



RF EXPOSURE REPORT

REPORT NO.: SA130607E05A
MODEL NO.: xPico Wi-Fi, xPico W1003, xPico W1002
FCC ID: R68XPICOW
RECEIVED: Oct. 21, 2014
TESTED: Oct. 23, 2014
ISSUED: Nov. 19, 2014

APPLICANT: Lantronix
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ISSUED BY: Bureau Veritas Consumer Products Services
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TABLE OF CONTENTS

RELEASE CONTROL RECORD.....	3
1. CERTIFICATION.....	4
2. RF EXPOSURE LIMIT	5
3. MPE CALCULATION FORMULA.....	5
4. CLASSIFICATION.....	5
5. ANTENNA GAIN	5
6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER	6



RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
SA130607E05A	Original release	Nov. 19, 2014



1. CERTIFICATION

PRODUCT: 802.11b/g/n Wireless Module, xPico Wi-Fi SMT Module

BRAND NAME: Lantronix

MODEL NO.: xPico Wi-Fi, xPico W1003, xPico W1002

TEST SAMPLE: ENGINEERING SAMPLE


APPLICANT: Lantronix

TESTED: Oct. 23, 2014

STANDARDS: FCC Part 2 (Section 2.1091)
KDB 447498 D03
IEEE C95.1

The above equipment (Model: xPico W1002) 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:** Nov. 19, 2014
(Lori Chung, Specialist)

Approved By :  , **Date:** Nov. 19, 2014
(May Chen, Manager)

2. RF EXPOSURE LIMIT

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

3. 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

4. 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**.

5. ANTENNA GAIN

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

Ant. No.	Brand	Model	Antenna Type	Net Gain (dBi) (Include cable loss)	Connector Type	Frequency range (MHz to MHz)	Cable Loss (dB)	Cable Length (mm)
1	ethertronics	1000602	PIFA	2.5	IPEX	2390 ~ 2490	NA	50
2	Wanshih	WSS002	Dipole	2.38	IPEX	2400 ~ 2483.5	0.5	100
3	Advanced Ceramic X	AT8010-E 2R9HAA	Chip	2	IPEX	2400 ~ 2483.5	0.5	0

6. CALCULATION RESULT OF MAXIMUM CONDUCTED POWER

802.11b

FREQUENCY (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
2412 - 2462	87.902	2.5	20	0.03110	1.00

802.11g

FREQUENCY (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
2412 - 2462	221.309	2.5	20	0.07829	1.00

802.11n (HT20)

FREQUENCY BAND (MHz)	CONDUCTED POWER (mW)	ANTENNA GAIN (dBi)	DISTANCE (cm)	POWER DENSITY (mW/cm ²)	LIMIT (mW/cm ²)
2412 - 2462	197.242	2.5	20	0.06978	1.00

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