

RF Exposure Report

Report No.: SA140128E04E

FCC ID: PQRFXE2000-DG

Test Model: FXE2000-DG

Received Date: Apr. 20, 2016

Test Date: May. 03, 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.

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Release Control Record

Issue No.	Description	Date Issued
SA140128E04E	Original release.	May 25, 2016

1 Certificate of Conformity

Product: Wireless LAN Adapter

Brand: CONTEC

Test Model: FXE2000-DG

Sample Status: ENGINEERING SAMPLE

Applicant: Contec Co., Ltd.

Test Date: Apr. 29 to May. 03, 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 : May Chen , **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

$$P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 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

The antennas provided to the EUT, please refer to the following table:

Transmitter Circuit	Brand	Model	Gain (dBi) (Exclude cable loss)	Cable Loss (dB)	Net Gain (dBi) (Include cable loss)	Antenna Type	Connector Type	Frequency range (GHz to GHz)	Cable Length (cm)
Chain (0)	FDK	A3001	2	1	1	Chip	U.FL	2.4~2.4835	6
			1	2	-1			5.15~5.85	
Chain (1)	FDK	A3001	2	1.5	0.5	Chip	U.FL	2.4~2.4835	16
			1	2.5	-1.5			5.15~5.85	

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.: SA140128E04)

Frequency Band (MHz)	Max Power (mW)	Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
2412 - 2462	835.103	3.76	20	0.39488	1
5180 - 5240	27.593	1.76	20	0.00823	1
5260 - 5320	22.719	1.76	20	0.00452	1
5500 - 5580 & 5660 - 5700	55.700	1.76	20	0.01108	1
5745 - 5825	70.136	1.76	20	0.02093	1

NOTE:

2.4GHz: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 3.76\text{dBi}$.

5GHz: Directional gain = $10 \log[(10^{G1/20} + 10^{G2/20})^2 / 2] = 1.76\text{dBi}$

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