   Above 1GHz, RBW=1MHz, VBW=3MHz, Detector=Peck, Sweep time=Auto
5. Each emission under consideration shall be evaluated:
   a) Raise and lower the measurement antenna from 1 m to 4 m, as necessary to enable detection of the

maximum emission amplitude relative to measurement antenna height.

b) Rotate the EUT through 360° to determine the maximum emission level relative to the axial position.

c) Return the turntable to the azimuth where the highest emission amplitude level was observed.

d) Vary the measurement antenna height again through 1 m to 4 m again to find the height associated with the maximum emission amplitude.

e) Record the measured emission amplitude level and frequency

6. Repeat step 5 for each emission frequency with the measurement antenna oriented in both the horizontal and vertical polarizations to determine the orientation that gives the maximum emissions amplitude.
7. Set-up the substitution measurement with the reference point of the substitution antenna located as near as possible to where the center of the EUT radiating element was located during the initial EUT measurement.
8. Maintain the previous measurement instrument settings and test set-up, with the exception that the EUT is removed and replaced by the substitution antenna.
9. Connect a signal generator to the substitution antenna; locate the signal generator so as to minimize any potential influences on the measurement results. Set the signal generator to the frequency where emissions are detected, and set an output power level such that the radiated signal can be detected by the measurement instrument, with sufficient dynamic range relative to the noise floor.
10. For each emission that was detected and measured in the initial test

    a) Vary the measurement antenna height between 1 m to 4 m to maximize the received (measured) signal amplitude.

    b) Adjust the signal generator output power level until the amplitude detected by the measurement instrument equals the amplitude level of the emission previously measured directly in step 5 and step 6.

    c) Record the output power level of the signal generator when equivalence is achieved in step b).
11. Repeat step 8 through step 10 with the measurement antenna oriented in the opposite polarization.
12. Calculate the emission power in dBm referenced to a half-wave dipole using the following equation:

    Pe = Ps(dBm) − cable loss (dB) + antenna gain (dBd)

    where

    Pe = equivalent emission power in dBm

    Ps = source (signal generator) power in dBm

    NOTE—dBd refers to the measured antenna gain in decibels relative to a half-wave dipole.
13. Correct the antenna gain of the substitution antenna if necessary to reference the emission power to a half-wave dipole. When using measurement antennas with the gain specified in dBi, the equivalent dipole-referenced gain can be determined from:

    gain (dBd) = gain (dBi) − 2.15 dB.

    If necessary, the antenna gain can be calculated from calibrated antenna factor information
14. Provide the complete measurement results as a part of the test report.

TEST MODE

Please refer to the clause 4.2

TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

LTE Band26			
Test channel:	Low	Polarization:	Horizontal

Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	40.31	-84.21	27.63	1.15	30.96	-86.39	-13.00	-73.39	Peak
2	492.92	-80.64	25.38	4.41	29.80	-80.65	-13.00	-67.65	Peak
3	3644.18	-65.22	42.34	5.20	40.85	-58.53	-13.00	-45.53	Peak
4	4996.69	-65.43	44.35	6.00	40.20	-55.28	-13.00	-42.28	Peak
5	7981.72	-66.08	48.11	8.03	39.94	-49.88	-13.00	-36.88	Peak
6	11283.55	-68.97	52.95	9.03	40.42	-47.41	-13.00	-34.41	Peak

Test channel:	Low	Polarization:	Vertical

Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	94.74	-81.16	25.82	1.82	30.60	-84.12	-13.00	-71.12	Peak
2	587.67	-79.53	26.96	4.87	29.57	-77.27	-13.00	-64.27	Peak
3	4004.08	-64.01	41.55	5.44	40.31	-57.33	-13.00	-44.33	Peak
4	5060.69	-66.00	44.33	6.05	40.13	-55.75	-13.00	-42.75	Peak
5	7800.94	-66.92	48.56	8.01	39.99	-50.34	-13.00	-37.34	Peak
6	10560.94	-66.67	52.38	8.98	40.26	-45.57	-13.00	-32.57	Peak

Test channel:	Mid	Polarization:	Horizontal

Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	46.72	-79.27	24.82	1.25	30.91	-84.11	-13.00	-71.11	Peak
2	410.54	-81.19	25.71	3.99	29.82	-81.31	-13.00	-68.31	Peak
3	1630.26	-47.73	36.08	3.35	41.50	-49.80	-13.00	-36.80	Peak
4	4076.07	-57.45	41.64	5.54	40.24	-50.51	-13.00	-37.51	Peak
5	7451.57	-64.32	48.31	7.75	39.92	-48.18	-13.00	-35.18	Peak
6	11312.31	-67.82	52.95	9.05	40.39	-46.21	-13.00	-33.21	Peak

