FCC PART 90
ISED RSS-111, ISSUE 5, SEPTEMBER 2014

TEST REPORT

For

Cisco Systems, Inc.

FCC: 125 West Tasman Drive
San Jose, CA 95134-1706
IC: 170 W. Tasman Drive, Building P & 7
San Jose, CA 95134, United States of America (Excluding The State of Alaska)

FCC ID: LDKIW9165DH
IC: 2461A-IW9165DH

Report Type:	**Product Type:**
Class 2 Permissive Change	Wi-Fi 6E Outdoor Access Point

Prepared By:	Kevin Chau Test Engineer
Report Number:	R2404056-90
Report Date:	2024-06-11
Reviewed By:	Alexandrae Duran RF Project Engineer

Bay Area Compliance Laboratories Corp.
1274 Anvilwood Avenue,
Sunnyvale, CA 94089, USA
Tel: +1 (408) 732-9162, Fax: +1 (408) 732-9164

A2LA ACCREDITED CERTIFICATE #3297.02

TABLE OF CONTENTS

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	R2404056-90	C2PC	2024-06-11

1 General Information

1.1 Product Description for Equipment under Test (EUT)

This test report was prepared on behalf of *Cisco Systems, Inc.*, and their product model: *IW9165DH-B (USA), IW9165DH-A (Canada)*, FCC ID: LDKIW9165DH and IC: 2461A-IW9165DH, or the "EUT" as referred to in this report. It is a Wi-Fi 6E Outdoor Access Point.

1.2 Mechanical Description

Dimensions (mm): 200 mm (L) x 190 mm (W) x 80 mm (H), Weight = 1.95kg.
Serial Number: FOC2638BL91 assigned by manufacturer.
EUT Photos: See Attachments Annex B.

1.3 Objective

This report was prepared on behalf *Cisco Systems, Inc.* in accordance with Part 90 Subparts I and Y and Part 2 Subpart J of the Federal Communication Commission's rules and with ISEDC RSS-111 Issue 5, September 2014 in order to add additional modulations/bandwidths and antenna options. Specifically to account for additional modes: a10, n10, n20, ac10, ac20 and account for additional antennas provided by the customer.

Note: n/ac(10 and 20) modes will be low-power modes while a10 mode will be high-power mode

1.4 Related Submittal(s)/Grant(s)

N/A

1.5 Test Methodology

All tests and measurements indicated in this document were performed in accordance with ANSI C63.26-2015 American National Standard for Compliance Testing of Transmitters Used in Licensed Radio Services.

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 90 Subparts I and Y and Part 2 Subpart J and with ISEDC RSS-111 Issue 5, September 2014.

1.6 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in the field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Parameter	Measurement uncertainty
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±0.57 dB
Unwanted Emissions, conducted	±1.57dB
All emissions, radiated	±4.0 dB
Temperature	±2 º C
Humidity	±5 %
DC and low frequency voltages	±1.0 %
Time	±2 %
Duty Cycle	±3 %

1.7 Test Facility Registrations

BACLs test facilities that are used to perform Radiated and Conducted Emissions tests are currently recognized by the Federal Communications Commission as Accredited with NIST Designation Number US1129.

BACL's test facilities that are used to perform Radiated and Conducted Emissions tests are currently registered with Industry Canada under Registration Numbers: 3062A-1, 3062A-2, and 3062A-3.

BACL is a Chinese Taipei Bureau of Standards Metrology and Inspection (BSMI) validated Conformity Assessment Body (CAB), under Appendix B, Phase I Procedures of the APEC Mutual Recognition Arrangement (MRA). BACL's BSMI Lab Code Number is: SL2-IN-E-1002R

BACL's test facilities that are used to perform AC Line Conducted Emissions, Telecommunications Line Conducted Emissions, Radiated Emissions from 30 MHz to 1 GHz, and Radiated Emissions from 1 GHz to 6 GHz are currently recognized as Accredited in accordance with the Voluntary Control Council for Interference [VCCI] Article 15 procedures under Registration Number A-0027.

1.8 Test Facility Accreditations

Bay Area Compliance Laboratories Corp. (BACL) is:

A- ***An independent, 3rd-Party, Commercial Test Laboratory accredited to ISO/IEC 17025:2017 by A2LA (Test Laboratory Accreditation Certificate Number 3297.02),*** in the fields of: Electromagnetic Compatibility and Telecommunications. Unless noted by an Asterisk (*) in the Compliance Matrix (See Section 3 of this Test Report), BACL's ISO/IEC 17025:2017 Scope of Accreditation includes all of the Test Method Standards and/or the Product Family Standards detailed in this Test Report..

BACL's ISO/IEC 17025:2017 Scope of Accreditation includes a comprehensive suite of EMC Emissions, EMC Immunity, Radio, RF Exposure, Safety and wireline Telecommunications test methods applicable to a wide range of product categories. These product categories include Central Office Telecommunications Equipment [including NEBS - Network Equipment Building Systems], Unlicensed and Licensed Wireless and RF devices, Information Technology Equipment (ITE); Telecommunications Terminal Equipment (TTE); Medical Electrical Equipment; Industrial, Scientific and Medical Test Equipment; Professional Audio and Video Equipment; Industrial and Scientific Instruments and Laboratory Apparatus; Cable Distribution Systems, and Energy Efficient Lighting.

