RF Exposure Evaluation Declaration

FCC ID:	2ALTTCT1200
APPLICANT:	i3-TECHNOLOGIES NV
Application Type:	Certification
Product:	i3SYNC
Model No.:	i3SYNC RX40
Serial Model:	CT1200,CT1210
Trademark:	
FCC Rule Part(s):	Part 2.1091 (Mobile)
Test Procedure(s):	KDB 447498 D01v06
Test Date:	May 31~ June 29, 2018

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Testing Laboratory
3261

Revision History

Report No.	Version	Description	Issue Date	Note
1909TW1202-U3	1.0	Original Report	2019-09-24	

1. PRODUCT INFORMATION

1.1. Equipment Description

Product Name	i3SYNC
Model No.	i3SYNC RX40
Serial Model	CT1200,CT1210
Trademark	
Supports Radios Spec.	WLAN: 2.4G: 802.11b/g/n-20/n-40
Wi-Fi Specification	802.11 b/g/n (2TX / 2RX)
Frequency Range	**2.4GHz:** For 802.11b/g/n-20M: 2412 ~ 2462 MHz For 802.11n-40M: 2422 ~ 2452 MHz
Type of Modulation	802.11b: DSSS, DBPSK, DQPSK, CCK 802.11g/n-20M/n-40M: OFDM, BPSK, QPSK, 16QAM, 64QAM

Note:

(1)There are two appearances of this product, one with internal antenna for HDMI Transmitter(Tx) Box, another with external antenna for HDMI Receiver(Rx) Box. The RF circuits of these two appearances are the same.

(2)Model Difference: The difference of model is only for marketing different, the other is the same.

1.2. Antenna Description

i3SYNC RX40 (Internal Antenna)

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	Auden Techno Corp.	AUD17-003	PIFA	2.68dBi

i3SYNC RX40 (External Antenna)

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	Auden Techno Corp.	AUD17-001	Dipole	2.64dBi

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	30
1500-100,000	--	--	1.0	30

f= Frequency in MHz

Calculation 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 is the limit of MPE, $1mW/cm^2$. 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.

2.2. Test Result of RF Exposure Evaluation

For 2.4GHz ISM Band (802.11b/g/n-HT20/n-HT40)**:**

Mode	Frequency Band (MHz)	Output Power (dBm)	Output Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
(TX) Internal Antenna	2412~2462	21.75	334.2	2.68	20	0.1232	1
(RX) External Antenna	2412~2462	21.75	334.2	2.64	20	0.1221	1

The End