Test channel:	Mid	Polarization:	Vertical

Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	92.76	-81.06	25.85	1.81	30.65	-84.05	-13.00	-71.05	Peak
2	494.65	-80.30	26.12	4.42	29.79	-79.55	-13.00	-66.55	Peak
3	4076.07	-61.54	41.92	5.54	40.24	-54.32	-13.00	-41.32	Peak
4	5257.66	-65.29	43.98	6.21	39.90	-55.00	-13.00	-42.00	Peak
5	7840.75	-66.88	48.36	8.01	39.98	-50.49	-13.00	-37.49	Peak
6	10453.95	-67.42	52.16	8.96	40.17	-46.47	-13.00	-33.47	Peak

Test channel:	High	Polarization:	Horizontal

Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	59.35	-83.06	24.46	1.41	30.70	-87.89	-13.00	-74.89	Peak
2	438.91	-80.22	26.04	4.14	29.98	-80.02	-13.00	-67.02	Peak
3	4076.07	-62.03	41.64	5.54	40.24	-55.09	-13.00	-42.09	Peak
4	6203.70	-67.41	45.36	6.77	39.20	-54.48	-13.00	-41.48	Peak
5	7781.10	-66.79	47.86	8.00	40.00	-50.93	-13.00	-37.93	Peak
6	10295.50	-67.71	51.17	8.84	40.08	-47.78	-13.00	-34.78	Peak

Test channel:	High	Polarization:	Vertical

Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	93.74	-81.65	25.84	1.81	30.63	-84.63	-13.00	-71.63	Peak
2	499.90	-80.81	26.26	4.45	29.77	-79.87	-13.00	-66.87	Peak
3	3241.50	-63.57	41.07	4.82	40.80	-58.48	-13.00	-45.48	Peak
4	5490.18	-66.27	44.01	6.39	39.72	-55.59	-13.00	-42.59	Peak
5	7741.59	-66.79	48.47	7.98	39.99	-50.33	-13.00	-37.33	Peak
6	10587.85	-68.10	52.40	8.96	40.29	-47.03	-13.00	-34.03	Peak

LTE Band26-10MHz			
Test channel:	Mid	Polarization:	Horizontal

Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	57.50	-81.82	24.29	1.39	30.73	-86.87	-13.00	-73.87	Peak
2	498.14	-80.61	25.46	4.44	29.78	-80.49	-13.00	-67.49	Peak
3	4996.69	-64.60	44.35	6.00	40.20	-54.45	-13.00	-41.45	Peak
4	7981.72	-65.93	48.11	8.03	39.94	-49.73	-13.00	-36.73	Peak
5	9636.16	-67.27	49.95	8.60	39.83	-48.55	-13.00	-35.55	Peak
6	11140.85	-68.24	52.93	8.91	40.56	-46.96	-13.00	-33.96	Peak

Test channel:	Mid	Polarization:	Vertical

Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	90.82	-81.32	25.88	1.79	30.69	-84.34	-13.00	-71.34	Peak
2	664.64	-80.33	28.32	5.21	29.54	-76.34	-13.00	-63.34	Peak
3	4181.16	-64.62	42.44	5.68	40.33	-56.83	-13.00	-43.83	Peak
4	6678.99	-68.06	47.09	7.40	39.29	-52.86	-13.00	-39.86	Peak
5	9228.06	-67.99	49.74	8.49	39.91	-49.67	-13.00	-36.67	Peak
6	11428.08	-68.47	53.15	9.14	40.27	-46.45	-13.00	-33.45	Peak

LTE Band26-15MHz			
Test channel:	Low	Polarization:	Horizontal

Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	58.52	-81.54	24.38	1.40	30.71	-86.47	-13.00	-73.47	Peak
2	459.44	-80.01	25.86	4.25	29.71	-79.61	-13.00	-66.61	Peak
3	5420.74	-67.00	44.04	6.34	39.77	-56.39	-13.00	-43.39	Peak
4	7045.74	-67.14	47.70	7.37	39.51	-51.58	-13.00	-38.58	Peak
5	9134.58	-67.16	48.99	8.45	39.95	-49.67	-13.00	-36.67	Peak
6	11140.85	-68.69	52.93	8.91	40.56	-47.41	-13.00	-34.41	Peak

Test channel:	Low	Polarization:	Vertical

Mark	Frequency MHz	Reading dBm	Antenna dB	Cable dB	Preamp dB	Level dBm	Limit dBm	Over limit	Remark
1	109.43	-80.75	24.51	1.96	30.35	-84.63	-13.00	-71.63	Peak
2	499.90	-79.80	26.26	4.45	29.77	-78.86	-13.00	-65.86	Peak
3	4076.07	-59.57	41.92	5.54	40.24	-52.35	-13.00	-39.35	Peak
4	7063.69	-66.21	47.76	7.38	39.53	-50.60	-13.00	-37.60	Peak
5	9088.19	-67.15	49.11	8.44	39.96	-49.56	-13.00	-36.56	Peak
6	10480.59	-67.98	52.25	8.98	40.19	-46.94	-13.00	-33.94	Peak

-------End of the report------