

# Agile Workspace Limited

## TEST REPORT

**SCOPE OF WORK**  
EMC TESTING—PUCK4

**REPORT NUMBER**  
240112077GZU-005

|                   |                       |
|-------------------|-----------------------|
| <b>ISSUE DATE</b> | <b>[REVISED DATE]</b> |
| 29-October-2024   | [-----]               |

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## TEST REPORT

Applicant Name & : Agile Workspace Limited  
Address : 31 Boston Road, Grafton, Auckland, 1023, New Zealand  
Manufacturing Site : Same as applicant  
Intertek Report No: 240112077GZU-005  
FCC ID: 2AUTH-PUCK4

## Test standards

**47 CFR PART 1, Subpart I, Section 1.1310**  
**KDB 680106 D01 RF Exposure Wireless Charging App v03r01**

## Sample Description

Product : Desk Booking Puck  
Model No. : PUCK4  
Electrical Rating : Input: DC 24V/5A; 120W  
Wireless charger: 15W max.  
USB-A:5V/3A max; USB-C: 20V3A max  
Serial No. : Not Labeled  
Date Received : 12 January 2024  
Date Test : 08 August 2024-14 August 2024  
Conducted

Prepared and Checked By

Approved By:



Elena Lei  
Project Engineer



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Sr. Project Engineer

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## TEST REPORT

### 1.0 TEST RESULT SUMMARY

Classification of EUT: Class B

| Test Item | Standard                                 | Result |
|-----------|--|--------|
| EMF       | 47 CFR PART 1, Subpart I, Section 1.1310 | PASS   |

Remark:

When determining the test results, measurement uncertainty of tests has been considered.

## TEST REPORT

### 2.0 General Description

#### 2.1 Product Description

|                     |                             |
|---------------------|-----------------------------|
| Operating Frequency | 128-146KHz                  |
| Type of Modulation: | Load modulation             |
| Antenna Type        | Inductive loop coil antenna |
| Power Supply:       | 24V DC by Adapter           |
| Power cord:         | N/A                         |

#### 2.2 Test Facility

Room102/104, No 203, KeZhu Road, Science City, GETDD Guangzhou, China

A2LA Certificate Number 0078.10

Intertek Testing Services Shenzhen Ltd. Guangzhou Branch is accredited by A2LA and Listed in FCC website. FCC accredited test labs may perform both Certification testing under Parts 15 and 18 and Declaration of Conformity testing.

#### 2.3 EUT Exercising Software

| Description          | Manufacturer | Model No. | SN/Version          | Supplied by |
|----------------------|--------------|-----------|---------------------|-------------|
| For fixing frequency | ---          | --        | PuTTY Configuration | Applicant   |

#### 2.4 Special Accessories

N/A

#### 2.5 Equipment Modification

Any modifications installed previous to testing by Agile Workspace Limited will be incorporated in each production model sold / leased in the United States.

No modifications were installed by Intertek Testing Services Shenzhen Ltd. Guangzhou Branch.

## TEST REPORT

### 2.6 Support Equipment List and Description

This product was tested with corresponding support equipment as below:

Cable

| Description                | Model No. | Connector type | Cable length/type | Supplied by |
|----------------------------|-----------|----------------|-------------------|-------------|
| Antenna cable              | RF-01     | SMA            | 0.2 m(shielded)   | Intertek    |
| Adapter power supply       | --        | AC             | 1.2 m(unshielded) | applicant   |
| Adapter to EUT             | --        | AC-DC          | 1.5 m(unshielded) | applicant   |
| EUT to PIR sensor          | --        | DC             | 1.0 m(unshielded) | applicant   |
| EUT to Cement resistance*2 | --        | DC             | 0.8 m(unshielded) | applicant   |

Support equipment

| Description                 | Model No.       | Rating  | Supplied by |
|-----------------------------|-----------------|---|-------------|
| NoteBook                    | Latitude 5420   | 100-240VAC,50/60Hz                                    | Intertek    |
| Adapter                     | GM130-2400500-F | 100-240VAC,50/60Hz 2.5A                               | applicant   |
| Wireless charging load(WPT) | --              | 5W,7.5W,10W,15W                                       | Intertek    |
| NFC card                    | --              | --  | applicant   |
| PIR sensor                  | --              | --  | applicant   |
| Cement resistance*4         | --              | 2 $\Omega$ ,5 $\Omega$ ,1 $\Omega$ ,0.5 $\Omega$ ,50W | Intertek    |

**Remark:** WPT client was one of typical client devices, it's selected such that the EUT was fully exercised at maximum power from its transmitter. It will not be sold together.

