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RF EXPOSURE REPORT

REPORT NO.: SA120622C07-1

MODEL NO.: TL-WA830RE

FCC ID: TE7WA830REV2

RECEIVED: Jun. 22, 2012

TESTED: Jul. 21 ~ Aug. 28, 2012

ISSUED: Sep. 10, 2012

APPLICANT: TP-LINK TECHNOLOGIES CO., LTD.

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(H.K.) Ltd., Taoyuan Branch

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RELEASE CONTROL RECORD

| ISSUE NO. | REASON FOR CHANGE | DATE ISSUED |
|---------------|-------------------|---------------|
| SA120622C07-1 | Original release | Sep. 10, 2012 |



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1. CERTIFICATION

PRODUCT: 300Mbps Wireless N Range Extender
MODEL NO.: TL-WA830RE
BRAND: TP-LINK
APPLICANT: TP-LINK TECHNOLOGIES CO., LTD.
TESTED: Jul. 21 ~ Aug. 28, 2012
TEST SAMPLE: PROTOTYPE
STANDARDS: **FCC Part 2 (Section 2.1091)**
FCC OET Bulletin 65, Supplement C (01-01)
IEEE C95.1

The above equipment (model: TL-WA830RE) 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 : Jemma Yang , **DATE :** Sep. 10, 2012
Jemma Yang / Specialist

APPROVED BY : Gary Chang , **DATE :** Sep. 10, 2012
Gary Chang / Technical 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

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

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 Calculation result of maximum conducted power

| MODE | MAX POWER (dBm) | ANTENNA GAIN (dBi) | DISTANCE (cm) | POWER DENSITY (mW/cm ²) | LIMIT (mW/cm ²) |
|-----------------|-----------------|--------------------|---------------|-------------------------------------|-----------------------------|
| 802.11b | 20.76 | 8.01 | 20 | 0.1497 | 1 |
| 802.11g | 27.32 | 8.01 | 20 | 0.6785 | 1 |
| 802.11n (20MHz) | 26.94 | 5.00 | 20 | 0.3111 | 1 |
| 802.11n (40MHz) | 25.92 | 5.00 | 20 | 0.2457 | 1 |

802.11b/g: Directional gain = 5dBi + 10log(2) = 8.01dBi