

MRT Technology (Suzhou) Co., Ltd Phone: +86-512-66308358 Web: www.mrt-cert.com Report No.: 2108RSU082-U3 Report Version: V01 Issue Date: 09-22-2021

RF Exposure Evaluation Declaration

FCC ID: TV7CPGI52XL

Applicant: Mikrotikls SIA

Product: cAP XL ac

Model No.: RBcAPGi-5acD2nD-XL-US

Brand Name: MikroTik

FCC Classification: Digital Transmission System (DTS)

Unlicensed National Information Infrastructure (NII)

Reviewed By: /how

Vincent Yu

Approved By:

Robin Wu





The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standards through the calibration of the equipment and evaluated measurement uncertainty herein.

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Revision History

Report No.	Version	Description	Issue Date	Note
2108RSU082-U3	Rev. 01	Initial Report	09-22-2021	Valid



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1. General Information

1.1. Applicant

Mikrotikls SIA

Brivibas gatve 214i, Riga, LV-1039, Latvia

1.2. Manufacturer

Mikrotikls SIA

Brivibas gatve 214i, Riga, LV-1039, Latvia

1.3. Testing Facility

\boxtimes	Test Site – MRT Suzhou Laboratory							
	Laboratory Location (Suzhou - Wuzhong)							
	D8 Building, No.2 Tian'edang Rd., Wuzhong Economic Development Zone, Suzhou, China							
	Laboratory Location (Suzhou - SIP)							
	4b Building, Liando U Valley, No.200 Xingpu Rd., Shengpu Town, Suzhou Industrial Park, China							
	Laboratory Accreditations							
	A2LA: 3628.01		CNAS	: L10551				
	FCC: CN1166		ISED: CN0001					
	\ <u>'</u>	□R-20025	□G-20034	□C-20020	□T-20020			
	VCCI:	□R-20141	□G-20134	□C-20103	□T-20104			
	Test Site - MRT	Shenzhen Labo	oratory					
	Laboratory Loca	tion (Shenzhen)						
	1G, Building A, Junxiangda Building, Zhongshanyuan Road West, Nanshan District, Shenzhen,							
	China							
	Laboratory Accreditations							
	A2LA: 3628.02 CNAS: L10551							
	FCC: CN1284 ISED: CN0105							
	Test Site – MRT Taiwan Laboratory							
	Laboratory Location (Taiwan) No. 38, Fuxing 2nd Rd., Guishan Dist., Taoyuan City 333, Taiwan (R.O.C.)							
	Laboratory Accreditations							
	TAF: L3261-1907	25						
	FCC: 291082, TW	/3261	ISED:	TW3261				



1.4. Equipment Description

Product Name	cAP XL ac			
Model No.	RBcAPGi-5acD2nD-XL-US			
Carial Na	For Radiated: E4F30DA8A985/052			
Serial No.	For Conducted: E4F30D549481/052			
Hardware Version	r4			
Software Version	RouterOS 6.48.1			
Wi-Fi Specification	802.11a/b/g/n/ac			
Antenna Delivery	2*TX + 2*RX			
Power Supply AC/DC Adapter				
Operating Environment Indoor Use				
Accessories				
AC/DC Adapter	Model No.: SAW30-240-1200G			
	INPUT: 100-240V ~ 50/60Hz, 0.8A			
	OUTPUT: 24.0V===1.2A, 28.8W			
Remark: The information of EUT was provided by the manufacturer, and the accuracy of the				
information shall be the responsibility of the manufacturer.				



2. RF Exposure Evaluation

2.1. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range	Electric Field	Magnetic Field	Power Density	Average Time			
(MHz)	Strength (V/m)	Strength (A/m)	(mW/cm ²)	(Minutes)			
(A) Limits for Occupational/ Control Exposures							
300-1500	-	-	f/300	6			
1500-100,000		5		6			
(B) Limits for General Population/ Uncontrolled Exposures							
300-1500	-	-	f/1500 6				
1500-100,000			1	30			

f= Frequency in MHz

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

Where

Pd = power density in mW/cm²

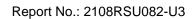
Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

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

Pd is the limit of MPE, 1mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.





2.2. Test Result of RF Exposure Evaluation

Product	cAP XL ac
Test Item	RF Exposure Evaluation

Test Mode	Frequency	Conducted	Maximum	Power Density	Limit	Result
	Band (MHz)	Power (dBm)	Tune up (dBm)	(mW/cm ²)	(mW/cm ²)	
802.11b/g/n	2412 ~ 2462	15.42	16.00	0.02810	1	Pass
802.11a/n/ac	5180 ~ 5240	17.11	18.00	0.04454	1	Pass
	5260 ~ 5320	19.87	20.00	0.07059	1	Pass
	5500 ~ 5720	19.66	20.00	0.07059	1	Pass
	5745 ~ 5825	17.26	18.00	0.04454	1	Pass

Note: The maximum antenna gain is 5.5dBi.

CONCLUSION:

So the compliance distance is 20cm for this device installed without any other radio equipment.