RF Exposure Report

Report No.:	SA120113E07J
FCC ID:	PQRFXE2000-G
Test Model:	FXE2000-G
Received Date:	Apr. 20, 2016
Test Date:	May 04, 2016
Issued Date:	May 25, 2016
Applicant:	Contec Co., Ltd.
Address:	3-9-31, Himesato, Nishiyodogawa-ku Osaka Japan 555-0025
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.
Test Location:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan R.O.C.

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Release Control Record

Issue No.	Description	Date Issued
SA120113E07J	Original release.	May 25, 2016

1 Certificate of Conformity

Product:	Wireless LAN Adapter
Brand:	CONTEC
Test Model:	FXE2000-G
Sample Status:	ENGINEERING SAMPLE
Applicant:	Contec Co., Ltd.
Test Date:	May 04, 2016
Standards:	FCC Part 2 (Section 2.1091) KDB 447498 D01 General RF Exposure Guidance v06 IEEE C95.1-1992

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by : Wendy Wu. , **Date:** May 25, 2016

Wendy Wu / Specialist

Approved by : , **Date:** May 25, 2016

May Chen / Manager

2 RF Exposure

2.1 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)
Limits For General Population / Uncontrolled Exposure				
300-1500	…	…	F/1500	30
1500-100,000	…	…	1.0	30

F = Frequency in MHz

2.2 MPE 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

2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. So, this device is classified as **Mobile Device**.

2.4 Antenna Gain

Set 1								
Brand	Model	Antenna Type	Peak Gain(dBi) (Exclude cable loss)	Net Gain (dBi) (Include cable loss)	Connecte r Type	Cable Length (cm)	Cable Loss (dB)	Transmitter Circuit
FDK	AN1523	chip	2.4GHz: 2 5GHz :1	2.4GHz: 0.6 5GHz :-0.4	U.FL	16	1.4	Chain (0) & Chain (1)

Set 2									
Brand	Model	Antenna Type	Peak Gain(dBi) (Exclude cable loss)	Net Gain (dBi) (Include cable loss)	Connecter Type	Cable Length (cm)	Cable Loss (dB)	Total Cable Loss (dB)	Transmitter Circuit
Azure Solutions, Inc.	MR-1700-W	Vehicle	2.4GHz: 4	2.4GHz: 2.1695	Cable 1: R-SMA Cable 2: U.FL	Cable 1: 152 Cable 2: 20	Cable 1: 0.9305 Cable 2: 0.9	1.8305	Chain (0) & Chain (1)

Set 3									
Brand	Model	Antenna Type	Peak Gain(dBi) (Exclude cable loss)	Net Gain (dBi) (Include cable loss)	Connecter Type	Cable Length (cm)	Cable Loss (dB)	Total Cable Loss (dB)	Transmitter Circuit
Azure Solutions, Inc.	MR-6000	Vehicle	5GHz :4	5GHz: 0.7978	Cable 1: R-SMA Cable 2: U.FL	Cable 1: 152 Cable 2: 20	Cable 1: 1.5022 Cable 2: 1.7	3.2022	Chain (0) & Chain (1)

Note: When operating with Ant Set 2 or Set 3. The antenna cable1 & cable2 should be connected together.

3 Calculation Result Of Maximum Conducted Power

For 2.4GHz and 5GHz (U-NII-1, UNII-2A and UNII-2C) data was copied from the original test report (Report No.: SA120113E07)

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
2412 - 2462	662.965	5.18	20	0.435	1
5180 - 5240	25.827	3.81	20	0.012	1
5260 - 5320	30.624	3.81	20	0.015	1
5500 - 5580 & 5660 - 5700	62.559	3.81	20	0.030	1
5745 - 5825	101.569	3.81	20	0.04856	1

NOTE:
2.4GHz: Directional gain = 2.17dBi +10 log(2) = 2.61dBi = 5.18dBi.
5 GHz: Directional gain,
ANT Set 1:
UNII-1, UNII-2A, UNII-2C and UNII-3: Directional gain = -0.4dBi +10 log(2) = 2.61dBi = 2.61dBi

ANT Set 3:
UNII-1, UNII-2A, UNII-2C and UNII-3: Directional gain = 0.8dBi +10 log(2) = 2.61dBi = 3.81dBi

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