



TEST REPORT

Eurofins KCTL Co.,Ltd. 65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea TEL: 82-70-5008-1021 FAX: 82-505-299-8311 www.kctl.co.kr	Report No.: KR25-SRF0095 Page (1) of (10)	KCTL
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1. Client

- Name : YURA CORPORATION
- Address : 308, Pangyo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea
- Date of Receipt : 2025-03-04

2. Use of Report : Certification

3. Name of Product / Model : Built-In CAM / BLTN_CAM2.5_LX3

4. Manufacturer / Country of Origin : YURA CORPORATION / Korea

5. FCC ID : 2A8FF-BLTNCAM25

6. IC Certificate No. : 28921-BLTNCAM25

7. Date of Test : 2025-04-01 to 2025-04-22

8. Location of Test : ☒ Permanent Testing Lab ☐ On Site Testing
 (Address: 65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea)

9. Test method used : 47 CRF Part 1.1310
 RSS-102 Issue 6 December 2023

10. Test Result : Refer to the test result in the test report

Affirmation	Tested by Name : Minki Kim (Signature)	Technical Manager Name : Harim Lee (Signature)
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2025-04-24

Eurofins KCTL Co.,Ltd.

As a test result of the sample which was submitted from the client, this report does not guarantee the whole product quality. This test report should not be used and copied without a written agreement by Eurofins KCTL Co.,Ltd.

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REPORT REVISION HISTORY

Date	Revision	Page No
2025-04-24	Originally issued	-

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General remarks for test reports

Statement concerning the uncertainty of the measurement systems used for the tests

(may be required by the product standard or client)

☐ Internal procedure used for type testing through which traceability of the measuring uncertainty has been established:

Procedure number, issue date and title:

Calculations leading to the reported values are on file with the testing laboratory that conducted the testing.

☒ Statement not required by the standard or client used for type testing

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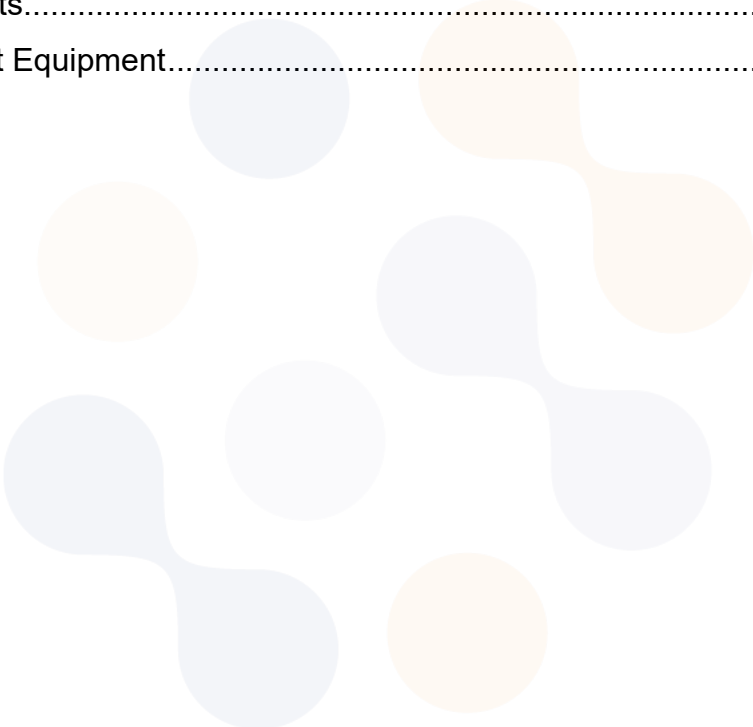
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1. General information

Client : YURA CORPORATION
 Address : 308, Pangyo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea
 Manufacturer : YURA CORPORATION
 Address : 308, Pangyo-ro, Bundang-gu, Seongnam-si, Gyeonggi-do, Republic of Korea
 Laboratory : Eurofins KCTL Co.,Ltd.
 Address : 65, Sinwon-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16677, Korea
 Accreditations : FCC Site Designation No: KR0040, FCC Site Registration No: 687132
 VCCI Registration No. : R-20080, G-20078, C-20059, T-20056
 CAB Identifier: KR0040
 ISED Number: 8035A
 KOLAS No.: KT231