B- ***A Product Certification Body accredited to ISO/IEC 17065:2012 by A2LA (Product Certification Body Accreditation Certificate Number 3297.03)*** to certify

- For the USA (Federal Communications Commission):
  1- All Unlicensed radio frequency devices within FCC Scopes A1, A2, A3, and A4;
  2- All Licensed radio frequency devices within FCC Scopes B1, B2, B3, and B4;
  3- All Telephone Terminal Equipment within FCC Scope C.
- For the Canada (Industry Canada):
  1- All Scope 1-Licence-Exempt Radio Frequency Devices;
  2- All Scope 2-Licensed Personal Mobile Radio Services;
  3- All Scope 3-Licensed General Mobile & Fixed Radio Services;
  4- All Scope 4-Licensed Maritime & Aviation Radio Services;
  5- All Scope 5-Licensed Fixed Microwave Radio Services
  6- All Broadcasting Technical Standards (BETS) in the Category I Equipment Standards List.
- For Singapore (Info-Communications Development Authority (IDA)):
  1- All Line Terminal Equipment: All Technical Specifications for Line Terminal Equipment – Table 1 of IDA MRA Recognition Scheme: 2011, Annex 2
  2- All Radio-Communication Equipment: All Technical Specifications for Radio-Communication Equipment – Table 2 of IDA MRA Recognition Scheme: 2011, Annex 2
- For the Hong Kong Special Administrative Region:
  1- All Radio Equipment, per KHCA 10XX-series Specifications;
  2- All GMDSS Marine Radio Equipment, per HKCA 12XX-series Specifications;
  3- All Fixed Network Equipment, per HKCA 20XX-series Specifications.
- For Japan:
  1- MIC Telecommunication Business Law (Terminal Equipment):
  - All Scope A1 - Terminal Equipment for the Purpose of Calls;
  - All Scope A2 - Other Terminal Equipment
  2- Radio Law (Radio Equipment):
  - All Scope B1 - Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 1 of the Radio Law
  - All Scope B2 - Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 2 of the Radio Law
  - All Scope B3 - Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 3 of the Radio Law

C- ***A Product Certification Body accredited to ISO/IEC 17065:2012 by A2LA (Product Certification Body Accreditation Certificate Number 3297.01)*** to certify Products to USA's Environmental Protection Agency (EPA) ENERGY STAR Product Specifications for:

1 Electronics and Office Equipment:
- for Telephony (ver. 3.0)
- for Audio/Video (ver. 3.0)
- for Battery Charging Systems (ver. 1.1)
- for Set-top Boxes & Cable Boxes (ver. 4.1)
- for Televisions (ver. 6.1)
- for Computers (ver. 6.0)
- for Displays (ver. 6.0)
- for Imaging Equipment (ver. 2.0)
- for Computer Servers (ver. 2.0)

2 Commercial Food Service Equipment
- for Commercial Dishwashers (ver. 2.0)
- for Commercial Ice Machines (ver. 2.0)
- for Commercial Ovens (ver. 2.1)
- for Commercial Refrigerators and Freezers

3 Lighting Products
- For Decorative Light Strings (ver. 1.5)
- For Luminaires (including sub-components) and Lamps (ver. 1.2)
- For Compact Fluorescent Lamps (CFLs) (ver. 4.3)
- For Integral LED Lamps (ver. 1.4)

4 Heating, Ventilation, and AC Products
- for Residential Ceiling Fans (ver. 3.0)
- for Residential Ventilating Fans (ver. 3.2)

5 Other
- For Water Coolers (ver. 3.0)

D- ***A NIST Designated Phase-I and Phase-II Conformity Assessment Body (CAB) for the following economies and regulatory authorities under the terms of the stated MRAs/Treaties:***

- Australia: ACMA (Australian Communication and Media Authority) – APEC Tel MRA -Phase I;
- Canada: (Innovation, Science and Economic development Canada - ISEDC) Foreign Certification Body – FCB – APEC Tel MRA -Phase I & Phase II;
- Chinese Taipei (Republic of China – Taiwan):
  - BSMI (Bureau of Standards, Metrology and Inspection) APEC Tel MRA -Phase I;
  - NCC (National Communications Commission) APEC Tel MRA -Phase I;
- European Union:
  - EMC Directive 2014/30/EU US-EU EMC & Telecom MRA CAB (NB)
  - Radio Equipment (RE) Directive 2014/53/EU US-EU EMC & Telecom MRA CAB (NB)
  - Low Voltage Directive (LVD) 2014/35/EU
- Hong Kong Special Administrative Region: (Office of the Telecommunications Authority – OFTA) APEC Tel MRA -Phase I & Phase II
- Israel – US-Israel MRA Phase I
- Republic of Korea (Ministry of Communications - Radio Research Laboratory) APEC Tel MRA -Phase I
- Singapore: (Infocomm Media Development Authority - IMDA) APEC Tel MRA -Phase I & Phase II;
- Japan: VCCI - Voluntary Control Council for Interference US-Japan Telecom Treaty VCCI Side Letter-
- USA:
  - ENERGY STAR Recognized Test Laboratory – US EPA
  - Telecommunications Certification Body (TCB) – US FCC;
  - Nationally Recognized Test Laboratory (NRTL) – US OSHA
- Vietnam: APEC Tel MRA -Phase I;

2 System Test Configuration

2.1 Justification

The EUT was configured for testing according to ANSI C63.26-2015.

The firmware build of the tested EUT was:

Linux OpenWrt 4.4.60 #57 SMP PREEMPT Tue Dec 27 03:52:15 UTC 2022 aarch64 GNU/Linux

2.2 EUT Exercise Software

The test software used was Tera Term. The software is compliant with the standard requirements being tested against.

Please refer to the following power setting table.

