RF Exposure Evaluation declaration

Product Name : iDEA^{+} Docking Station

Model No. : PTI-7011N

FCC ID : YHYPTI-7011N

Applicant : PARADIGM TECHNOLOGY INC.

Address : 3F.-1, No.49, Ln. 35, Jihu Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)

Date of Receipt : Dec. 26, 2011

Date of Declaration : Jan. 17, 2012

Report No. : 121009R-RFUSP42V01

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 : iDEA+ Docking Station
Test Item : RF Exposure Evaluation
Test Site : No.3 OATS

(802.11b) Output Power Into Antenna & RF Exposure Evaluation Distance (2dBi):

Channel	Frequency (MHz)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm2)
01	2412.00	46.2381	0.014579
06	2437.00	48.4172	0.015266
11	2462.00	48.8652	0.015407

The RF exposure at 20 cm is below limit.

(802.11g) Output Power Into Antenna & RF Exposure Evaluation Distance (2dBi):

Channel	Frequency (MHz)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm2)
01	2412.00	103.7528	0.032714
06	2437.00	104.7129	0.033016
11	2462.00	106.9055	0.033708

The RF exposure at 20 cm is below limit.

(n20) Output Power Into Antenna & RF Exposure Evaluation Distance (2dBi):

Channel	Frequency (MHz)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm2)
01	2412.00	96.8278	0.030530
06	2437.00	98.6279	0.031098
11	2462.00	98.1748	0.030955

The RF exposure at 20 cm is below limit.

(n40) Output Power Into Antenna & RF Exposure Evaluation Distance (2dBi):

Channel	Frequency (MHz)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm2)
03	2422.00	98.4011	0.031026
06	2437.00	92.6830	0.029223
09	2452.00	86.6962	0.027336

The RF exposure at 20 cm is below limit.