

Test Report No.:  
**FCC2021-0008-H**

## **Test Report**

**EUT** : LC300 LTE CPE

**MODEL** : LC300,LC300SV,LC300CA, LC300A,  
LC300B, LC300C, LC300D

**BRAND NAME** : sunvot

**CLIENT** : Ningbo Sunvot Technology Co., Ltd

**Classification Of Test** : Commission Test

**Vkan Certification & Testing Co., Ltd.**



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<b>Client</b>		Name : Ningbo Sunvot Technology Co., Ltd Address : Building 3, NO 55 Longtan Shan Road, Beilun Daqi, Ningbo, Zhejiang	
<b>Manufacturer</b>		Name : Ningbo Sunvot Technology Co., Ltd Address : Building 3, NO 55 Longtan Shan Road, Beilun Daqi, Ningbo, Zhejiang	
<b>Equipment Under Test</b>		Name : LC300 LTE CPE Model/Type: LC300, LC300SV, LC300CA, LC300A, LC300B, LC300C, LC300D Trade mark : sunvot Serial NO.: N/A Sample NO.: 1-1	
Date of Receipt.	2021.04.27	Date of Testing	2021.03.19~2021.04.27
<b>Test Specification</b>		<b>Test Result</b>	
FCC Part 2 (Section 2.1091) KDB 447498 D01 IEEE C95.1		PASS	
<b>Evaluation of Test Result</b>	The equipment under test was found to comply with the requirements of the standards applied.  <b>Issue Date: 2021.04.27</b>		
Tested by:  Zhu Cheng Name Signature	Reviewed by: Cheng Xiaochuan  Cheng Xiao Chuan Name Signature	Approved by:  Dong San Bi Name Signature	
<b>Other Aspects: NONE.</b>			
Abbreviations: OK, Pass= passed Fail = failed N/A= not applicable EUT= equipment, sample(s) under tested			
This test report relates only to the EUT, and shall not be reproduced except in full, without written approval of CVC.			



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## RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
FCC2021-0008-H	Original release	Apr. 27, 2021



## 1. GERTIFICATION

FCC ID	2AZGN-LC300-202103
PRODUCT	LC300 LTE CPE
BRAND	sunvot
MODEL	LC300
ADDITIONAL MODEL	LC300SV,LC300CA, LC300A, LC300B, LC300C, LC300D
APPLICANT	Ningbo Sunvot Technology Co., Ltd
STANDARDS	FCC Part 2 (Section 2.1091)
	KDB 447498 D01
	IEEE C95.1

Additional models (see about table) are identical with the test model LC300 except the color of the appearance and model name for trading purpose.

## 2. RF EXPOSURE LIMIT

### LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

FREQUENCY RANGE(MHz)	ELECTRIC FIELD STRENGTH (V/m)	MAGNETIC FIELD STRENGTH (A/m)	POWER DENSITY(mW/cm <sup>2</sup> )	AVERAGE TIME(minutes)
LIMITS FOR GENERAL POPULATION / UNCONTROLLED EXPOSURE				
300-1500	...	...	F/1500	30
1500-100,000	...	...	1.0	30

F = Frequency in MHz

## 3. MPE CALCULATION FORMULA

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

where

$P_d$  = power density in mW/cm<sup>2</sup>

$P_{out}$  = 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

## 4. CLASSIFICATION

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

## 5. ANTENNA GAIN

The antennas provided to the EUT, please refer to the following table:

Frequency Band	Antenna Gain (dBi)	Antenna Type
Wi-Fi 2.4GHz	2	External Antenna
Wi-Fi 5GHz	3	External Antenna

## 6. CALCULATION RESULT OF MAXIMUM CONDUCTED AV POWER

The tuned conducted Average Power (declared by client)

Mode	Frequency (MHz)	Target Power (dBm)	Tolerance (dBm)	Lower Tolerance (dBm)	Upper Tolerance (dBm)
802.11b	2412-2462MHz	15	+/-1	14	16
802.11g	2412-2462MHz	14.5	+/-1	13.5	15.5
802.11n 20	2412-2462MHz	14	+/-1	13	15
802.11n 40	2422-2452MHz	13	+/-1	12	14
802.11a	5180-5240MHz 5745-5825MHz	15	+/-1	14	16
802.11n 20	5180-5240MHz 5745-5825MHz	15	+/-1	14	16
802.11n 40	5190-5230MHz 5755-5795MHz	14.5	+/-1	13.5	15.5
802.11ac 80	5210MHz 5775MHz	11	+/-1	10	12

The measured conducted Average Power

Mode	Frequency (MHz)	Averaged Power (dBm)
802.11b	2437	15.17
802.11g	2462	15.12
802.11n 20	2462	14.91
802.11n 40	2437	14.96
802.11a	5785	15.57
802.11n 20	5240	14.96
802.11n 40	5795	15.2
802.11ac 80	5775	11.66

**Note: the power of MIMO mode is relatively high, so this mode is evaluated in the report.**



FREQUENCY BAND (MHz)	MAX POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm <sup>2</sup> )	LIMIT (mW/cm <sup>2</sup> )
Wi-Fi 2.4GHz	39.8107	2	20	0.012552468	1.0
Wi-Fi 5GHz	39.8107	3	20	0.015802621	1.0

**CONCLUSION:**

The Wi-Fi can transmit simultaneously, the formula of calculated the MPE is:

**CPD1 / LPD1 + CPD2 / LPD2 + .....etc. < 1**

**CPD = Calculation power density**

**LPD = Limit of power density**

$(0.012552468/1) + (0.015802621/1) = 0.028355089 < 1$ , which is less than the "1" limit.



## Important

- (1) The test report is valid with the official seal of the laboratory and the signatures of Test engineer, Author and Reviewer simultaneously.
- (2) The test report is invalid if altered.
- (3) Any photocopies or part photocopies in the test report are forbidden without the written permission from the laboratory.
- (4) Objections to the test report must be submitted to the laboratory within 15 days.
- (5) Generally, commission test is responsible for the tested samples only.

Address of the laboratory:

Vkan Certification & Testing Co., Ltd.

Address: No.3, Tiantaiyi Road, Kaitai Avenue, Science City, Guangzhou, China

Post Code: 510663

Tel: 020-32293888

FAX: 020-32293889

E-mail: [office@cvc.org.cn](mailto:office@cvc.org.cn)