Antenna Gain (dBi)	Radio	Frequency (MHz)	MIMO Power Setting Antenna A & B	SISO Power Setting Antenna A	SISO Power Setting Antenna B
15	1	4950	20	26	27
		4955	20	26	27
		4980	20	26	27
	2	4950	22	29	29
		4955	22	29	29
		4980	22	29	29
⩽ 8	1	4950	35	36	36
		4955	35	36	36
		4980	35	36	36

*Data rates tested:
802.11a10: 6Mbps

Antenna Gain (dBi)	Radio	Frequency (MHz)	MIMO Power Setting Antenna A & B	SISO Power Setting Antenna A	SISO Power Setting Antenna B
15	1	4950	-7	0	0
		4955	-7	-1	0
		4980	-7	0	0
	2	4950	-5	1	1
		4955	-6	1	1
		4980	-5	1	1
⩽ 8	1	4950	10	17	17
		4955	10	16	17
		4980	10	16	16

*Data rates tested:
802.11n10: MCS0

Antenna Gain (dBi)	Radio	Frequency (MHz)	MIMO Power Setting Antenna A & B	SISO Power Setting Antenna A	SISO Power Setting Antenna B
15	1	4950	1	8	8
		4965	1	7	8
		4980	1	8	8
	2	4950	1	7	7
		4965	1	7	7
		4980	1	8	8
⩽ 8	1	4950	17	23	23
		4965	17	23	23
		4980	16	22	22

*Data rates tested:
802.11n20: MCS0

Antenna Gain (dBi)	Radio	Frequency (MHz)	MIMO Power Setting Antenna A & B	SISO Power Setting Antenna A	SISO Power Setting Antenna B
15	1	4950	-7	-1	-1
		4955	-8	-1	-2
		4980	-7	-1	-2
	2	4950	-5	0	1
		4955	-6	0	1
		4980	-5	1	1
⩽ 8	1	4950	10	17	16
		4955	10	17	16
		4980	10	16	15

*Data rates tested:
802.11ac10: MCS0

Antenna Gain (dBi)	Radio	Frequency (MHz)	MIMO Power Setting Antenna A & B	SISO Power Setting Antenna A	SISO Power Setting Antenna B
15	1	4950	1	8	8
		4965	1	8	8
		4980	1	8	8
	2	4950	1	7	7
		4965	1	7	7
		4980	1	8	8
⩽ 8	1	4950	17	23	23
		4965	17	23	23
		4980	16	22	22

*Data rates tested:
802.11ac20: MCS0

2.3 Duty Cycle Correction Factor

Radio 2

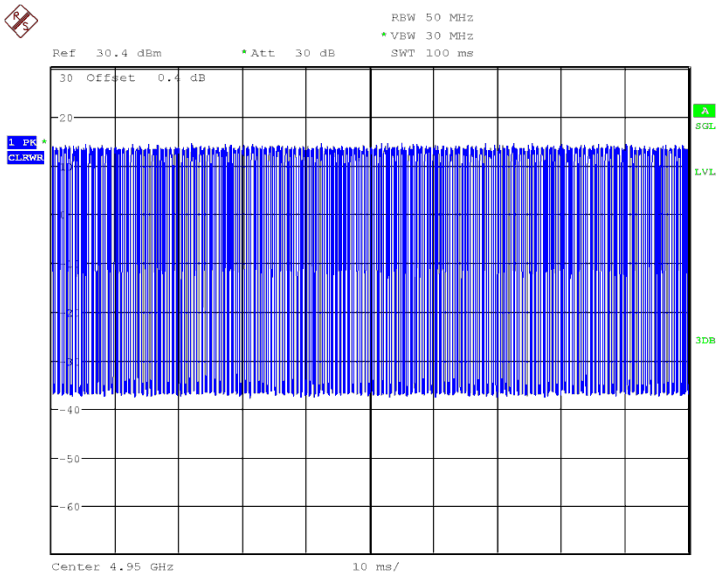
Mode	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
802.11a 10	See Note[1]	See Note[1]	48.68	3.13
802.11n 10	1.962	2.11	93.03	0.31
802.11n 20	1.931	2.011	96.02	0.18
802.11ac 10	1.976	2.143	92.2	0.35
802.11ac 20	1.936	2.016	96.03	0.18

Note[1]: The duty cycle for mode 802.11a had an inconsistent duty cycle and the on and off times were computed via exported trace values.

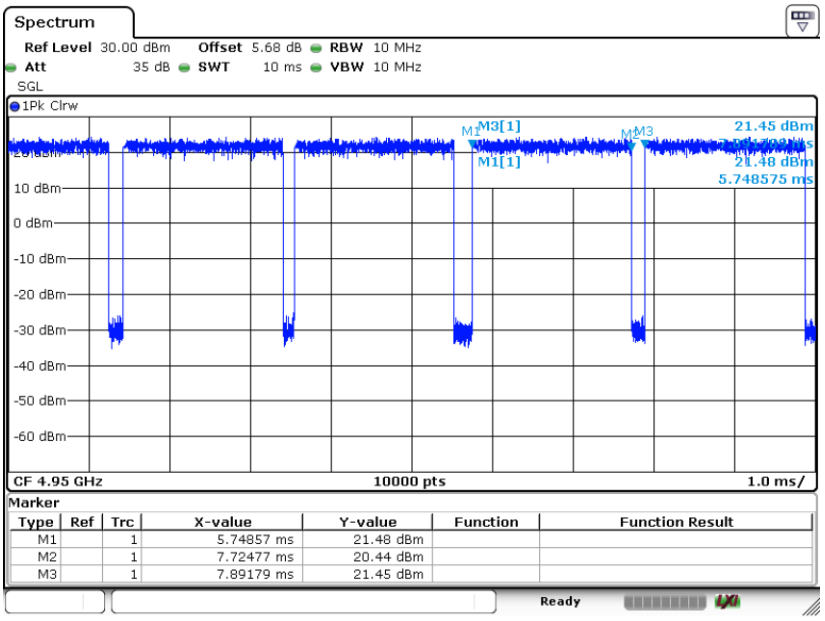
Duty Cycle = On Time (ms)/ Period (ms)
Duty Cycle Correction Factor (dB) = 10*log(1/Duty Cycle)

Please refer to the following plots.