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested based on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above evaluated respectively

|               |                                |  |
|---------------|--------------------------------|--|
| Pretest mode  | Description                    |  |
| Standby Mode  | kept transmitting continuously |  |
| Charging Mode | CH: Low                        | WPT client is charging at 1% battery power, 50% and 99% battery power respectively, keep transmitting continuously |
|               | CH: Middle                     |  |
|               | CH: High                       |  |

## TEST REPORT

### 3.0 EMF TEST

#### 3.1 Standard Requirement

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 limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.1m normally can be maintained between the user and the device.

##### (a) Limits for Occupational / Controlled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S)(mW/cm <sup>2</sup> ) | Averaging Times  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|--|--|
| 0.3-3.0               | 614                               | 1.63                              | (100)*                                 | 6  |
| 3.0-30                | 1842/f                            | 4.89/f                            | (900/f)*                               | 6  |
| 30-300                | 61.4                              | 0.163                             | 1.0                                    | 6  |
| 300-1500              | --                                | --                                | F/300                                  | 6  |
| 1500-100000           | --                                | --                                | 5                                      | 6  |

##### (b) Limits for General Population / Uncontrolled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S)(mW/cm <sup>2</sup> ) | Averaging Times  E  <sup>2</sup> ,  H  <sup>2</sup> or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|--|--|
| 0.3-1.34              | 614                               | 1.63                              | (100)*                                 | 30   |
| 1.34-30               | 824/f                             | 2.19/f                            | (180/f)*                               | 30   |
| 30-300                | 27.5                              | 0.073                             | 0.2                                    | 30   |
| 300-1500              | --                                | --                                | F/1500                                 | 30   |
| 1500-100000           | --                                | --                                | 1.0                                    | 30   |

Note: f=frequency in MHz; \*Plane-wave equivalent power density

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### 3.2 Test Data

Input Voltage: 120V/60Hz  
Ambient Condition: 24°C, 50%RH

Test distance: 15 cm surrounding the device, and 20 cm away from the surface from the coil.

H-Filed Strength:

| Test Position | Probe Measure Result (A/m) |                             |                             | 50% Limit (A/m) | Limit (A/m) |
|---------------|----------------------------|-----------------------------|-----------------------------|-----------------|-------------|
|               | Mobile in 1% battery power | Mobile in 50% battery power | Mobile in 99% battery power |                 |             |
| Side 1        | 0.050                      | 0.051                       | 0.050                       | 0.815           | 1.63        |
| Side 2        | 0.064                      | 0.064                       | 0.063                       | 0.815           | 1.63        |
| Side 3        | 0.053                      | 0.052                       | 0.052                       | 0.815           | 1.63        |
| Side 4        | 0.084                      | 0.081                       | 0.083                       | 0.815           | 1.63        |
| Top           | 0.125                      | 0.123                       | 0.124                       | 0.815           | 1.63        |

MPE ratio:

$$0.125 \text{ (A/m)} / 0.815 \text{ (A/m)} = 0.15337$$

The EUT is composite device with NFC, 900M, Bluetooth and WPT function, NFC function MPE ratio is 0.000005, 900M function MPE ratio is 0.00019, Bluetooth function MPE ratio is 0.00042, WPT function MPE ratio is 0.15337.

the test data please refer to FCC ID: 2AUTH-PUCK4, 240112077GZU MPE report.

Sum of the MPE ratio for all simultaneously transmitting antennas:

$$0.00042 + 0.00019 + 0.000005 + 0.15337 = 0.153985 < 1$$

### 4.0 Test Equipment List

| Equip. No. | Equipment             | Model   | Manufacturer | Cal. date  | Due date   |
|------------|-----------------------|---------|--------------|------------|------------|
| EM007-03   | Exposure Level Tester | ELT-400 | NARDA        | 11/03/2024 | 10/03/2025 |

\*\*\*\*\*End of the test report\*\*\*\*\*