MPE Report
According to
FCC CFR Title 47 Part 15 Subpart C

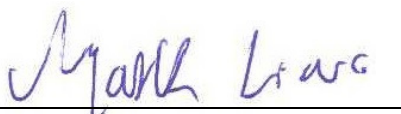|		
Applicant	**:**	**Hangzhou Guoguo Technology Co., Ltd.**
Address	**:**	**No.88 jiangnan avenue, xixing street, binjiang district, Hangzhou, Zhejiang,China.**
Manufacturer	**:**	**Zhejiang Yusong Technology Co., Ltd.**
Address	**:**	**No.1 Qixian Road, Science Park, Liangzhu University, Yuhang district, Hangzhou,Zhejiang,China**
Equipment	**:**	**SMART EXPRESS CABINET**
Model No.	**:**	**PB1801**
FCC ID	**:**	**2APPS-PB1801**
Test Period	**:**	**May.16,2018~ May.24, 2018**

■The test result refers exclusively to the test presented test model / sample.

■Without written approval of *Cerpass Technology Corporation Test Laboratory.* the test report shall not be reproduced exc- ept in full.

■The test report must not be used by the clients to claim product certification approval by **NVLAP** or any agency of the Government.

I HEREBY CERTIFY THAT :
The measurements shown in this test report were made in accordance with the procedures given in **ANSI C63.10 – 2013, FCC Part15.247**and the energy emitted by this equipment was *passed.*

Approved by:

Laboratory Accreditation:

Mark Liao / Assistant Manager

☒ Cerpass Technology Corporation Test Laboratory

TAF LAB Code:	1439

Radio Frequency Exposure

<u>LIMIT</u>

For 2.4G Band: According to §15.247(i), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess of the Commission's guidelines. See § 1.1307(b)(1) of this chapter.

For 5.0G Band: According to FCC §1.1310, The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in § 1.1307(b).

EUT Specification

EUT	SMART EXPRESS CABINET
Frequency band (Operating)	☒ WLAN: 2.412GHz ~ 2.462GHz ☐ WLAN: 5.150GHz ~ 5.250GHz ☐ WLAN: 5.745GHz ~ 5.825GHz
Device category	☐ Portable (<20cm separation) ☒ Mobile (>20cm separation)
Exposure classification	☐ Occupational/Controlled exposure (S = 5mW/cm^2) ☒ General Population/Uncontrolled exposure (S=1mW/cm^2)
Antenna diversity	☒ Single antenna ☐ Multiple antennas ☐ Tx diversity ☐ Rx diversity ☒ Tx/Rx diversity

Max. output power for 2.4G Band	Mode	Power (dBm)	Power (mW)
	IEEE802.11b	19.40	87.10
	IEEE802.11g	23.10	204.17
	IEEE802.11n(20MHz)	23.01	199.99
	IEEE802.11n(40MHz)	22.79	190.11

Antenna gain (Max)	5dBi for 2.4G Band
Evaluation applied	☒ MPE Evaluation* ☐ SAR Evaluation ☐ N/A

Remark:

1. *The maximum output power is 23.10dBm (0.204W) at 2412MHz (with numeric 3.16antenna gain.) for2.4G band*
2. *DTS device is not subject to routine RF evaluation; MPE estimate is used to justify the compliance.*
3. *For mobile or fixed location transmitters, no SAR consideration applied. The maximum power density is 1.0 mW/cm^2 even if the calculation indicates that the power density would be larger.*

Note: Simultaneous transmission is not applicable for this EUT.

TEST RESULTS

No non-compliance noted.

Calculation

Given $E = \dfrac{\sqrt{30 \times P \times G}}{d}$ & $S = \dfrac{E^2}{3770}$

> Where   E = Field strength in Volts / meter
> P = Power in Watts
> G = Numeric antenna gain
> d = Distance in meters
> S = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{3770 d^2}$$

Changing to units of mW and cm, using:

> P (mW) = P (W) / 1000 and
> d (cm) = d(m) / 100

Yields

$$S = \frac{30 \times (P/1000) \times G}{3770 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2}$$ ***Equation 1***

> Where   d = Distance in cm
> P = Power in mW
> G = Numeric antenna gain
> S = Power density in mW / cm^2

Maximum Permissible Exposure

Modulation Mode	Frequency band (MHz)	Max. Conducted output power(dBm)	Antenna gain (dBi)	Distance (cm)	Power density (mW/cm^2)	Limit (mW/cm^2)
IEEE802.11b	2412-2462	19.40	5	20	0.0548	1
IEEE802.11g	2412-2462	23.10	5	20	0.1284	1
IEEE802.11n20	2412-2462	23.01	5	20	0.1258	1
IEEE802.11n40	2422-2452	22.79	5	20	0.1196	1