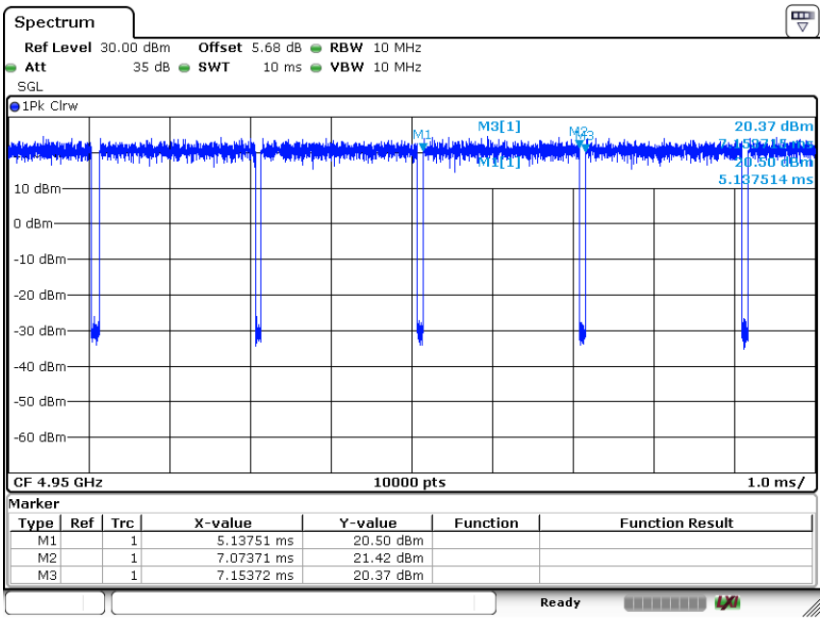
802.11a 10



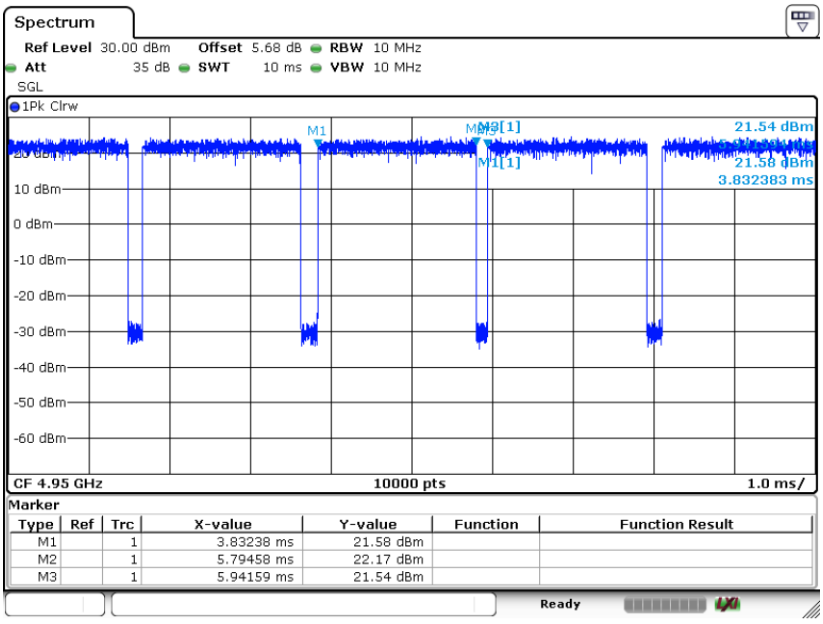
802.11ac 10



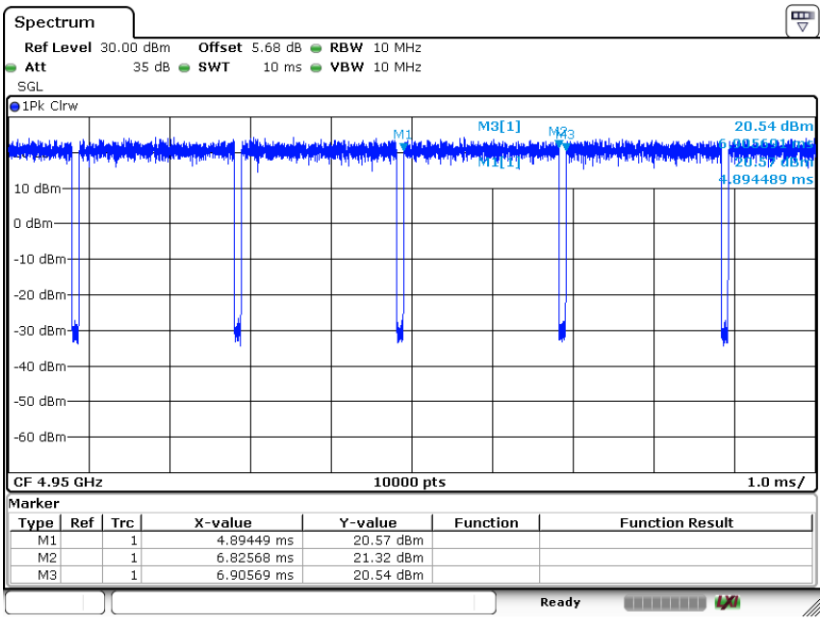
802.11ac 20



802.11n 10



802.11n 20



Radio 1

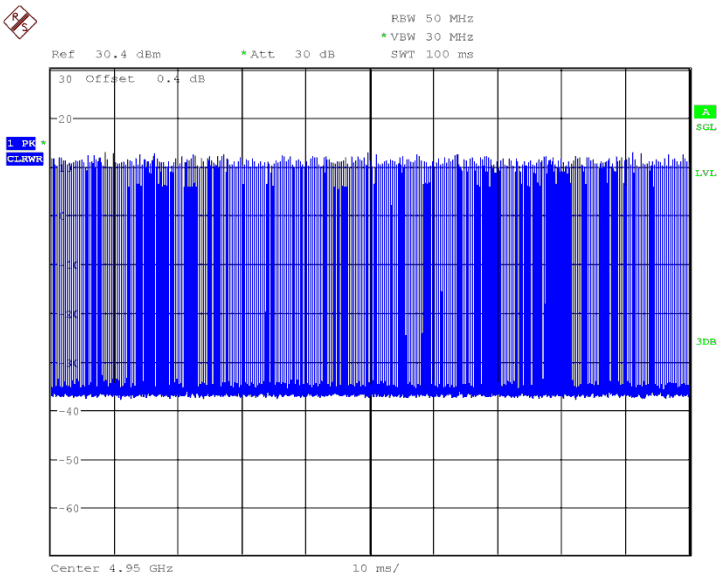
Mode	On Time (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
802.11a 10	See Note[1]	See Note[1]	48.6	3.13
802.11n 10	1.968	2.199	89.49	0.48
