RF Exposure Report

Report No.:	SA191127E11
FCC ID:	RPVATW310
Test Model:	ATW310-32
Series Model:	ATW310-31
Received Date:	Nov. 27, 2019
Test Date:	Dec. 12, 2019
Issued Date:	Jan. 07, 2020
Applicant:	Atop Technologies, Inc.
Address:	1F,No.30 R&D RD. II, Seicence-Based Industrial Park,Hsinchu,30076 Taiwan.
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
Test Location:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
FCC Registration / Designation Number:	723255 / TW2022

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
SA191127E11	Original release.	Jan. 07, 2020

1 Certificate of Conformity

Product:	Wireless coordinator
Brand:	Atop
Test Model:	ATW310-32
Series Model:	ATW310-31
Sample Status:	ENGINEERING SAMPLE
Applicant:	Atop Technologies, Inc.
Test Date:	Dec. 12, 2019
Standards:	FCC Part 2 (Section 2.1091) KDB 447498 D01 General RF Exposure Guidance v06 IEEE C95.3 -2002

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by : Phoenix Huang / Specialist , **Date:** Jan. 07, 2020

Approved by : Clark Lin / Technical Manager , **Date:** Jan. 07, 2020

2 RF Exposure

2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Average Time (minutes)
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
300-1500	…	…	f/1500	30
1500-100,000	…	…	1.0	30

f = Frequency in MHz ; *Plane-wave equivalent power density

2.2 MPE Calculation Formula

$Pd = (Pout*G) / (4*pi*r^2)$

where

Pd = power density in mW/cm^2

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

R = distance between observation point and center of the radiator in cm

2.3 Classification

The antenna of this product, under normal use condition, is at least 20 cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 Antenna Gain

With Antenna Stander							
Brand Name	Model No.	Ant. Net Gain (including cable loss) (dBi)	Freq. Range (MHz ~ MHz)	Ant. Type	Connector Type	Cable Length	Cable Loss (dB)
Invax	AN50(AN0908-5003BSM)	-0.83	902~928	Dipole	SMA	1.5 m (BS3703SM) + 6 cm	2.982
Without Antenna Stander							
Brand Name	Model No.	Ant. Net Gain (including cable loss) (dBi)	Freq. Range (MHz ~ MHz)	Ant. Type	Connector Type	Cable Length	Cable Loss (dB)
Invax	AN50(AN0908-5003BSM)	2.01	902~928	Dipole	SMA	6 cm	0.132
Note: Max. gain was selected for the final test.							

2.5 Calculation Result of Maximum Conducted Power

Evaluation Frequency (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
927.35	23.878	2.01	20	0.00755	0.61823*

Note:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. *Limit of Power Density = f/1500.

--- END ---