

FCC Part 1.1310

RF Exposure Evaluation REPORT

For

FCC ID : 2BLTA-CF4A

Model : C-F4A

Report Type : Original Report

Product Name : Access Controller

Report Number : RXZ250821063SA01

Report Date : 2025-10-15

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Statement of Compliance

Applicant (Certification Holder)	EWIC PHILIPPINES INC.
	BLDG NOS 7&8 S BLK 2 LOT 2 EZP WAREHOUSE, LAGUNA TECHNOPARK ANNEX, BARANGAY BO BINAN, BINAN, PHILIPPINES
Brand (Trade) Name	N/A
Product (Equipment) Name	Access Controller
Model Name	C-F4A
Series Model Name	FC01
Model Discrepancy	Please refer to the difference declaration letter provided by the Applicant.

Measurement Procedures and Standards Used:

- ☒ FCC Part 2.1091
- ☒ FCC Part 1 1.1310

The measurement results in this report were performed at Bay Area Compliance Laboratories Corp. (New Taipei Laboratory)

Any unauthorized alteration, forgery or falsification of the content or appearance of this document is unlawful and offenders may be prosecuted to the fullest extent of the law.

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

The determination of the test results does not require consideration of the uncertainty of the measurement, unless the assessment is required by customer agreement, regulation or standard document specification.

Bay Area Compliance Laboratories Corp. (New Taipei Laboratory) is not responsible for the authenticity of the information provided by the applicant that affects the test results.

Report Issued Date : 2025-10-15

Reviewed By : Anson Lu 

Revision History

Revision	No.	Report Number	Issue Date	Description	Author/ Revised by
0.0	RXZ250821063	RXZ250821063SA01	2025.10.15	Original Report	Anson Lu

TABLE OF CONTENTS

1. General Information 5

2. RF Output Power Evaluation 6

3. FCC §1.1310 - RF Exposure..... 7

4. RF Exposure Evaluation Result..... 10

1. General Information

Product Description for Equipment under Test (EUT)

Product Name	Access Controller
Frequency Range	IEEE 802.11b/ g/ n HT20 Mode : 2412 ~ 2462 MHz IEEE 802.11n HT40 Mode : 2422 ~ 2452 MHz NFC : 13.56MHz
Tune-Up EIRP Power (dBm)	IEEE 802.11b Mode: 15.77 dBm IEEE 802.11g Mode: 19.77 dBm IEEE 802.11n HT20 Mode: 19.27 dBm IEEE 802.11n HT40 Mode: 18.77 dBm NFC : -32.0 dBm
Modulation Technique	IEEE 802.11b Mode: DSSS IEEE 802.11g Mode: OFDM IEEE 802.11n HT20 Mode: OFDM IEEE 802.11n HT40 Mode: OFDM NFC : ASK
Antenna Specification	WiFi : Antenna Type : PCB Antenna Gain : 2.27 dBi NFC : Antenna Type : LOOP Antenna
Received Date	2025/08/21

**All measurement and test data in this report was gathered from production sample serial number:
RXZ250821063-1 (Assigned by BACL (New Taipei Laboratory)).*

