

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                       |                                                                                    |                        |                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------|------------------------------|
| <b>Prüfbericht-Nr.:</b><br><i>Test report no.:</i>                                                                                                                                                                                                                                                                                                                                                                                                                  | CN217P50 (FCC-RFEXP)<br>001                                                           | <b>Auftrags-Nr.:</b><br><i>Order no.:</i>                                          | 238515716              | Seite 1 von 8<br>Page 1 of 8 |
| <b>Kunden-Referenz-Nr.:</b><br><i>Client reference no.:</i>                                                                                                                                                                                                                                                                                                                                                                                                         | N/A                                                                                   | <b>Auftragsdatum:</b><br><i>Order date:</i>                                        | 2021-05-27             |                              |
| <b>Auftraggeber:</b><br><i>Client:</i>                                                                                                                                                                                                                                                                                                                                                                                                                              | HP Inc.<br>3390 East Harmony Road, Mailstop 66, Fort Collins, CO 80528, United States |                                                                                    |                        |                              |
| <b>Prüfgegenstand:</b><br><i>Test item:</i>                                                                                                                                                                                                                                                                                                                                                                                                                         | Wireless adapter                                                                      |                                                                                    |                        |                              |
| <b>Bezeichnung / Typ-Nr.:</b><br><i>Identification / Type no.:</i>                                                                                                                                                                                                                                                                                                                                                                                                  | CL002WA1                                                                              |                                                                                    |                        |                              |
| <b>Auftrags-Inhalt:</b><br><i>Order content:</i>                                                                                                                                                                                                                                                                                                                                                                                                                    | FCC Certification                                                                     |                                                                                    |                        |                              |
| <b>Prüfgrundlage:</b><br><i>Test specification:</i>                                                                                                                                                                                                                                                                                                                                                                                                                 | IEEE Std C95.1<br>47 CFR §2.1093<br>47 CFR §1.1310                                    |                                                                                    |                        |                              |
| <b>Wareneingangsdatum:</b><br><i>Date of sample receipt:</i>                                                                                                                                                                                                                                                                                                                                                                                                        | 2021-06-21                                                                            |                                                                                    |                        |                              |
| <b>Prüfmuster-Nr.:</b><br><i>Test sample no.:</i>                                                                                                                                                                                                                                                                                                                                                                                                                   | A003075904-021<br>A003075904-004                                                      |                                                                                    |                        |                              |
| <b>Prüfzeitraum:</b><br><i>Testing period:</i>                                                                                                                                                                                                                                                                                                                                                                                                                      | 2021-07-05 - 2021-07-10                                                               |                                                                                    |                        |                              |
| <b>Ort der Prüfung:</b><br><i>Place of testing:</i>                                                                                                                                                                                                                                                                                                                                                                                                                 | EMC/RF Taipei Testing Site                                                            |                                                                                    |                        |                              |
| <b>Prüflaboratorium:</b><br><i>Testing laboratory:</i>                                                                                                                                                                                                                                                                                                                                                                                                              | Taipei Testing Laboratories                                                           |                                                                                    |                        |                              |
| <b>Prüfergebnis*:</b><br><i>Test result*:</i>                                                                                                                                                                                                                                                                                                                                                                                                                       | Pass                                                                                  |                                                                                    |                        |                              |
| <b>überprüft von:</b><br><i>compiled by:</i>                                                                                                                                                                                                                                                                                                                                                                                                                        | <b>genehmigt von:</b><br><i>authorized by:</i>                                        |                                                                                    |                        |                              |
| <b>Datum:</b><br><i>Date:</i>                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2021-07-15                                                                            | <b>Ausstellungsdatum:</b><br><i>Issue date:</i>                                    | 2021-07-15             |                              |
| <b>Stellung / Position:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                         | Senior Project Engineer                                                               | <b>Stellung / Position:</b>                                                        | Senior Project Manager |                              |
| <b>Sonstiges / Other:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                       |                                                                                    |                        |                              |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                       |                                                                                    |                        |                              |
| <b>Zustand des Prüfgegenstandes bei Anlieferung:</b><br><i>Condition of the test item at delivery:</i>                                                                                                                                                                                                                                                                                                                                                              |                                                                                       | Prüfmuster vollständig und unbeschädigt<br><i>Test item complete and undamaged</i> |                        |                              |
| <p>* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft<br/>P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet</p> <p>* Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor<br/>P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested</p>                    |                                                                                       |                                                                                    |                        |                              |
| <p><b>Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.</b><br/> <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i></p> |                                                                                       |                                                                                    |                        |                              |

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### APPENDIX EP - PHOTOGRAPHS OF EUT

**Prüfbericht - Nr.: CN217P50 (FCC-RFEXP) 001**  
Test Report No.

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### HISTORY OF THIS TEST REPORT

| Report No.                     | Description      | Date Issued |
|--------------------------------|------------------|-------------|
| CN217P50<br>(FCC-RFEXP)<br>001 | Original Release | 2021-07-15  |

# 1 General Remarks

## 1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:  
**Appendix EP - Photographs of EUT**

## 1.2 Decision Rule of Conformity

The decision rule of conformity of this test report is following the requirements of the requested standard in the quotation, and agreed among testing laboratory and manufacturer (applicant) to exclude the consideration of Measurement Uncertainty, unless it is required by the specific standard.

