

Prüfbericht-Nr.: Test report no.:	CN21F0JY(FCC-MPE) 001	Auftrags-Nr.: Order no.:	238494141	Seite 1 von 8 Page 1 of 8
Kunden-Referenz-Nr.: Client reference no.:	N/A	Auftragsdatum: Order date:	2021-12-11	
Auftraggeber: Client:	TAIWAN CAROL ELECTRONICS CO., LTD. No.202, TUNG KUANG ROAD. TAICHUNG, TAIWAN.			
Prüfgegenstand: Test item:	BLE True Sound low Latency Chargeable Audio Transmission Adapter			
Bezeichnung / Typ-Nr.: Identification / Type no.:	BTM-510CC, BTM-510CD, BTM-510CR			
Auftrags-Inhalt: Order content:	FCC Certification			
Prüfgrundlage: Test specification:	47 CFR §2.1093 47 CFR §1.1310			
Wareneingangsdatum: Date of sample receipt:	2021-06-07			
Prüfmuster-Nr.: Test sample no.:	A003067848-002, 007, 011			
Prüfzeitraum: Testing period:	2021-06-16 - 2021-06-28			
Ort der Prüfung: Place of testing:	EMC/RF Taipei Testing Site			
Prüflaboratorium: Testing laboratory:	Taipei Testing Laboratories			
Prüfergebnis*: Test result*:	Pass			
überprüft von: compiled by:			genehmigt von: authorized by:	
Datum: Date:	2021-07-12		Ausstellungsdatum: Issue date:	2021-07-12
Stellung / Position:	David Huang Senior Project Manager		Stellung / Position:	Ryan Chen Senior Project Manager
Sonstiges / Other:				
Zustand des Prüfgegenstandes bei Anlieferung: Condition of the test item at delivery:		Prüfmuster vollständig und unbeschädigt Test item complete and undamaged		
* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet * Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested				
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. 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.				

Contents

HISTORY OF THIS TEST REPORT	3
1 GENERAL REMARKS	4
1.1 COMPLEMENTARY MATERIALS.....	4
1.2 DECISION RULE OF CONFORMITY	4
2 TEST SITES	5
2.1 TEST FACILITIES	5
2.2 TEST FACILITY.....	5
3 GENERAL PRODUCT INFORMATION.....	6
3.1 PRODUCT FUNCTION AND INTENDED USE	6
3.2 RATINGS AND SYSTEM DETAILS.....	6
4 RF EXPOSURE EVALUATION	7
4.1 SAR TEST EXCLUSION	7
5 TEST RESULTS	8
5.1 SAR TEST EXCLUSION THRESHOLD.....	8

APPENDIX EP - PHOTOGRAPHS OF EUT

Prüfbericht - Nr.: CN21F0JY(FCC-MPE) 001
Test Report No.

Seite 3 von 8
Page 3 of 8

HISTORY OF THIS TEST REPORT

Report No.	Description	Date Issued
CN21F0JY(FCC-MPE) 001	Original Release	2021-07-12

Prüfbericht - Nr.: CN21F0JY(FCC-MPE) 001
Test Report No.

Seite 4 von 8
Page 4 of 8

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 BLE True Sound low Latency Chargeable Audio Transmission Adapter. It contains Bluetooth compatible enabling the user to communicate data through Bluetooth 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	BLE True Sound low Latency Chargeable Audio Transmission Adapter
Type Identification	BTM-510CC, BTM-510CD, BTM-510CR
FCC ID	G4RBTM-510C

Technical Specification of EUT

Item	EUT Information
Operating Frequency	2402 ~ 2480 MHz
Modulation	GFSK
Operation Voltage	USB 5 Vdc; Battery 3.7 Vdc
Antenna Type	Chip Antenna
Antenna Gain	0 dBi

Note:

1. All models are listed as below.

Model Type	Type Identification	Difference
Main	BTM-510CD	They are electrically identical, but the audio connector types are different. BTM-510CR used with 6.3Ø Phone Jack. BTM-510CC used with 3.5Ø Phone Jack. BTM-510CD used with Cannon XLR connector.
Series	BTM-510CC	
	BTM-510CR	

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 ≤ 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 ≤ 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 ≤ 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 ≤ 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

Frequency (GHz)	Max. Power (mW)	Min. test separation distance (mm)	SAR test exclusion calculation value	1-g head or body SAR test exclusion thresholds	Result
2.4	8.73	20	0.68	3	Pass