802.11n 20	1.931	2.048	94.28	0.26
802.11ac 10	1.976	2.194	90.06	0.45
802.11ac 20	1.934	2.086	92.71	0.33

Note[1]: The duty cycle for mode 802.11a had an inconsistent duty cycle and the on and off times were computed via exported trace values.

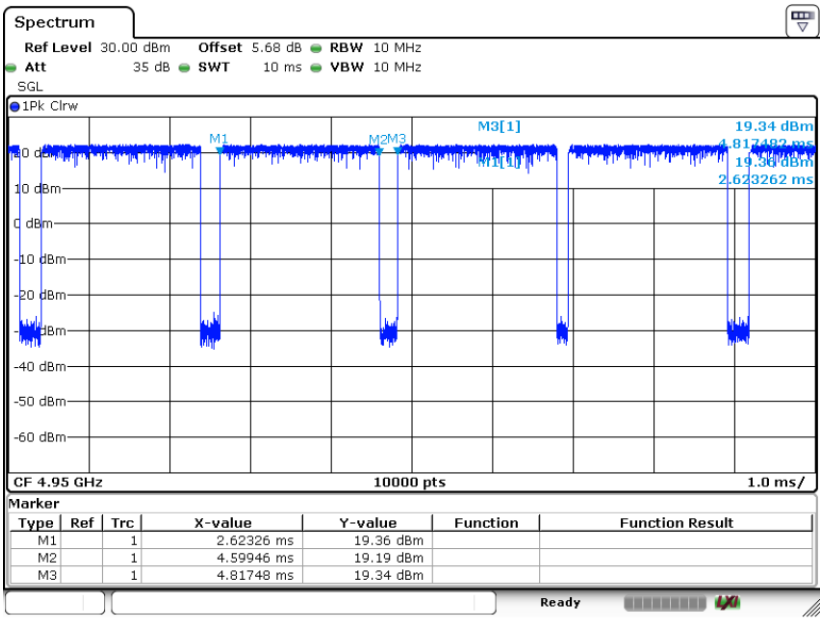
Duty Cycle = On Time (ms)/ Period (ms)
Duty Cycle Correction Factor (dB) = 10*log(1/Duty Cycle)

Please refer to the following plots.

