



Radio Frequency Exposure

Applicant : Franklin Technology Inc

Address : 906 JEI Platz, 186, Gasan digital 1-ro,
Geumcheon-gu, Seoul, 08502 South Korea

Equipment : 5G M2M Router

Model No. : SG2000

FCC ID : XHG-SG2000

I HEREBY CERTIFY THAT :

The sample was received on Jun. 30, 2026 and the testing was completed on Jul. 20, 2026 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:

Mark Liao / Supervisor

Laboratory Accreditation:

CerpPASS Technology Corporation Test Laboratory





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History of this test report

Report No.	Issued Date	Description
26060018-TRFCC04	Aug. 13, 2026	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

Operation Frequency Range	2.4GHz:802.11b/g/n/ax/be: 2400-2483.5MHz 5GHz:802.11a/n/ac/ax/be:5150-5250MHz, 5250-5350MHz, 5470-5725MHz, 5725-5875MHz 6GHz: 802.11a/ax/be: 5925MHz~6425MHz, 6425MHz~6525MHz 6525MHz~6875MHz, 6875MHz~7125MHz
Center Frequency Range	2.4GHz:802.11b/g/n/ax/be: 2412MHz-2462MHz 5GHz:802.11a/n/ac/ax/be:5180-5240MHz, 5260-5320MHz, 5500-5720MHz, 5745-5825MHz 6GHz: 802.11a/ax/be: 5955MHz~6415MHz, 6435MHz~6515MHz 6535MHz~6855MHz, 6875MHz~7115MHz
Modulation Type	2.4GHz: 802.11b: CCK, DQPSK, DBPSK 802.11g/n: BPSK, QPSK, 16QAM, 64QAM 802.11ax: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM 802.11be: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM 5GHz: 802.11a/n: BPSK, QPSK, 16QAM, 64QAM 802.11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM 802.11ax: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM 802.11be: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM 6GHz: 802.11a: BPSK, QPSK, 16QAM, 64QAM 802.11ax: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM 802.11be: BPSK, QPSK, 16QAM, 64QAM, 256QAM, 1024QAM, 4096QAM
Modulation Spread Spectrum	DSSS 、 OFDM 、 OFDMA
Data Rate	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,HE20/40 802.11be: MCS0 – MCS13,EHT20/40 5GHz: 802.11a: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11n: MCS0 – MCS15, HT20/40 802.11ac: MCS0 – MCS9, VHT20/40/80/160 802.11ax: MCS0 – MCS11,HE20/40/80/160 802.11be: MCS0 – MCS13,EHT20/40/80/160 6GHz 802.11a: 6, 9, 12, 18, 24, 36, 48, 54Mbps 802.11ax: MCS0 – MCS11, HE20/40/80/160 802.11be: MCS0 – MCS13,EHT20/40/80/160



Antenna Type	FPCB Antenna
Antenna Gain	2412-2484MHz: ANT A: 0.21dBi, ANT B: 0.21dBi 5150-5260MHz: ANT A: 1.66dBi, ANT B: 1.66dBi 5260-5320MHz: ANT A: 1.60dBi, ANT B: 1.60dBi 5470-5700MHz: ANT A: 1.43dBi, ANT B: 1.43dBi 5745-5850MHz: ANT A: 1.83dBi, ANT B: 1.83dBi 5945-6425MHz: ANT A: 2.23dBi, ANT B: 2.23dBi 6425-6525MHz: ANT A: 2.07dBi, ANT B: 2.07dBi 6525-7115MHz: ANT A: 4.15dBi, ANT B: 4.15dBi 6855-7125MHz: ANT A: 4.15dBi, ANT B: 4.15dBi
Adapter	Brand: Franklin Wireless Model: APS-M036120300W-G

Note: 1. EUT support TPC Function.
2. WLAN and 3G can simultaneously transmission.
3. EUT support Master Mode.
4. EUT only support Full RU.
5. EUT: Low Power indoor Access Point
6. For more details, please refer to the User's manual of the EUT.

