RF Exposure Evaluation declaration

Product Name	Access Point/Sensor
Model No.	O-90, O-90-E
FCC ID	PPQ-O90

Applicant	LITE-ON Technology Corp.
Address	Bldg. C, 90, Chien 1 Road, Chung Ho, New Taipei City 23585, Taiwan, R.O.C

Date of Receipt	Dec. 07, 2015
Date of Declaration	Dec. 11, 2015
Report No.	15C0146R-RFUSP05V00

1. RF Exposure Evaluation

1.1. 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

Pd id the limit of MPE, 1 mW/cm^2. 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.

1.2. Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.
The temperature and related humidity: 18℃and 78％ RH.

1.3. Test Result of RF Exposure Evaluation

Product : Access Point/Sensor
Test Item : RF Exposure Evaluation
Test Site : No.3 OATS

For Internal Antenna:

Operation Frequency	5260-5320MHz,5500-5700MHz 5270-5310MHz,5510-5670MHz 5720MHz, 5710MHz, 5290MHz,5530-5690MHz
Maximum Conducted output power	18.09dBm
Antenna gain	8.6dBi

Output Power Into Antenna & RF Exposure Evaluation Distance:

Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm2)
64.41692655	0.0928

Power density is lower than the limit (1 mW/cm2).

For External Antenna:

Operation Frequency	5260-5320MHz,5500-5700MHz 5270-5310MHz,5510-5670MHz 5720MHz, 5710MHz, 5290MHz,5530-5690MHz
Maximum Conducted output power	21.88dBm
Antenna gain	4.58dBi

Output Power Into Antenna & RF Exposure Evaluation Distance:

Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm2)
154.1700453	0.0881

Power density is lower than the limit (1 mW/cm2).