

RF EXPOSURE REPORT



Report No.: 16070893-FCC-H2

Supersede Report No.: N/A

| | | |
|--|--|---|
| Applicant | Bean Information Technology Co., Ltd | |
| Product Name | Core+ 10.1,Core+11.6 | |
| Model No. | W1102 | |
| Serial No. | W1001 | |
| Test Standard | FCC 2.1093:2015 | |
| Test Date | August 05 to September 01, 2016 | |
| Issue Date | September 02, 2016 | |
| Test Result | <input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail | |
| Equipment complied with the specification <input checked="" type="checkbox"/> | | |
| Equipment did not comply with the specification <input type="checkbox"/> | | |
| Loren Luo | David Huang |  |
| Loren Luo Test Engineer | David Huang Checked By | |
| This test report may be reproduced in full only Test result presented in this test report is applicable to the tested sample only | | |

Issued by:

SIEMIC (SHENZHEN-CHINA) LABORATORIES

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Laboratories Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.



In addition to testing and certification, SIEMIC provides initial design reviews and compliance management throughout a project. Our extensive experience with China, Asia Pacific, North America, European, and International compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the global markets.

Accreditations for Conformity Assessment

| Country/Region | Scope |
|----------------|------------------------------------|
| USA | EMC, RF/Wireless, SAR, Telecom |
| Canada | EMC, RF/Wireless, SAR, Telecom |
| Taiwan | EMC, RF, Telecom, SAR, Safety |
| Hong Kong | RF/Wireless, SAR, Telecom |
| Australia | EMC, RF, Telecom, SAR, Safety |
| Korea | EMI, EMS, RF, SAR, Telecom, Safety |
| Japan | EMI, RF/Wireless, SAR, Telecom |
| Singapore | EMC, RF, SAR, Telecom |
| Europe | EMC, RF, SAR, Telecom, Safety |

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1. Report Revision History

| Report No. | Report Version | Description | Issue Date |
|-----------------|----------------|-------------|--------------------|
| 16070893-FCC-H2 | NONE | Original | September 02, 2016 |
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2. Customer information

| | |
|------------------|---|
| Applicant Name | Bean Information Technology Co., Ltd |
| Applicant Add | No. 810 of Software Building, Keji RD 1St., Science and Technology Park, Nanshan District, Shenzhen City, Guangdong Province, China |
| Manufacturer | Dongguan WeiHeng Digital Technology Co.,Ltd. |
| Manufacturer Add | Build 3, Fengquan Industry Area YaoShan,XieGang Town DongGuan |

3. Test site information

| | |
|----------------------|---|
| Lab performing tests | SIEMIC (Shenzhen-China) LABORATORIES |
| Lab Address | Zone A, Floor 1, Building 2 Wan Ye Long Technology Park South Side of Zhoushi Road, Bao'an District, Shenzhen, Guangdong China 518108 |
| FCC Test Site No. | 718246 |
| IC Test Site No. | 4842E-1 |
| Test Software | Radiated Emission Program-To Shenzhen v2.0 |

4. Equipment under Test (EUT) Information

Description of EUT: Core+ 10.1,Core+11.6

Main Model: W1102

Serial Model: W1001

Date EUT received: August 04, 2016

Test Date(s): August 05 to September 01, 2016

Antenna Gain: Bluetooth/ WIFI: 4.36dBi

Antenna Type: PIFA antenna

Type of Modulation: 802.11b/g/n: DSSS, OFDM
Bluetooth: GFSK, π /4DQPSK, 8DPSK

RF Operating Frequency (ies): WIFI: 802.11b/g/n(20M): 2412-2472 MHz
Bluetooth: 2402-2480 MHz

Number of Channels: WIFI :802.11b/g/n(20M): 13CH
Bluetooth: 79CH

Port: Power Port, Earphone Port, USB Port, USB-C Port, HDMI Port,
Docking Port, MIC Port

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Adapter 1:

Model: PS12F050K2000UD

Input: AC100-240V~50/60Hz,0.35A

Output: DC 5.0V,2000mA

Adapter 2:

Input Power:

Model: JK050200-S04USA

Input: AC100-240V~50/60Hz,0.5A

Output: DC 5.0V,2000mA

Battery:

Spec: 3.7V,3500mAh(31.45Wh)

Trade Name :

BIT

FCC ID:

2AHWT-W1102

5. FCC §2.1093 - Radiofrequency radiation exposure evaluation: portable devices.

5.1 RF Exposure

Standard Requirement:

According to §15.247 (i) and §1.1307(b)(1), 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 level in excess of the Commission's guidelines.

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f_{(\text{GHz})}}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR,}^{16}$ where

- $f_{(\text{GHz})}$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation¹⁷
- The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum *test separation distance* is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum *test separation distance* is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

Routine SAR evaluation refers to that specifically required by § 2.1093, using measurements or computer simulation. When routine SAR evaluation is not required, portable transmitters with output power greater than the applicable low threshold require SAR evaluation to qualify for TCB approval.

$$\text{result} = P\sqrt{F} / D$$

P= Maximum turn-up power in mW

F= Channel frequency in GHz

D= Minimum test separation distance in mm

5.2 Test Result

Bluetooth Mode:

| Modulation | CH | Frequency (MHz) | Conducted Power (dBm) | Tune Up Power (dBm) | Max Tune Up Power (dBm) | Max Tune Up Power (mW) | Result | Limit |
|---------------|------|-----------------|-----------------------|---------------------|-------------------------|------------------------|--------|-------|
| GFSK | Low | 2402 | 3.446 | 3.5±1 | 4.5 | 2.818 | 0.87 | 3 |
| | Mid | 2441 | 3.459 | 3.5± | 4.5 | 2.818 | 0.88 | 3 |
| | High | 2480 | 4.032 | 3.5± | 4.5 | 2.818 | 0.89 | 3 |
| $\pi/4$ DQPSK | Low | 2402 | 3.456 | 3.5± | 4.5 | 2.818 | 0.87 | 3 |
| | Mid | 2441 | 3.459 | 3.5± | 4.5 | 2.818 | 0.88 | 3 |
| | High | 2480 | 4.116 | 3.5± | 4.5 | 2.818 | 0.89 | 3 |
| 8-DPSK | Low | 2402 | 7.783 | 7.5±1 | 8.5 | 7.079 | 2.19 | 3 |
| | Mid | 2441 | 7.709 | 7.5±1 | 8.5 | 7.079 | 2.21 | 3 |
| | High | 2480 | 7.923 | 7.5±1 | 8.5 | 7.079 | 2.23 | 3 |

Result: Compliance

No SAR measurement is required.