

RF Exposure Evaluation Report

Product Name : Intel® Wi-Fi 6 AX201

Model No. : AX201D2W

FCC ID : PD9AX201D2

Applicant : Intel Corporation

Address : 100 Center Point Circle Suite 200 Columbia,
South Carolina 29210, United States

Date of Receipt : Mar. 30, 2019

Date of Declaration : Nov. 04, 2019

Report No. : 1930505R-SAUSP03V00

Report Version : V1.0

The test results relate only to the samples tested.

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

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Issued Date: Nov. 04, 2019

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Product Name	Intel® Wi-Fi 6 AX201
Applicant	Intel Corporation
Address	100 Center Point Circle Suite 200 Columbia, South Carolina 29210, United States
Manufacturer	INTEL MOBILE COMMUNICATIONS
Model No.	AX201D2W
FCC ID.	PD9AX201D2
Trade Name	Intel
Applicable Standard	FCC 47 CFR 1.1307
Test Result	Complied

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Approved By : 
(Director / Vincent Lin)

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Intel® Wi-Fi 6 AX201
Trade Name	Intel
Model No.	AX201D2W
FCC ID.	PD9AX201D2
Frequency Range	802.11b/g/n/ax-20MHz:2412MHz~2472MHz 802.11n/ax-40MHz: 2422MHz~2462MHz 802.11a/n/ax-20MHz: 5180-5320MHz, 5500-5700MHz, 5720 MHz, 5745-5825MHz 802.11n/ax-40MHz: 5190-5310MHz, 5510-5670MHz, 5710 MHz, 5755-5795MHz 802.11ac/ax-80MHz: 5210-5290MHz, 5530-5690MHz, 5775MHz 802.11ac/ax-160MHz: 5250MHz, 5570MHz BT : 2402-2480MHz
Channel Number	802.11b/g/n/ax-20MHz: 13, n/ax-40MHz: 9 802.11a/n/ax-20MHz: 25; 802.11n/ax-40MHz: 12 802.11ac/ax-80MHz: 6, 802.11ac/ax-160MHz: 2 BT : 79 , BLE : 40
Type of Modulation	DSSS/OFDM/BPSK/QPSK/16QAM/64QAM/256QAM/1024-QAM FHSS: GFSK(1Mbps) / π / 4DQPSK(2Mbps) / 8DPSK(3Mbps)
Antenna Type	Dipole Antenna
Channel Control	Auto
Antenna Gain	Refer to the table “Antenna List”

Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	WIESON Technologies co.,Ltd.	GY121HT0321-003-H / GY121C888-001-H	Dipole Antenna	2.89dBi for 2.4 GHz 2.92 dBi for 5.15~5.25GHz 3.19 dBi for 5.25~5.35GHz 4.41 dBi for 5.47~5.725GHz 4.22 dBi for 5.725~5.85GHz

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

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

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

2.2. Test Result of RF Exposure Evaluation

Product : Intel® Wi-Fi 6 AX201
 Test Item : RF Exposure Evaluation

WLAN 2.4G Peak Gain: 2.89dBi

Band	Frequency (MHz)	Conducted maximum 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
WLAN 2.4G	2442	25.17	90.17	364.70	0.1411	1	Pass

Note: The conducted output power is refer to original report No.: 1930505R-RFUSP23V00, 1930505R-RFUSP23V00-A, 1930505R-RFUSP25V00 from the DEKRA.

WLAN 5G Peak Gain: 4.41dBi

Band	Frequency (MHz)	Conducted maximum Average 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
WLAN 5G	5710	21.79	89.79	168.18	0.0924	1	Pass

Note: The conducted output power is refer to original report No.: 1930505R-RFUSP30V00 from the DEKRA.