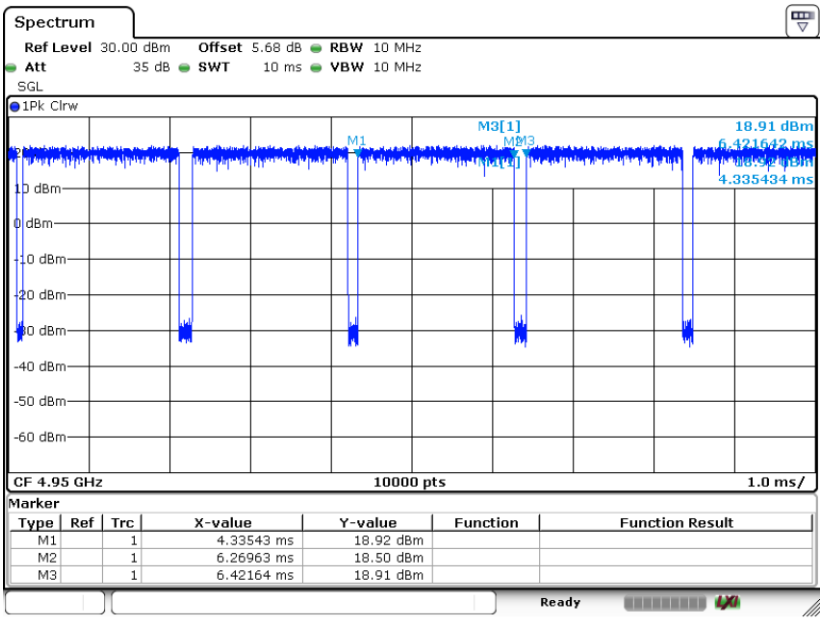
802.11a 10



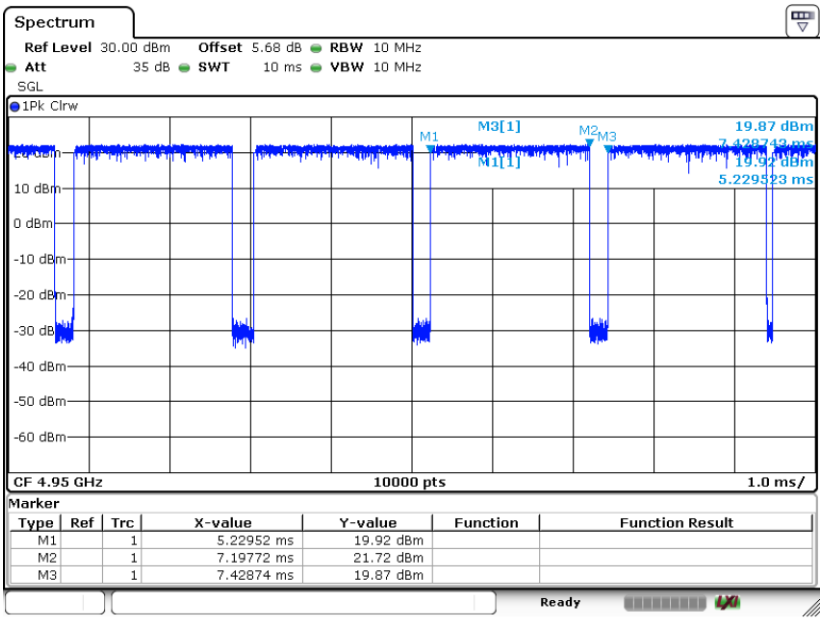
802.11ac 10



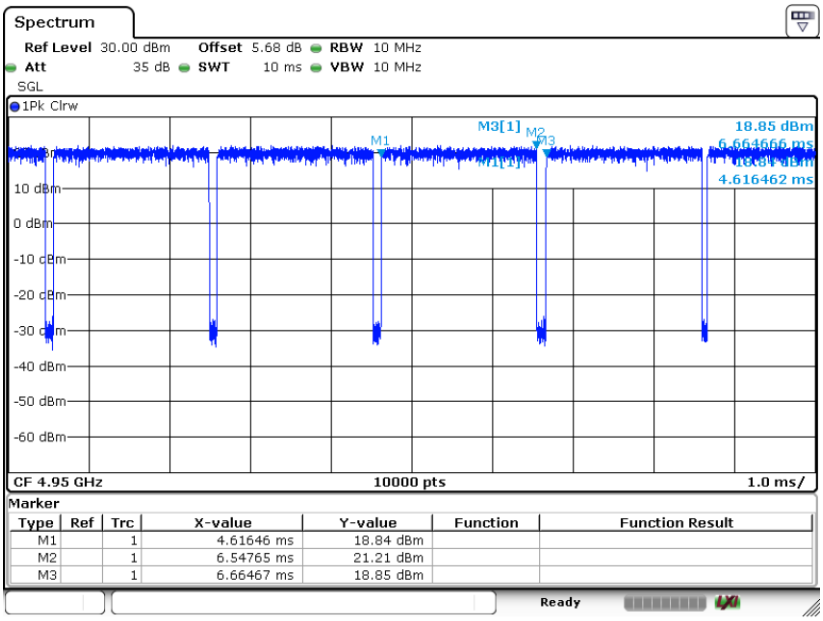
802.11ac 20



802.11n 10



802.11n 20



2.4 Equipment Modifications

No modifications were made to the EUT.

2.5 Local Support Equipment List and Details

Manufacturer	Descriptions	Models
Dell	Laptop	Latitude 5401

2.6 Remote Support Equipment List and Details

Manufacturer	Descriptions	Models
LiteON	Power Supply	PA-1600-1C

2.7 Interface Ports and Cabling

Cable Description	Length (m)	From	To
Power Cable	1	EUT	DC Power Supply
Ethernet to USB Cable	2	EUT	Laptop/Computer

3 Summary of Test Results

FCC/IC Rules	Description of Tests	Results
FCC §1.1307(b)(1), §2.1091, §90.223, RSS-Gen §3.4	RF Exposure	Compliant
FCC §2.1046, §90.205(p), §90.1215, RSS-111 § 5.3	RF Output Power	Compliant
FCC §90.1215, RSS-111 § 5.4	Transmitter Peak to Average Ratio	Compliant
FCC §2.1046, §90.205(p), §90.1215, RSS-111 § 5.3	Power Spectral Density	Compliant
FCC §2.1049, §90.209, RSS-111 § 5.3	Occupied Bandwidth	Compliant
FCC §2.1051, §90.210, RSS-111 § 5.5	Spurious Emissions at Antenna Terminals	Compliant
FCC §2.1051, §90.210, RSS-111 § 5.5	Emission Mask	Compliant
FCC §2.1055, §90.213 RSS-111 § 5.2	Frequency Tolerance	Compliant

BACL is responsible for all the information provided in this report, except when information is provided by the customer as identified in this report. Information provided by the customer, e.g., antenna gain, can affect the validity of results.

4 FCC §1.1307(b) (1), §2.1091 &§90.223 & ISEDC RSS-102 - RF Exposure

4.1 Applicable Standards

FCC §2.1091, (a) Requirements of this section are a consequence of Commission responsibilities under the National Environmental Policy Act to evaluate the environmental significance of its actions. See subpart I of part 1 of this chapter, in particular §1.1307(b).

