



Radio Frequency Exposure

Applicant : Ubiquiti Inc.
Address : 685 Third Avenue, New York, New York 10017, USA
Equipment : PoE Audio Port
Model No. : UPL-Port-W, UPL-Port-B
Trade Name : UBIQUITI
FCC ID : SWX-UPLP

I HEREBY CERTIFY THAT :

The sample was received on May. 09, 2025 and the testing was completed on Jun. 17, 2025 at CerpPASS Technology Corp. The test result refers exclusively to the test presented test model / sample. Without written approval of CerpPASS Technology Corp., the test report shall not be reproduced except in full.

Approved by:

Vic Hsiao / Supervisor

Laboratory Accreditation:

CerpPASS Technology Corporation Test Laboratory





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History of this test report

Report No.	Issued Date	Description
25040713-TRFCC07	Jul. 01, 2025	Original



1. Summary of Test Procedure and Test Results

1.1. Applicable Standards

FCC Rules and Regulations Part 2.1091

FCC Rule	Description of Test	Result
2.1091	Radio Frequency Exposure	PASS
*The lab has reduced the uncertainty risk factor from test equipment, environment and staff technicians which according to the standard on contract. Therefore, the test result will only be determined by standard requirement, measurement uncertainty evaluation is not considered.		



2. Test Configuration of Equipment under Test

2.1. Feature of Equipment under Test

Frequency Range	BT/BLE: 2400-2483.5MHz 802.11b/g/n/ax: 2400-2483.5MHz 802.11a/n/ac/ax: 5150-5250MHz, 5250-5350MHz, 5470-5725MHz, 5725-5850MHz
Center Frequency Range	BT/BLE: 2402-2480MHz 802.11b/g/n/ax: 2412MHz-2462MHz 802.11a/n/ac/ax: 5180-5240MHz, 5260-5320MHz, 5500-5720MHz, 5745-5825MHz
Modulation Type	BT: GFSK, $\pi/4$ -DQPSK, 8DPSK BLE: GFSK WLAN: 2.4GHz: 802.11b: CCK, DQPSK, DBPSK 802.11g/n: BPSK, QPSK, 16QAM, 64QAM 802.11ax: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM 5GHz: 802.11n/a: BPSK, QPSK, 16QAM, 64QAM 802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM 802.11ax: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM
Modulation Technology	FHSS, DTS, DSSS, OFDM, OFDMA
Data Rate	BT: GFSK: 1Mbps, $\pi/4$ -DQPSK: 2Mbps, 8DPSK: 3Mbps BLE: GFSK: 1Mbps WLAN: 2.4GHz: 802.11b: 1, 2, 5.5, 11Mbps 802.11g: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0 – MCS15, HT20/40 802.11ax: MCS0 – MCS11, HE20/40 5GHz: 802.11a: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0 – MCS15, HT20/40 802.11ac: MCS0 – MCS9, VHT20/40/80 802.11ax: MCS0 – MCS11, HE20/40/80
Antenna Type	BT/BLE: Dipole Antenna WLAN 2.4GHz/5GHz: PIFA Antenna
Antenna Gain	BT/BLE: 2400MHz-2500MHz: 1.0dBi WLAN: 2400MHz-2500MHz: ANT A: 2.0dBi; ANT B: 2.0dBi 5180MHz-5850MHz: ANT A: 6.0dBi; ANT B: 6.0dBi
Adapter	UBIQUITI \ ADS-18LD-12 12018EPCU

Note:

1. EUT support TPC Function.
2. EUT supports DFS Client Mode, without radar detection.
3. For more details, please refer to the User's manual of the EUT.

Difference description:

Model No.	Color of Enclosure
UPL-Port-W	White
UPL-Port-B	Black



2.2. General Information of Test

Organization	Cerpass Technology Corp.		
☒ Test Site	Cerpass Technology Corporation Test Laboratory Address: No.10, Ln. 2, Lianfu St., Luzhu Dist., Taoyuan City 33848, Taiwan (R.O.C.) Tel: +886-3-3226-888 Fax: +886-3-3226-881		
	FCC	TW1439, TW1079	
	IC	4934E-1, 4934E-2	
Frequency Range Investigated	Conducted: from 150kHz to 30 MHz Radiation: from 9kHz to 40,000MHz		
Test Distance	The test distance of radiated emission from antenna to EUT is 3 M.		