2. Device information

Equipment under test : Built-In CAM
 Model : BLTN_CAM2.5_LX3
 Derivative model : BLTN_CAM2.5_NH2
 Modulation technique : WIFI(802.11a/b/g/n/ac) : DSSS, OFDM
 Number of channels : 2.4 GHz WLAN : 13 ch (20 MHz)
 : 5 GHz UNII-1 : 4 ch (20 MHz), 2 ch (40 MHz), 1 ch (80 MHz)
 Power source : DC 12 V
 Antenna specification : Ceramic Chip Antenna
 Antenna gain : 2.4 GHz WLAN : 1.84 dBi
 : 5 GHz UNII-1 : 1.43 dBi
 Frequency range : 2.4 GHz WLAN : 2 412 MHz ~ 2 472 MHz (802.11b/g/n_HT20)
 : 5 GHz UNII-1 : 5 180 MHz ~ 5 240 MHz (802.11a/n/ac_HT20/VHT20)
 : 5 190 MHz ~ 5 230 MHz (802.11n/ac_HT40/VHT40)
 : 5 210 MHz (802.11ac_VHT80)
 Software version : 01.01.70.20
 Hardware version : 1.00
 Test device serial No. : (LX3)95720-P9100, (NH2) 95720-XH500
 Operation temperature : -40 °C ~ 75 °C

2.1. Information about derivative model

The difference between basic model and derivative models is:

The basic and derivative models are the differences between filters, capacitors and resistors.

2.2. Frequency/channel operations

This device contains the following capabilities:

WLAN 2.4 GHz(802.11b/g/n_HT20), WLAN 5 GHz(802.11a/n_HT20/40/ac_VHT20/40/80)

Ch.	Frequency (MHz)
01	2 412
.	.
06	2 437
.	.
11	2 462
12	2 467
13	2 472

Table 2.1.1. 802.11b/g/n_HT20 mode

UNII-1

Ch.	Frequency (MHz)
36	5 180
40	5 200
48	5 240

Table 2.2.2. 802.11a/n/ac_HT20/VHT20

UNII-1

Ch.	Frequency (MHz)
38	5 190
46	5 230

Table 2.2.3. 802.11n/ac_HT40/VHT40

UNII-1

Ch.	Frequency (MHz)
42	5 210

Table 2.2.4. 802.11ac_VHT80

3. RF Exposure

FCC

Regulation

This document is prepared to show compliance with the RF Exposure requirements as required in §1.1310 of the FCC rules and Regulations.

The limit for Maximum Permissible Exposure (MPE), specified in FCC §1.1310, is listed in Table 1-1. According to FCC §1.1310: the criteria listed in the following table shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified in §1.1307(b).

Table 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 [minute]
(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 ~ 15 000	/	/	5	6
(B) 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/1 500	30
1 500 ~ 15 000	/	/	1.0	30

f=frequency in MHz, *= plane-wave equivalent power density

Per the guidance of KDB 680106, the E-field and H-field limits shown in the table above are extended down to 100 kHz

IC

RF Field strength and power density limits for devices used by the general public (uncontrolled environment)

Frequency Range (MHz)	Electric Field (V _{RMS} /m rms)	Magnetic Field (A _{RMS} /m)	Power Density (W/m ²)	Reference Period (minutes)
10-20	27.46	0.072 8	2	6
20-48	58.07 / $f^{0.25}$	0.154 0 / $f^{0.25}$	8.944 / $f^{0.5}$	6
48-300	22.06	0.058 52	1.291	6
300-6 000	3.142 $f^{0.341\ 7}$	0.008 335 $f^{0.341\ 7}$	0.026 19 $f^{0.683\ 4}$	6
6 000-15 000	61.4	0.163	10	6
15 000-150 000	61.4	0.163	10	616 000/ $f^{1.2}$
150 000-300 000	0.158 $f^{0.5}$	$4.21 \times 10^{-4} f^{0.5}$	$6.67 \times 10^{-5} f$	616 000/ $f^{1.2}$

Note: f is frequency in MHz.

