

RF Exposure Evaluation Report

APPLICANT : Lantronix, Inc.
EQUIPMENT : Wi-Fi & Bluetooth Module
BRAND NAME : LANTRONIX
MODEL NAME : xPico 600
FCC ID : R68XPICO600
STANDARD : 47 CFR Part 2.1091
FCC KDB 447498 D01 V06

The product evaluation date was started from Mar. 17, 2026 and completed on Mar. 17, 2026. We, Sporton International Inc. (Kunshan), would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1091 and FCC KDB 447498 D01 v06, and pass the limit. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.



Approved by: Si Zhang



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Revision History

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FA612610	Rev. 01	Initial issue of report.	Mar. 31, 2026



1. Administration Data

1.1. Testing Laboratory

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Testing Laboratory			
Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	SAR01-KS	CN1257	314309

Applicant	
Company Name	Lantronix, Inc.
Address	48 Discovery, Suite 250 Irvine, CA 92618 USA

Manufacturer	
Company Name	Lantronix, Inc.
Address	48 Discovery, Suite 250 Irvine, CA 92618 USA

2. Description of Equipment Under Test (EUT)

Product Feature & Specification	
EUT Type	Wi-Fi & Bluetooth Module
Brand Name	LANTRONIX
Model Name	xPico 600
FCC ID	R68XPICO600
Wireless Technology and Frequency Range	WLAN 2.4GHz Band: 2412 MHz ~ 2462 MHz WLAN 5.2GHz Band: 5180 MHz ~ 5240 MHz WLAN 5.3GHz Band: 5260 MHz ~ 5320 MHz WLAN 5.5GHz Band: 5500 MHz ~ 5720 MHz WLAN 5.8GHz Band: 5745 MHz ~ 5825 MHz Bluetooth: 2402 MHz ~ 2480 MHz
Mode	WLAN 2.4GHz : 802.11b/g/n/ax HT20/HE20 WLAN 5GHz : 802.11a/n HT20 WLAN 5GHz 802.11ac/ax VHT20/HE20 Bluetooth LE
Antenna Gain	<Ant 1/2> WLAN2.4GHz: 0.2 dBi WLAN 5.2GHz: -0.7 dBi WLAN 5.3GHz: -0.8 dBi WLAN 5.5GHz: -1.2 dBi WLAN 5.8GHz: -1.5 dBi Bluetooth: 0.2 dBi
Antenna Type	WLAN: Dipole Antenna Bluetooth: Dipole Antenna
EUT Stage	Identical Prototype

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

Comments and Explanations:

1. The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.
2. The maximum RF output tune up power, antenna gain also the safe distance used for evaluate RF exposure were declared by manufacturer.

3. Maximum RF average output tune up power among production units

<2.4GHz WLAN >

Mode		Maximum Average Power (dBm)	
		Ant 1	Ant 2
2.4GHz	802.11b	20.00	20.00
	802.11g	19.00	19.00
	802.11n-HT20	19.00	19.00
	802.11ax-HE20	19.00	19.00

<WLAN 5GHz>

Mode		Maximum Average Power (dBm)	
		Ant 1	Ant 2
5.2GHz	802.11a	20.00	20.00
	802.11n-HT20	20.00	20.00
	802.11ac-VHT20	20.00	20.00
	802.11ax-HE20	20.00	20.00
5.3GHz	802.11a	20.00	20.00
	802.11n-HT20	20.00	20.00
	802.11ac-VHT20	20.00	20.00
	802.11ax-HE20	20.00	20.00
5.5GHz	802.11a	19.00	19.00
	802.11n-HT20	19.00	19.00
	802.11ac-VHT20	19.00	19.00
	802.11ax-HE20	19.00	19.00
5.8GHz	802.11a	19.00	19.00
	802.11n-HT20	19.00	19.00
	802.11ac-VHT20	19.00	19.00
	802.11ax-HE20	19.00	19.00

<Bluetooth>

Mode		Maximum Average power(dBm)	
		Ant 1	Ant 2
Bluetooth	LE	9.0	9.0

4. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna



5. Radio Frequency Radiation Exposure Evaluation

5.1. Standalone Power Density Calculation

Band	Frequency (MHz)	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Average EIRP (mW)	Power Density at 20cm (mW/cm ²)	Limit (mW/cm ²)	Power Density / Limit
Bluetooth	2402.0	0.20	9.00	9.200	8.318	0.002	1.000	0.002
2.4GHz WLAN	2412.0	0.20	20.00	20.200	104.713	0.021	1.000	0.021
5.2GHz WLAN	5180.0	-0.70	20.00	19.300	85.114	0.017	1.000	0.017
5.3GHz WLAN	5260.0	-0.80	20.00	19.200	83.176	0.017	1.000	0.017
5.5GHz WLAN	5500.0	-1.20	19.00	17.800	60.256	0.012	1.000	0.012
5.8GHz WLAN	5745.0	-1.50	19.00	17.500	56.234	0.011	1.000	0.011

Note:

- For conservativeness, the lowest uplink frequency of each band is used to determine the MPE limit of that band.
- Chose the maximum RF output tune up power and the maximum antenna gain of all antennas among same frequency WLAN/BT bands to perform MPE calculation conservatively.

5.2. Collocated Power Density Calculation

Maximum Bluetooth Power Density / Limit	Maximum WLAN 5GHz Power Density / Limit	Σ (Power Density / Limit) of Bluetooth + WLAN 5GHz
0.002	0.017	0.019

Note:

- Σ (Power Density / Limit): This is a summation of [(power density for each transmitter/antenna included in the simultaneous transmission)/ (corresponding MPE limit)], for Bluetooth + WLAN 5GHz.
- According to the EUT characteristic, WLAN 2.4GHz and WLAN 5GHz cannot transmit simultaneously.
- According to the EUT characteristic, Bluetooth and WLAN 2.4GHz cannot transmit simultaneously.
- According to the EUT characteristic, Bluetooth and WLAN 5GHz can transmit simultaneously.
- Considering all transmitter of the EIRP performance listed in the table above, the aggregated (power density /limit) is smaller than 1, and MPE collocated transmitters is compliant.

Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.

-----THE END-----