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for Occupational/Controlled Exposure

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
1,500-100,000			5	<6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-3.0	614	1.63	*(100)	<30
3.0-30	824/f	2.19/f	*($900/f^2$)	<30
30-300	27.5	0.073	1.0	<30
300-1,500			f/1500	<30
1,500-100,000			1.0	<30

Note: f = frequency in MHz
* = Plane-wave equivalent power density

According to ISED RSS-102:

6.6 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 ƒ 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 ƒ 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.

4.2 MPE Prediction

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

$$S = PG/4\pi R^2$$

Where: S = power density
P = power input to antenna
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

4.3 RF Exposure Evaluation and Exemption for FCC and IC

FCC:

Maximum tune up power at antenna input terminal (dBm):	6.86
Maximum tune up power at antenna input terminal (mW):	4.853
Prediction frequency (MHz):	4950
Antenna Gain, maximum (dBi):	15
Maximum Antenna Gain (numeric):	31.6
Prediction distance (cm):	40
Power density of prediction frequency at 40 cm (mW/cm^2):	0.076326
FCC MPE limit for uncontrolled exposure at prediction frequency (mW/cm^2):	1.0

IC:

Maximum EIRP power = 6.86 dBm + 15 dBi = 21.86 dBm which is lesser than $1.31\times10^{-2}f^{0.6834}$ = 4.36 W = 36.42 dBm.

Simultaneous Transmission Evaluation

Total Power Densities (Percentages) = 5GHz Radio 1 Power Density % + 5GHz Radio 2 Power Density % + BLE Power Density % + 4.9GHz Radio 1

Total Relative Power Densities (Percentages) = (0.106/1.0) *100 + (0.197/1.0) *100 + (0.001/1)*100 + (0.056/1.0)*100= 10.6 % + 19.7 % + 1% + 5.6 % = 36.9%

Note: above power density percentages are referenced from *Maximum Permissible Exposure Study – Engineering Analysis EDCS#11556830* issued by *Cisco Systems, Inc.*

4.4 Conclusion

FCC: The device is compliant with the requirement FCC MPE limit for uncontrolled exposure. The maximum power density at the distance of 40 cm is 0.076326 mW/cm^2. The Limit is 1.0 mW/cm^2.

IC: The maximum EIRP power of 21.86 dBm is less than calculated 36.39 dBm source-based, time-averaged maximum EIRP exemption limit. Therefore, RF Exposure Evaluation is not required.

5 FCC §2.1046, §90.205(p) & RSS-111 § 5.3 - RF Output Power

5.1 Applicable Standards

FCC §2.1046

FCC §90.205 (p) Limitations on power are specified in § 90.1215.

Channel bandwidth (MHz)	Low power maximum conducted output power (dBm)	High power maximum conducted output power (dBm)
1	7	20
5	14	27
10	17	30
15	18.8	31.8
20	20	33

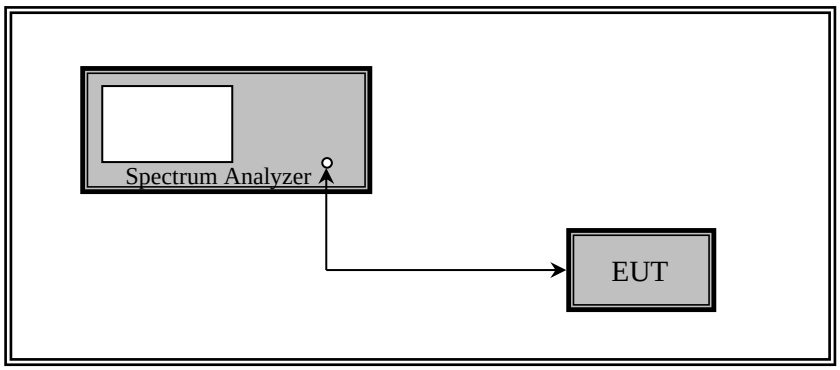
RSS-111 §5.3

Table 1 — Channel Bandwidth and Power Limits		
	Transmitter Power, P (dBm)	
Channel Bandwidth (MHz)	Low-power Device	High-power Device
1	P ≤ 7	7 < P ≤ 20
5	P ≤ 14	14 < P ≤ 27
10	P ≤ 17	17 < P ≤ 30
15	P ≤ 18.8	18.8 < P ≤ 31.8
20	P ≤ 20	20 < P ≤ 33

5.2 Test Procedure

ANSI C63.26-2015 section 5.2.4.

5.3 Test Setup Block Diagram



5.4 Test Equipment List and Details

BACL No.	Manufacturers	Descriptions	Models	Serial Numbers	Calibration Dates	Calibration Interval
912	Rhode & Schwarz	Signal Analyzer	FSV40	1321.3008k39-101203-UW	2023-06-02	13months
1224	Radiall	USB COAXIAL SWITCHES	SPNT R574X11X01 USB	-	Each time[1]	N/A
-	-	RF Cable	-	-	Each time[1]	N/A

Note[1]: Equipment was calibrated for each test.
Statement of Traceability: BACL Corp. *attests that all of the calibrations on the equipment items listed above were traceable to NIST or to another internationally recognized National Metrology Institute (NMI), and were compliant with the latest version of A2LA policy P102 "A2LA Policy on Metrological Traceability".*

5.5 Test Environmental Conditions

Temperature:	22.4° C
Relative Humidity:	45.4 %
ATM Pressure:	101.8 kPa

The testing was performed by Kevin Chau from 2024-04-16 to 2024-05-29 in the RF Site.

