

## 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.

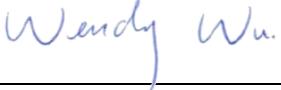
**Test Date:** May 04, 2016

**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 :  , 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 <sup>2</sup> )	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

$$Pd = (Pout \cdot G) / (4 \cdot \pi \cdot r^2)$$

where

Pd = power density in mW/cm<sup>2</sup>

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 )	Connecter Type	Cable Length (cm)	Cable Loss (dB)	Transmitter Circuit	
FDK	AN1523	chip	2.4GHz: 2	2.4GHz: 0.6	U.FL	16	1.4	Chain (0) & Chain (1)	
			5GHz :1	5GHz :-0.4					
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 1: 152	Cable 1: 0.9305	1.8305	Chain (0) & Chain (1)
					Cable 2: U.FL	Cable 2: 20	Cable 2: 0.9		
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 1: 152	Cable 1: 1.5022	3.2022	Chain (0) & Chain (1)
					Cable 2: U.FL	Cable 2: 20	Cable 2: 1.7		
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 <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )
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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