For BT

Test Item	Test Site	Test period	Environmental Conditions	Tested By
RF Conducted	RFCON01-NK	2025/05/23	25.8°C / 48%	Leon Huang
RF Conducted	RFCON01-NK	2025/05/24	25.1°C / 58%	Leon Huang
RF Conducted	RFCON01-NK	2025/06/17	25.6°C / 55%	Leon Huang

For BLE

Test Item	Test Site	Test period	Environmental Conditions	Tested By
RF Conducted	RFCON01-NK	2025/05/23	25.8°C / 48%	Leon Huang

For 2.4GHz

Test Item	Test Site	Test period	Environmental Conditions	Tested By
RF Conducted	RFCON01-NK	2025/05/26	23.9°C / 53%	Leon Huang

For 5GHz

Test Item	Test Site	Test period	Environmental Conditions	Tested By
RF Conducted	RFCON01-NK	2025/05/24	25.1°C / 58%	Leon Huang
RF Conducted	RFCON01-NK	2025/05/27	25.3°C / 51%	Leon Huang
RF Conducted	RFCON01-NK	2025/05/26	23.9°C / 53%	Leon Huang



2.3. Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

For 2.4GHz, BT, BLE

Measurement Item	Uncertainty
AC Power Line Conduction(150K~30MHz)	±3.2dB
Radiated Spurious Emission(9KHz~30MHz)	±3.5dB
Radiated Spurious Emission(30MHz~1GHz)	±5.1dB
Radiated Spurious Emission(1GHz~40GHz)	±5.2dB
Conducted Spurious Emission	±2.1dB
6dB Bandwidth	±5.4%
20dB Bandwidth	±4.4%
Occupied Bandwidth	±4.5%
Peak Output Power(Conducted Power Meter)	±1.1dB
Dwell Time / Deactivation Time	±7.6%
Power Spectral Density	±2.0dB
Duty Cycle	±3.5%

For 5GHz

Measurement Item	Uncertainty
AC Power Line Conduction(150K~30MHz)	±3.2dB
Radiated Spurious Emission(9KHz~30MHz)	±3.5dB
Radiated Spurious Emission(30MHz~1GHz)	±5.1dB
Radiated Spurious Emission(1GHz~40GHz)	±5.2dB
6dB Bandwidth	±5.4%
26dB Bandwidth	±4.4%
Occupied Bandwidth	±4.5%
Peak Output Power(Conducted Power Meter)	±1.1dB
Power Spectral Density	±2.0dB
Duty Cycle	±3.5%
Frequency Stability	±0.23KHz



3. Test Equipment and Ancillaries Used for Tests

Test Item	RF Conducted				
Test Site	RFCON01-NK				
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
Spectrum Analyzer	R&S	FSP 40	100047	2025/03/03	2026/03/02
Attenuator	KEYSIGHT	8491B	MY39250703	2025/02/12	2026/02/11
Cable-0.5m (30M-40G)	HUBER SUHNER	SUCOFLEX 102	28420/2	2024/10/24	2025/10/23
Power Meter	Anritsu	ML2495A	1224005	2025/02/12	2026/02/11
Power Sensor	Anritsu	MA2411B	1207295	2025/02/12	2026/02/11
Switch Box	Theda	1-4	TW5451159	NA	NA



4. Radio Frequency Exposure

4.1. Applicable Standards

§1.1307(b)(3)(i)(A)	The available maximum time-averaged power is no more than 1 mW, regardless of separation distance.																																																	
§1.1307(b)(3)(i)(c)	ERP is below a threshold calculated based on the distance , R between the person and the antenna / radiating structure, where $R > \lambda / 2 \pi$. TABLE B.1—THRESHOLDS FOR SINGLE RF SOURCES SUBJECT TO ROUTINE ENVIRONMENTAL EVALUATION <table><tr><th colspan="3">RF Source Frequency</th><th colspan="3">Minimum Distance</th><th>Threshold ERP</th></tr><tr><th>f_L MHz</th><th></th><th>f_H MHz</th><th>$\lambda_L / 2\pi$</th><th></th><th>$\lambda_H / 2\pi$</th><th>W</th></tr><tr><td>0.3</td><td>–</td><td>1.34</td><td>159 m</td><td>–</td><td>35.6 m</td><td>1,920 R²</td></tr><tr><td>1.34</td><td>–</td><td>30</td><td>35.6 m</td><td>–</td><td>1.6 m</td><td>3,450 R²/f^2</td></tr><tr><td>30</td><td>–</td><td>300</td><td>1.6 m</td><td>–</td><td>159 mm</td><td>3.83 R²</td></tr><tr><td>300</td><td>–</td><td>1,500</td><td>159 mm</td><td>–</td><td>31.8 mm</td><td>0.0128 R²f</td></tr><tr><td>1,500</td><td>–</td><td>100,000</td><td>31.8 mm</td><td>–</td><td>0.5 mm</td><td>19.2R²</td></tr></table> Subscripts L and H are low and high; λ is wavelength. From § 1.1307(b)(3)(i)(C), modified by adding Minimum Distance columns.	RF Source Frequency			Minimum Distance			Threshold ERP	f_L MHz		f_H MHz	$\lambda_L / 2\pi$		$\lambda_H / 2\pi$	W	0.3	–	1.34	159 m	–	35.6 m	1,920 R ²	1.34	–	30	35.6 m	–	1.6 m	3,450 R ² / f^2	30	–	300	1.6 m	–	159 mm	3.83 R ²	300	–	1,500	159 mm	–	31.8 mm	0.0128 R ² f	1,500	–	100,000	31.8 mm	–	0.5 mm	19.2R ²
RF Source Frequency			Minimum Distance			Threshold ERP																																												
f_L MHz		f_H MHz	$\lambda_L / 2\pi$		$\lambda_H / 2\pi$	W																																												
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300	–	1,500	159 mm	–	31.8 mm	0.0128 R ² f																																												
1,500	–	100,000	31.8 mm	–	0.5 mm	19.2R ²																																												
§ 1.1307(b)(3)(i)(B).	Device operates between 300 MHz and 6 GHz and the maximum time-averaged power or effective radiated power (ERP), whichever is greater, $\leq P_{th}$ $P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$ Where $x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right) \text{ and } f \text{ is in GHz;}$ and $ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$ d = the separation distance (cm);																																																	