## 2 Test Sites

### 2.1 Test Facilities

Taipei Testing Laboratories

11F. No.758, Sec. 4, Bade Rd., Songshan Dist.  
Taipei City 105  
Taiwan (R.O.C.)

### 2.2 Test Facility

Taipei Testing Laboratories

No.458-18, Sec. 2, Fenliao Rd., Linkou Dist.,  
New Taipei City 244  
Taiwan (R.O.C.)

### 3 General Product Information

#### 3.1 Product Function and Intended Use

The EUT is Wireless adapter. It contains a 2.4GHz compatible module enabling the user to communicate data through a Wireless interface.

For details refer to the User Guide, Data Sheet and Circuit Diagram.

#### 3.2 Ratings and System Details

##### Basic Information of EUT

| Item                        | EUT Information  |
|-----------------------------|------------------|
| Kind of Equipment/Test Item | Wireless adapter |
| Type Identification         | CL002WA1         |
| FCC ID                      | B94-CL002WA1     |

##### Technical Specification of EUT

| Item                | EUT Information                                                               |
|---------------------|-------------------------------------------------------------------------------|
| Operating Frequency | 2405.35 MHz ~ 2477.35 MHz                                                     |
| Modulation          | Pi/4 DQPSK                                                                    |
| Operation Voltage   | 5 Vdc                                                                         |
| Antenna Type        | Ant 1: PCB antenna with 1.1 dBi gain<br>Ant 2: PCB antenna with 3.26 dBi gain |

Note: There're two antennas (Ant 1 and Ant 2) used for 2.4GHz function and supports SISO mode only.

## 4 RF Exposure Evaluation

### 4.1 SAR test exclusion

#### Following FCC KDB 447498 D01 "General SAR test exclusion guidance v06"

The corresponding SAR Test Exclusion Threshold condition(s), listed below:

- a) For 100 MHz to 6 GHz and test separation distances  $\leq 50$  mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:
- $$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f_{\text{(GHz)}}}] \leq 3.0 \text{ for 1-g SAR, and } \leq 7.5 \text{ for 10-g extremity SAR, where}$$
- $f_{\text{(GHz)}}$  is the RF channel transmit frequency in GHz.
  - Power and distance are rounded to the nearest mW and mm before calculation.
  - The result is rounded to one decimal place for comparison
  - The values 3.0 and 7.5 are referred to as numeric thresholds in step b) below
- The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  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.
- b) For 100 MHz to 6 GHz and test separation distances  $> 50$  mm, the 1-g and 10-g SAR test exclusion thresholds are determined by the following:
- 1)  $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot (f_{\text{(MHz)}}/150)]\}$  mW, for 100 MHz to 1500 MHz
  - 2)  $\{[\text{Power allowed at numeric threshold for 50 mm in step a)}] + [(\text{test separation distance} - 50 \text{ mm}) \cdot 10]\}$  mW, for  $> 1500$  MHz and  $\leq 6$  GHz
- c) For frequencies below 100 MHz, the following may be considered for SAR test exclusion.
- 1) For test separation distances  $> 50$  mm and  $< 200$  mm, the power threshold at the corresponding test separation distance at 100 MHz in step b) is multiplied by  $[1 + \log(100/f_{\text{(MHz)}})]$
  - 2) For test separation distances  $\leq 50$  mm, the power threshold determined by the equation in c) 1) for 50 mm and 100 MHz is multiplied by  $\frac{1}{2}$
  - 3) SAR measurement procedures are not established below 100 MHz.

When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any SAR test results below 100 MHz to be acceptable.

## 5 Test Results

### 5.1 SAR Test Exclusion Threshold

#### <Ant 1>

| Frequency (GHz) | Max. Power (mW) | Min. test separation distance (mm) | SAR test exclusion calculation value | 10-g extremity SAR test exclusion thresholds | Result |
|-----------------|-----------------|------------------------------------|--------------------------------------|----------------------------------------------|--------|
| 2.40535         | 1.49            | 5                                  | 0.46                                 | 7.5                                          | Pass   |

#### <Ant 2>

| Frequency (GHz) | Max. Power (mW) | Min. test separation distance (mm) | SAR test exclusion calculation value | 10-g extremity SAR test exclusion thresholds | Result |
|-----------------|-----------------|------------------------------------|--------------------------------------|----------------------------------------------|--------|
| 2.40535         | 1.59            | 5                                  | 0.49                                 | 7.5                                          | Pass   |