2.2. General Information of Test

Organization	CerpPASS Technology Corp.		
☒ Test Site	CerpPASS 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 30 MHz to 40,000MHz		
Test Distance	The test distance of radiated emission from antenna to EUT is 3 M.		

For 2.4G

Test Item	Test Site	Test period	Environmental Conditions	Tested By
RF Conducted	RFCON02-NK	2026/07/20	24.2°C / 48%	Peter Pan

For 5G

Test Item	Test Site	Test period	Environmental Conditions	Tested By
RF Conducted	RFCON02-NK	2026/07/13	24.5°C / 52%	Peter Pan
RF Conducted	RFCON02-NK	2026/07/14	25.6°C / 48%	Peter Pan



For 6E

Test Item	Test Site	Test period	Environmental Conditions	Tested By
RF Conducted	RFCON02-NK	2026/07/16	25.3°C / 45%	Peter Pan
RF Conducted	RFCON02-NK	2026/07/17	25.1°C / 51%	Peter Pan
RF Conducted	RFCON02-NK	2026/07/18	24.7°C / 50%	Peter Pan

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 2.4G

Measurement Item	Uncertainty
AC Power Line Conduction(150K~30MHz)	±3.2dB
Radiated Spurious Emission(9KHz~30MHz)	±3.4dB
Radiated Spurious Emission(30MHz~1GHz)	±5.2dB
Radiated Spurious Emission(1GHz~40GHz)	±5.2dB
Conducted Spurious Emission	±2.1dB
6dB Bandwidth	±4.4%
20dB Bandwidth	±4.5%
Occupied Bandwidth	±4.4%
Peak Output Power(Conducted Power Meter)	±1.1dB
Dwell Time / Deactivation Time	±3.5%
Power Spectral Density	±2.0dB
Duty Cycle	±3.5%

For 5G / 6E

Measurement Item	Uncertainty
AC Power Line Conduction(150K~30MHz)	±3.2dB
Radiated Spurious Emission(9KHz~30MHz)	±3.4dB
Radiated Spurious Emission(30MHz~1GHz)	±5.2dB
Radiated Spurious Emission(1GHz~40GHz)	±5.2dB
6dB Bandwidth	±4.4%
26dB Bandwidth	±4.5%
Occupied Bandwidth	±4.4%
Peak Output Power(Conducted Power Meter)	±1.1dB
Power Spectral Density	±2.0dB
Duty Cycle	±3.5%
Frequency Stability	±223.073Hz



3. Test Equipment and Ancillaries Used for Tests

For 2.4G / 5G

Test Item	RF Conducted				
Test Site	RFCON02-NK				
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
Spectrum Analyzer	ROHDE & SCHWARZ	FSP 40	100047	2026/02/24	2027/02/23
Attenuator	KEYSIGHT	8491B	MY39250703	2026/01/29	2027/01/28
Cable-0.5m(30M-40G)	HUBER SUHNER	SUCOFLEX 102	28420/2	2025/10/13	2026/10/12
Power Meter	Anritsu	ML2495A	1224005	2026/01/27	2027/01/26
Power Sensor	Anritsu	MA2411B	1207295	2026/01/27	2027/01/26
Switch Box	Theda	1-4	TW5451159	NA	NA

For 6E

Test Item	RF Conducted				
Test Site	RFCON02-NK				
Instrument	Manufacturer	Model No	Serial No	Calibration Date	Valid Date
CAX Signal Analyzer	KEYSIGHT	N9000B	MY57100339	2025/10/23	2026/10/22
Attenuator	KEYSIGHT	8491B	MY39250703	2026/01/29	2027/01/28
Power Meter	Anritsu	ML2495A	1224005	2026/01/27	2027/01/26
Power Sensor	Anritsu	MA2411B	1207295	2026/01/27	2027/01/26