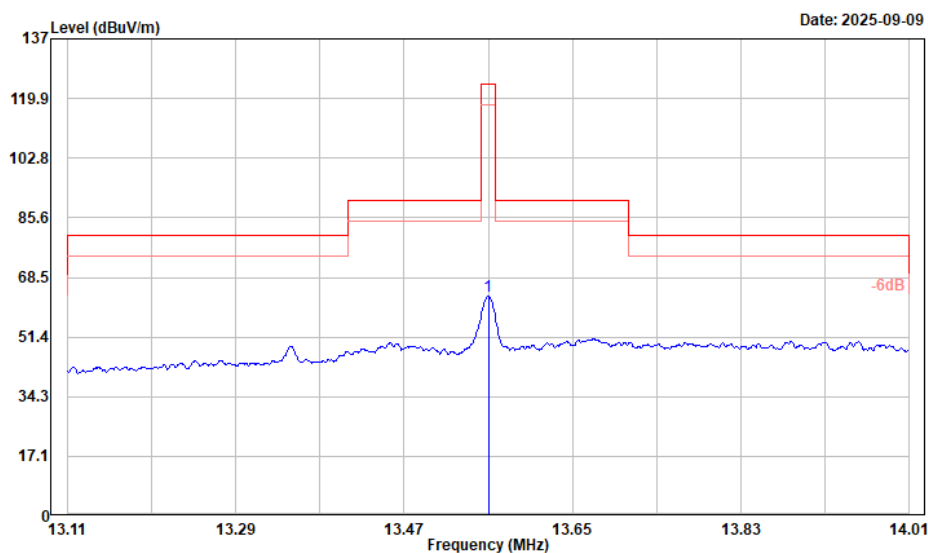
2. RF Output Power Evaluation

Please refer to RF report No: RXZ250821063RF01/02

Conducted Peak Output Power Table :

Mode	Channel	Frequency (MHz)	Conducted Peak Output Power(dBm)	Antenna Gain(dBi)	EIRP Power(dBm)
802.11b	1	2412	12.97	2.27	15.24
	6	2437	13.08	2.27	15.35
	11	2462	13.16	2.27	15.43
802.11g	1	2412	17.06	2.27	19.33
	6	2437	17.04	2.27	19.31
	11	2462	17.07	2.27	19.34
802.11n HT20	1	2412	16.63	2.27	18.90
	6	2437	16.64	2.27	18.91
	11	2462	16.63	2.27	18.90
802.11n HT40	3	2422	16.45	2.27	18.72
	6	2437	16.48	2.27	18.75
	9	2452	16.46	2.27	18.73

NFC :



Freq.	Reading	Factor	Level	Limit	Margin	Height	Degree	Remark
MHz	dBuV	dB/m	dBuV/m	dBuV/m	dB	(cm)	(°)	
13.560	51.48	11.58	63.06	124.00	-60.94	100	137	Peak

3. FCC §1.1310 - RF Exposure

Applicable Standard

According to subpart §1.1310 (a) Specific absorption rate (SAR) shall be used to evaluate the environmental impact of human exposure to radiofrequency (RF) radiation as specified in [§ 1.1307\(b\) of this part](#) within the frequency range of 100 kHz to 6 GHz (inclusive).

§1.1310 (d)(2) For operations within the frequency range of 300 kHz and 6 GHz (inclusive), the limits for maximum permissible exposure (MPE), derived from whole-body SAR limits and listed in Table 1 in [paragraph \(e\)\(1\)](#) of this section, may be used instead of whole-body SAR limits as set forth in [paragraphs \(a\)](#) through [\(c\)](#) of this section to evaluate the environmental impact of human exposure to RF radiation as specified in [§ 1.1307\(b\) of this part](#), except for portable devices as defined in [§ 2.1093 of this chapter](#) as these evaluations shall be performed according to the SAR provisions in [§ 2.1093](#).

§1.1310 (d)(3) At operating frequencies above 6 GHz, the MPE limits listed in Table 1 in [paragraph \(e\)\(1\)](#) of this section shall be used in all cases to evaluate the environmental impact of human exposure to RF radiation as specified in [§ 1.1307\(b\) of this part](#).

For single RF sources (*i.e.*, any single fixed RF source, mobile device, or portable device, as defined in paragraph (b)(2) of this section): A single RF source is exempt if:

(A) The available maximum time-averaged power is no more than 1 mW, regardless of separation distance. This exemption may not be used in conjunction with other exemption criteria other than those in paragraph (b)(3)(ii)(A) of this section.

Medical implant devices may only use this exemption and that in paragraph (b)(3)(ii)(A);

(B) Or the available maximum time-averaged power or effective radiated power (ERP), whichever is greater, is less than or equal to the threshold P_{th} (mW) described in the following formula. This method shall only be used at separation distances (cm) from 0.5 centimeters to 40 centimeters and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by:

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

Where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right) \text{ and } f \text{ is in GHz;}$$

and

$$ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases}$$

(C) Or using Table 1 and the minimum separation distance (R in meters) from the body of a nearby person for the frequency (f in MHz) at which the source operates, the ERP (watts) is no more than the calculated value prescribed for that frequency. For the exemption in Table 1 to apply, R must be at least $\lambda/2\pi$, where λ is the free-space operating wavelength in meters. If the ERP of a single RF source is not easily obtained, then the available maximum time-averaged power may be

used in lieu of ERP if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda/4$ or if the antenna gain is less than that of a half-wave dipole (1.64 linear value).

