RF Exposure Evaluation declaration

Product Name : Intel® Wireless-AC 9560

Model No. : 9560NGW

FCC ID : 2ANPM9560NG

Applicant : Nexstgo Company Limited

Address : FLAT/RM 1602 16/F ENTERPRISE SQUARE TOWER II NO.9 SHEUNG YUET ROAD, KOWLOON BAY, Hong Kong

Date of Receipt : Oct. 24, 2018

Date of Declaration : Dec. 07, 2018

Report No. : 18A0330R-SAUSP03V00

Issued Date: Dec. 07, 2018
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Product Name	Intel® Wireless-AC 9560
Applicant	Nexstgo Company Limited
Address	FLAT/RM 1602 16/F ENTERPRISE SQUARE TOWER II NO.9 SHEUNG YUET ROAD, KOWLOON BAY, Hong Kong
Manufacturer	Intel Mobile Communications France SAS
Model No.	9560NGW
FCC ID.	2ANPM9560NG
Trade Name	Intel
Applicable Standard	FCC 47 CFR 1.1310
Test Result	Complied

Documented By : Anny Chou
(Senior Adm. Specialist / Anny Chou)

Tested By : wen Lee
(Senior Engineer / Wen Lee)

Approved By :
(Director / Vincent Lin)

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Intel® Wireless-AC 9560
Trade Name	Intel
Model No.	9560NGW
FCC ID.	2ANPM9560NG
TX Frequency	802.11b/g/n-20MHz:2412MHz~2472MHz, 802.11n-40MHz: 2422MHz~2462MHz 802.11a/n-20:5180-5320MHz,5500-5720MHz, 5745-5825MHz 802.11n-40/MHz: 5190-5310MHz, 5510-5670MHz, 5755-5795MHz 802.11ac-20MHz: 5720MHz, 802.11ac-40MHz: 5710MHz 802.11ac-80MHz: 5210-5290MHz, 5530-5690MHz, 5775MHz 802.11ac-160: 5250MHz, BT : 2402 – 2480MHz
Channel separation	802.11b/g/n-20MHz: 5 MHz, 802.11a/n-20/ac-20MHz: 20MHz 802.11n-40/ac-40MHz: 40MHz, 802.11ac-80MHz: 80MHz 802.11ac-160MHz: 320MHz, BT : 1MHz , BLE : 2MHz
Number of Channels	802.11b/g/n-20MHz: 13, n-40MHz: 9 802.11a/n-20MHz: 24; 802.11n-40MHz: 11 802.11ac-20MHz: 1, 802.11ac-40MHz: 1,802.11ac-80MHz: 6 802.11ac-160MHz: 1, BT : 79 , BLE : 40
Data Rate	802.11b: 1-11Mbps, 802.11a/g: 6-54Mbps, 802.11n: up to 300Mbps 802.11ac-80MHz: up to 866.7Mbps, 802.11ac-160: up to 1733.3Mbps BT : 3Mbps , BLE : 1Mpbs
Type of Modulation	DSSS/OFDM/BPSK/QPSK/16QAM/64QAM/256QAM FHSS: GFSK(1Mbps) / π /4DQPSK(2Mbps) / 8DPSK(3Mbps)
Antenna Type	PIFA/SLOT Antenna
Channel Control	Auto
Antenna Gain	Refer to the table “Antenna List”

1.2. Antenna List :

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	Jieng Tai International Electronic Corp.	JT1805YY0311 (Main) JT1805YY1511 (Aux)	PIFA	-0.88 dBi for 2.4GHz 2.41dBi for 5.15-5.25 GHz 1.96dBi for 5.25-5.35 GHz 1.71dBi for 5.47-5.725 GHz 1.27 dBi for 5.725~5.850GHz
2	Well Green Technology Co., LTD.	SNSUPWIPB01 (Main) SNSUPWIPB03 (Aux)	SLOT	-0.07 dBi for 2.4GHz -0.13dBi for 5.15-5.25 GHz 1.49dBi for 5.25-5.35 GHz 0.73dBi for 5.47-5.725 GHz 0.66 dBi for 5.725~5.850GHz

Note: Only the higher gain antenna was tested and recorded in this report.

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 (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm^2)	Average Time (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

Friis Formula

Friis transmission 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

2.2. Test Result of RF Exposure Evaluation

Product : Intel® Wireless-AC 9560
Test Item : RF Exposure Evaluation

WLAN 2.4G

Band	Frequency	Conducted Worst Case Peak Power (dBm)	Worst Case Duty Cycle (%)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm^2)	Limit (mW/cm^2)	Pass/Fail
802.11g	2442	29.88	80	1215.93	0.242	1	Pass

Note: The conducted output power is refer to report No.: 18A0330R-RFUSP12V00 from the DEKRA.

WLAN 5G Peak Gain: 2.41dBi

Band	Frequency	Conducted Worst Case AV Power (dBm)	Worst Case Duty Cycle (%)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm^2)	Limit (mW/cm^2)	Pass/Fail
802.11n20	5825	24.11	79	326.12	0.113	1	Pass

Note: The conducted output power is refer to report No.: 18A0330R-RFUSP12V00-A from the DEKRA.