RF field strength and power density limits for controlled-use devices (controlled environment)

Frequency Range (MHz)	Electric Field (V _{RMS} /m rms)	Magnetic Field (A _{RMS} /m)	Power Density (W/m ²)	Reference Period (minutes)
10-20	61.4	0.163	10	6
20-48	129.8 / $f^{0.25}$	0.344 4 / $f^{0.25}$	44.72 / $f^{0.5}$	6
48-100	49.33	0.130 9	6.455	6
100-6 000	15.60 $f^{0.25}$	0.041 38 $f^{0.25}$	0.645 5 $f^{0.5}$	6
6 000-15 000	137	0.364	50	6
15 000-150 000	137	0.364	50	616 000/ $f^{1.2}$
150 000-300 000	0.354 $f^{0.5}$	$9.40 \times 10^{-4} f^{0.5}$	$3.33 \times 10^{-4} f$	616 000/ $f^{1.2}$

Note: f is frequency in MHz.

For both table 7 and table 8, refer to Health Canada's Safety Code 6 for relevant notes and additional information.

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Field reference level exposure exemption limits

Field reference level (FRL) exposure evaluation is required if the separation distance between the user and/or bystander and the device's radiating element is greater than 20 cm (i.e. mobile devices), except when the device operates as follows:

- below 20 MHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than 1 W (adjusted for tune-up tolerance)
- at or above 20 MHz and below 48 MHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than $4.49/f^{0.5}$ W (adjusted for tune-up tolerance), where f is in MHz
- at or above 48 MHz and below 300 MHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than 0.6 W (adjusted for tune-up tolerance)
- at or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than $1.31 \times 10^{-2} f^{0.6834}$ W (adjusted for tune-up tolerance), where f is in MHz
- at or above 6 GHz and the source-based, time-averaged maximum EIRP of the device is equal to or less than 5 W (adjusted for tune-up tolerance)

In these cases, the information contained in the RF exposure technical brief may be limited to information that demonstrates how the EIRP was derived.

3.1. Test results

FCC

MPE (Maximum Permissible Exposure) Prediction

Predication of MPE limit at a given distance: Equation from page 18 of OET Bulletin 65, Edition 97-01

$$S = PG / 4\pi R^2 \quad (\Rightarrow R = \sqrt{PG / 4\pi S})$$

S = power density [mW/cm^2]

P = Power input to antenna [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 [cm]

IC

RF Exposure evaluation

At or above 300 MHz and below 6 GHz and the source-based, time-averaged maximum e.i.r.p. of the device is equal to or less than $1.31 \times 10^{-2} f^{0.6834} \text{ W}$ (adjusted for tune-up tolerance), where f is in MHz;

Calculation Result of RF exposure (FCC)

Maximum tune-up tolerance (Worst Case)

Mode	Frequency [MHz]	Max Tune-up Power [dBm]	Ant Gain [dBi]	Power density at 20 cm [mW/cm^2]	Limit [mW/cm^2]
2.4G_802.11g	2 462	20.00	1.84	0.030 39	1.00
5G_U-NII-1_802.11ac_VHT40	5 230	6.00	1.43	0.001 10	1.00

Note.

- The power density Pd (5th column) at a distance of 20 cm calculated from the friis transmission
 Formula is far below the limit of $1 \text{ mW}/\text{cm}^2$.

Calculation Results of RF exposure (IC)

Maximum tune-up tolerance (Worst Case)

Mode	Frequency [MHz]	Max Tune-up Power [dBm]	Ant Gain [dBi]	E.I.R.P.		Limit [mW]
				[dBm]	[mW]	
2.4G_802.11g	2 462	20.00	1.84	21.80	152.76	2 721.93
5G_U-NII-1_802.11ac_VHT40	5 230	6.00	1.43	7.40	5.53	4 555.07

Note.

- The power density Pd (5th column) at a distance of 20 cm calculated from the friis transmission
 Formula is far below the limit of $1 \text{ mW}/\text{cm}^2$.

4. Measurement Equipment

Equipment Name	Manufacturer	Model No.	Serial No.	Next Cal. Date
Spectrum Analyzer	R&S	FSV30	101437	26.01.16
Attenuator	HUBER+SUHNER	6610_SK-50-1/199_NE	ATT06	26.03.17
Power Sensor	R&S	NRP-Z81	1137.9009.02-106223-bB	25.04.24
DC Power Supply	TOYOTECH	TL305TP	20100121	25.07.01
Spectrum Analyzer	R&S	FSV30	101437	26.01.16

End of test report