5.6 Test Results

Radio 2 15dBi SISO

Mode	Radio	Freq. (MHz)	Conducted Power Ant a (dBm)	Conducted Power Ant b (dBm)	Corrected Output Power Ant A (dBm)	Corrected Output Power Ant B (dBm)	Limit (dBm)
a10	1	4950	3.73	3.42	6.86	6.55	≤ 24
		4955	3.54	3.51	6.67	6.64	≤ 24
		4980	3.19	3.5	6.32	6.63	≤ 24
n10		4950	-1.04	-1.07	-0.73	-0.76	≤ 11
		4955	-1.54	-1.09	-1.23	-0.78	≤ 11
		4980	-0.91	-1.09	-0.60	-0.78	≤ 11
n20		4950	2.93	2.83	3.11	3.01	≤ 14
		4965	2.02	2.51	2.20	2.69	≤ 14
		4980	3.14	2.83	3.32	3.01	≤ 14
ac10		4950	-1.54	-1.62	-1.19	-1.27	≤ 11
		4955	-1.52	-2.06	-1.17	-1.71	≤ 11
		4980	-1.37	-2.08	-1.02	-1.73	≤ 11
ac20		4950	2.98	2.82	3.16	3.00	≤ 14
		4965	2.2	2.52	2.38	2.70	≤ 14
		4980	3.12	2.89	3.30	3.07	≤ 14

Radio 1 15dBi SISO

Mode	Radio	Freq. (MHz)	Conducted Power Ant a (dBm)	Conducted Power Ant b (dBm)	Corrected Output Power Ant A (dBm)	Corrected Output Power Ant B (dBm)	Limit (dBm)
a10	2	4950	3.44	3.45	6.57	6.58	≤ 24
		4955	3.5	3.28	6.63	6.41	≤ 24
		4980	2.75	3.1	5.88	6.23	≤ 24
n10		4950	-0.43	-0.65	0.05	-0.17	≤ 11
		4955	-0.44	-0.81	0.04	-0.33	≤ 11
		4980	-0.51	-0.83	-0.03	-0.35	≤ 11
n20		4950	2.65	2.4	2.91	2.66	≤ 14
		4965	2.23	2.08	2.49	2.34	≤ 14
		4980	2.86	2.62	3.12	2.88	≤ 14
ac10		4950	-0.91	-0.65	-0.46	-0.20	≤ 11
		4955	-0.97	-0.71	-0.52	-0.26	≤ 11
		4980	-0.52	-0.79	-0.07	-0.34	≤ 11
ac20		4950	2.47	2.49	2.80	2.82	≤ 14
		4965	2.47	2.12	2.80	2.45	≤ 14
		4980	2.8	2.73	3.13	3.06	≤ 14

Radio 1 ≤8dBi SISO

Mode	Radio	Freq. (MHz)	Conducted Power Ant a (dBm)	Conducted Power Ant b (dBm)	Corrected Output Power Ant A (dBm)	Corrected Output Power Ant B (dBm)	Limit (dBm)
a10	2	4950	6.05	6.06	9.18	9.19	≤ 30
		4955	6.09	6.08	9.22	9.21	≤ 30
		4980	5.67	5.97	8.80	9.10	≤ 30
n10		4950	5.44	5.43	5.92	5.91	≤ 17
		4955	5.47	5.42	5.95	5.90	≤ 17
		4980	5.45	5.53	5.93	6.01	≤ 17
n20		4950	8.63	8.2	8.89	8.46	≤ 20
		4965	8.31	8.46	8.57	8.72	≤ 20
		4980	8.7	8.4	8.96	8.66	≤ 20
ac10		4950	5.5	5.43	5.95	5.88	≤ 17
		4955	5.45	4.87	5.90	5.32	≤ 17
		4980	5.42	5.51	5.87	5.96	≤ 17
ac20		4950	8.23	8.11	8.56	8.44	≤ 20
		4965	8.17	8.56	8.50	8.89	≤ 20
		4980	8.67	8.44	9.00	8.77	≤ 20

Note: Corrected Output Power(dBm)=Conducted Power(dBm) + Duty Cycle Correction Factor(dB)
Note: If transmitting antennas of directional gain greater than 9 dBi are used, both the maximum conducted output power and the peak power spectral density limits should be reduced by the amount in decibels that the directional gain of the antennas exceed 9 dBi.

Please refer to the plots below

Radio 2 15dBi MIMO

Mode	Radio	Freq. (MHz)	Conducted Power Ant a (dBm)	Conducted Power Ant b (dBm)	Corrected Total Output Power (dBm)	Limit (dBm)
a10	1	4950	0.45	-0.11	6.319	≤ 24
		4955	0.64	-0.33	6.322	≤ 24
		4980	0.17	-0.23	6.115	≤ 24
n10		4950	-4.63	-4.7	-1.341	≤ 11
		4955	-4.66	-4.7	-1.356	≤ 11
		4980	-4.49	-4.71	-1.275	≤ 11
n20		4950	-0.6	-0.74	2.517	≤ 14
		4965	-1.07	-0.98	2.161	≤ 14
		4980	-0.49	-0.73	2.578	≤ 14
ac10		4950	-4.63	-4.69	-1.297	≤ 11
		4955	-5.1	-5.17	-1.772	≤ 11
		4980	-4.47	-4.69	-1.216	≤ 11
ac20		4950	-0.56	-0.72	2.547	≤ 14
		4965	-1.08	-0.96	2.167	≤ 14
		4980	-0.4	-0.72	2.629	≤ 14