

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

ADDRESS: 167 Technology, Irvine, CA 92618 (USA)

ISSUED BY: Bureau Veritas Consumer Products Services
(H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory

LAB ADDRESS : No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung Tsuen,
Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan,
R.O.C.

TEST LOCATION (1): No. 81-1, Lu Liao Keng, 9th Ling, Wu Lung Tsuen,
Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan,
R.O.C.

TEST LOCATION (2): No. 49, Ln. 206, Wende Rd., Shangshan Tsuen,
Chiung Lin Hsiang, Hsin Chu Hsien 307, Taiwan,
R.O.C.

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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

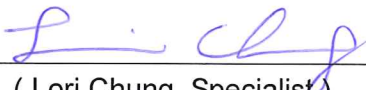
TEST SAMPLE: ENGINEERING SAMPLE


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 |

--- END ---