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 t 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/<i>f</i>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 R²<i>f</i></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 / <i>f</i> ²	30	–	300	1.6 m	–	159 mm	3.83 R ²	300	–	1,500	159 mm	–	31.8 mm	0.0128 R ² <i>f</i>	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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1.34	–	30	35.6 m	–	1.6 m	3,450 R ² / <i>f</i> ²																																												
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300	–	1,500	159 mm	–	31.8 mm	0.0128 R ² <i>f</i>																																												
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: 5500MHz ~ 5720MHz ☒ WLAN: 5745MHz ~ 5825MHz ☒ WLAN: 5955MHz ~ 6415MHz ☒ WLAN: 6435MHz ~ 6515MHz ☒ WLAN: 6535MHz ~ 6855MHz ☒ WLAN: 6875MHz ~ 7115MHz
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>17.68dBm (58.562mW) at 2462MHz (with 0.21dBi antenna gain.)</u>	

4.3. Result

For 2.4G

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	17.68	18.68	0.21	16.74	47.16	3060

For 5G

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	17.43	18.43	1.66	17.94	62.30	3060
5260-5320	17.47	18.47	1.6	17.92	62.01	3060
5500-5720	17.36	18.36	1.43	17.64	58.01	3060
5745-5825	17.48	18.48	1.83	18.16	65.47	3060



For 6E

Channel Frequency (MHz)	Max. Conducted output power(dBm)	Max. Tune up power (dBm)	Antenna Gain(dBi)	Max. Tune up EIRP (dBm)	Max. Tune up ERP (dBm)	Distance (cm)	$\lambda/2\pi$ (cm)	Max. Tune up ERP (W)	ERP Threshold (W)
6385	16.75	17.75	2.23	19.98	17.83	20	0.7482	0.061	0.768
6465	15.40	16.40	2.07	18.47	16.32	20	0.73891	0.043	0.768
6665	16.21	17.21	4.15	21.36	19.21	20	0.71674	0.083	0.768
6985	16.80	17.80	4.15	21.95	19.80	20	0.6839	0.095	0.768

Maximum Permissible Exposure (Co-location)

Wifi 2.4G+3G

Modulation Type	Channel Frequency (MHz)	Max. Conducted output power (dBm)	Max. Tune up power (dBm)	Antenna Gain(dBi)	Distance (cm)	Max.Tune up e.r.p. Power(mW)	Limit (mW)	MPE Ratio
WCDMA Band 8	880-915	25.00	26.00	1.17	20	317.687	3060.00	0.104
11be EHT40	2412-2462	17.68	18.68	0.21	20	47.164	3060.00	0.015
Co-location Total								0.119
Σ MPE ratios Limit								1.000

Note: 3G power data is based on the manufacturer's declared specifications.

Wifi 5G+3G

Modulation Type	Channel Frequency (MHz)	Max. Conducted output power (dBm)	Max. Tune up power (dBm)	Antenna Gain(dBi)	Distance (cm)	Max.Tune up e.r.p. Power(mW)	Limit (mW)	MPE Ratio
WCDMA Band 8	880-915	25.00	26.00	1.17	20	317.687	3060.00	0.104
11be EHT20	5745-5825	17.48	18.48	1.83	20	65.474	3060.00	0.021
Co-location Total								0.125
Σ MPE ratios Limit								1.000

Note: 3G power data is based on the manufacturer's declared specifications.

Wifi 6E+3G

Modulation Type	Channel Frequency (MHz)	Max. Conducted output power (dBm)	Max. Tune up power (dBm)	Antenna Gain(dBi)	Distance (cm)	Max.Tune up e.r.p. Power(mW)	Limit (mW)	MPE Ratio
WCDMA Band 8	880-915	25.00	26.00	1.17	20	317.687	3060.00	0.104
11be EHT160	6985	16.80	17.80	4.15	20	95.499	3060.00	0.031
Co-location Total								0.135
Σ MPE ratios Limit								1.000

Note: 3G power data is based on the manufacturer's declared specifications.

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