Table 1 to § 1.1307(b)(3)(i)(C) - Single RF Sources Subject to Routine Environmental Evaluation	
RF Source frequency (MHz)	Threshold ERP (watts)
0.3-1.34	$1,920 R^2$.
1.34-30	$3,450 R^2/f^2$.
30-300	$3.83 R^2$.
300-1,500	$0.0128 R^2 f$.
1,500-100,000	$19.2 R^2$.

(e)

(1) Table 1 to § 1.1310(e)(1) sets forth limits for Maximum Permissible Exposure (MPE) to radiofrequency electromagnetic fields.

TABLE 1 TO § 1.1310(E)(1)—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(i) 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			5	<6
(ii) LIMITS FOR GENERAL POPULATION/UNCONTROLLED EXPOSURE				
0.3-1.34	614	1.63	*(100)	<30
1.34-30	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

(2) Occupational/controlled exposure limits apply in situations in which persons are exposed as a consequence of their employment provided those persons are fully aware of the potential for exposure and can exercise control over their exposure. The phrase fully aware in the context of applying these exposure limits means that an exposed person has received written and/or verbal information fully explaining the potential for RF exposure resulting from his or her employment. With the exception of transient persons, this phrase also means that an exposed person has received appropriate training regarding work practices relating to controlling or mitigating his or her exposure. In situations when an untrained person is transient through a location where occupational/controlled limits apply, he or she must be made aware

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of the potential for exposure and be supervised by trained personnel pursuant to § 1.1307(b)(2) of this part where use of time averaging is required to ensure compliance with the general population exposure limit. The phrase exercise control means that an exposed person is allowed and also knows how to reduce or avoid exposure by administrative or engineering work practices, such as use of personal protective equipment or time averaging of exposure.

(3) General population/uncontrolled exposure limits apply in situations in which the general public may be exposed, or in which persons who are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure. For example, RF sources intended for consumer use shall be subject to the limits for general population/uncontrolled exposure in this section.

4. RF Exposure Evaluation Result

WiFi 2.4GHz & NFC :

Mode	Frequency Range (MHz)	Antenna Gain		Tune-Up Power		Evaluation Distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)
		(dBi)	(numeric)	(dBm)	(mW)			
802.11b	2412	2.27	1.69	13.5	22.39	20	0.008	1.0
802.11b	2437	2.27	1.69	13.5	22.39	20	0.008	1.0
802.11b	2462	2.27	1.69	13.5	22.39	20	0.008	1.0
802.11g	2412	2.27	1.69	17.5	56.23	20	0.019	1.0
802.11g	2437	2.27	1.69	17.5	56.23	20	0.019	1.0
802.11g	2462	2.27	1.69	17.5	56.23	20	0.019	1.0
802.11n HT20	2412	2.27	1.69	17.0	50.12	20	0.017	1.0
802.11n HT20	2437	2.27	1.69	17.0	50.12	20	0.017	1.0
802.11n HT20	2462	2.27	1.69	17.0	50.12	20	0.017	1.0
802.11n HT40	2422	2.27	1.69	16.5	44.67	20	0.015	1.0
802.11n HT40	2437	2.27	1.69	16.5	44.67	20	0.015	1.0
802.11n HT40	2452	2.27	1.69	16.5	44.67	20	0.015	1.0
NFC	13.56	Unknown		-32.0	0.001	20	<<0.001	1.0

Note : Distance 20cm is the minimum distance between the radiating structure of the RF source and the body of the user or nearby person.

Calculated Formulary:

Predication of MPE limit at a given distance

$S = PG/4\pi R^2$ = 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, the power gain factor, is normally numeric gain;

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

Calculate the EIRP from the radiated field strength in the far field using Equation

$$\text{EIRP} = \text{EMeas} + 20\log(\text{dMeas}) - 104.7$$

$$\text{EIRP} = 63.06 \text{ dBuV} - 95.2 = 32.14 \text{ dBm}$$

$$\text{EIRP Tune-Up power} = -32.0 \text{ dBm}$$

$$\text{Simultaneous Ratio} = (0.019/1) + (0.001/1) = 0.020$$

Result: Compliance.

***** END OF REPORT *****

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