4.2. EUT Specification

Frequency band (Operating)	☒ WLAN: 2412MHz ~ 2462MHz ☒ WLAN: 5150MHz ~ 5250MHz ☒ WLAN: 5250MHz ~ 5350MHz ☒ WLAN: 5470MHz ~ 5725MHz ☒ WLAN: 5725MHz ~ 5850MHz ☒ Bluetooth: 2402MHz ~ 2480MHz
Device category	☐ Portable (<20cm separation) ☒ Mobile (>20cm separation)
Antenna diversity	☒ Single antenna ☐ Multiple antennas ☐ Tx diversity ☐ Rx diversity ☐ Tx/Rx diversity
Evaluation applied	☐ Blanket 1 mW Blanket Exemption ☒ MPE-based Exemption ☐ SAR-based Exemption
Remark: The maximum conducted output power is <u>22.67dBm (184.927mW)</u> at 2437MHz (with 2.0dBi antenna gain.)	

**4.3. Test Result**

BT						
Channel Frequency (MHz)	Max. Conducted output power (dBm)	Max. Tune up power (dBm)	Antenna Gain(dBi)	Max.Tune up e.r.p. Power (dBm)	Max. Tune up e.r.p power (mW)	Limit (mW)
2402-2480	5.76	6.26	1.0	5.11	3.24	3060

BLE						
Channel Frequency (MHz)	Max. Conducted output power (dBm)	Max. Tune up power (dBm)	Antenna Gain(dBi)	Max.Tune up e.r.p. Power (dBm)	Max. Tune up e.r.p power (mW)	Limit (mW)
2402-2480	7.01	7.51	1.0	6.36	4.33	3060

2.4GHz, SISO ANT A						
Channel Frequency (MHz)	Max. Conducted output power(dBm)	Max. Tune up power (dBm)	Antenna Gain (dBi)	Max.Tune up e.r.p. Power (dBm)	Max.Tune up e.r.p. Power (mW)	Limit (mW)
2412-2462	22.67	23.17	2.0	23.02	200.45	3060

2.4GHz, SISO ANT B						
Channel Frequency (MHz)	Max. Conducted output power(dBm)	Max. Tune up power (dBm)	Antenna Gain (dBi)	Max.Tune up e.r.p. Power (dBm)	Max.Tune up e.r.p. Power (mW)	Limit (mW)
2412-2462	23.37	23.87	2.0	23.72	235.50	3060

2.4GHz, MIMO						
Channel Frequency (MHz)	Max. Conducted output power(dBm)	Max. Tune up power (dBm)	Antenna Gain (dBi)	Max.Tune up e.r.p. Power (dBm)	Max.Tune up e.r.p. Power (mW)	Limit (mW)
2412-2462	24.45	24.95	2.0	24.80	302.07	3060



5.0GHz, SISO ANT A						
Channel Frequency (MHz)	Max. Conducted output power(dBm)	Max. Tune up power (dBm)	Antenna Gain (dBi)	Max.Tune up e.r.p. Power (dBm)	Max.Tune up e.r.p. Power (mW)	Limit (mW)
5180-5240	19.13	19.63	6.0	23.48	222.84	3060
5260-5320	18.88	19.38	6.0	23.23	210.38	3060
5500-5720	17.48	17.98	6.0	21.83	152.41	3060
5745-5825	18.02	18.52	6.0	22.37	172.58	3060

5.0GHz, SISO ANT B						
Channel Frequency (MHz)	Max. Conducted output power(dBm)	Max. Tune up power (dBm)	Antenna Gain (dBi)	Max.Tune up e.r.p. Power (dBm)	Max.Tune up e.r.p. Power (mW)	Limit (mW)
5180-5240	18.88	19.38	6.0	23.23	210.38	3060
5260-5320	19.21	19.71	6.0	23.56	226.99	3060
5500-5720	19.14	19.64	6.0	23.49	223.36	3060
5745-5825	17.89	18.39	6.0	22.24	167.49	3060

5.0GHz, MIMO						
Channel Frequency (MHz)	Max. Conducted output power(dBm)	Max. Tune up power (dBm)	Antenna Gain (dBi)	Max.Tune up e.r.p. Power (dBm)	Max.Tune up e.r.p. Power (mW)	Limit (mW)
5180-5240	20.41	20.91	6.0	24.76	299.25	3060
5260-5320	20.56	21.06	6.0	24.91	309.91	3060
5500-5720	20.74	21.24	6.0	25.09	323.18	3060
5745-5825	21.33	21.83	6.0	25.68	369.43	3060

No non-compliance noted.
Distance: 20cm.

-----THE END OF REPORT-----