



# FCC Part 96.47 Test Report

Applicant : BARTEC GmbH  
Equipment : Android smartphone  
Brand Name : BARTEC  
Model Name : SP9EX1/SC9EX1/SP9EX2/SC9EX2  
FCC ID : TBUSX9EX  
Standard : FCC Part 96.47  
Test Date(s) : May 16, 2024

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia



Approved by: Jason Jia

**Sportun International Inc. (Kunshan)**  
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People's Republic of China



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### APPENDIX A. TEST SETUP PHOTO



## History of this test report



## Summary of Test Result

| Report Clause | Ref Std. Clause | Test Items                             | Result (PASS/FAIL) | Remark |
|---------------|-----------------|--|--------------------|--------|
| 3             | 96.47           | End User Device additional requirement | Pass               | -      |

**Conformity Assessment Condition:**

1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account.
2. The measurement uncertainty please refer to each test result in the section "Measurement Uncertainty"

**Disclaimer:**

The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

## 1 General Description

## 1.1 Applicant

BARTEC GmbH

Max-Eyth-Str.16 , 97980 Bad Mergentheim, Germany

## 1.2 Product Feature of Equipment Under Test

| Product Feature |                             |
|-----------------|-----------------------------|
| Equipment       | Android smartphone          |
| Brand Name      | BARTEC                      |
| Model Name      | SP9EX1/SC9EX1/SP9EX2/SC9EX2 |
| FCC ID          | TBUSX9EX                    |
| EUT Stage       | Identical Prototype         |

### Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. The differences between four model names are as bellow:
  - 1) The devices BARTEC SP9EX1 Smartphone and BARTEC SP9EX2 Smartphone share the same hardware and software.
  - 2) The same applies for the devices BARTEC SC9EX1 Smartscanner and BARTEC SC9EX2 Smartscanner.
  - 3) The only difference are the hazardous area marking of the devices, see table for clarification:

| BARTEC SP9EX1 Smartphone  | BARTEC SP9EX2 Smartphone   |
|---|--|
|   <p><b>BARTEC SP9EX1</b><br/>Type 17-619P-*****<br/>Manufacturer: BARTEC GmbH<br/>Max-Eyth-Strasse 16<br/>67980 Bad Mergentheim, DE<br/>www.bartec.com</p> <p>UL 24.ATEK 3100X<br/>VII 10 Ex es op iso IIIC T4 Ga<br/>VII 20 Ex es op iso IIIC T4C Dc IP64<br/>IECEx-UL 24.000AX</p> <p>Class I, Div 1, Groups A, B, C and D;<br/>Class II, 1, Groups E, F and G;<br/>Class III, T4</p> <p>Zone 1, ATEX is op IIIC T4 Ga<br/>Zone 2, ATEX is op IIIC T4C Dc<br/>Zone 2, Ex es op IIIC T4C Dc<br/>Zone 21, Ex es op IIIC T30°C Dc<br/>-20° T +4 +50°C</p> <p>USB port: USB-BD compatible – 5-20Vdc / max 3 A<br/>DC-In port: 12Vdc / max 3 A<br/>USB Ume = 20V DCIn Ume = 12V</p> <p><b>WARNING/ATTENTION:</b><br/>Use only replaceable battery pack BARTEC GmbH type: 17-8120-0020*****<br/>Utiliser uniquement une batterie de rechange BARTEC GmbH type: 17-8120-0020*****<br/><b>INTRINSICALLY SAFE/SECURITE INTRINSIQUE</b><br/>Warning - Substitution of components may impair intrinsic safety.<br/>Avertissement - La substitution des composants peut nuire à la sécurité intrinsique.</p>   |   <p><b>BARTEC SP9EX2</b><br/>Type 17-619P-*****<br/>Manufacturer: BARTEC GmbH<br/>Max-Eyth-Strasse 16<br/>67980 Bad Mergentheim, DE<br/>www.bartec.com</p> <p>UL 24.ATEK xxxx<br/>VII 10 Ex es op IIIC T4 Ga<br/>VII 20 Ex es op iso IIIC T4C Dc IP64<br/>IECEx-UL 24.000AX</p> <p>Class I, Div 2, Groups A, B, C and D;<br/>Class II, 2, Groups E, F and G;<br/>Class III, T4</p> <p>Zone 1, ATEX is op IIIC T4 Ga<br/>Zone 2, ATEX is op IIIC T4C Dc<br/>Zone 2, Ex es op IIIC T4C Dc<br/>-20° T +4 +50°C</p> <p>USB port: USB-BD compatible – 5-20Vdc / max 3 A<br/>DC-In port: 12Vdc / max 3 A<br/>USB Ume = 20V DCIn Ume = 12V</p> <p><b>WARNING/ATTENTION:</b><br/>Use only replaceable battery pack BARTEC GmbH type: 17-8122-0008*****<br/>Utiliser uniquement une batterie de rechange BARTEC GmbH type: 17-8122-0008*****<br/><b>INTRINSICALLY SAFE/SECURITE INTRINSIQUE</b><br/>Warning - Substitution of components may impair intrinsic safety.<br/>Avertissement - La substitution des composants peut nuire à la sécurité intrinsique.</p> |
|   <p><b>BARTEC SC9EX1</b><br/>Type 17-619C-*****<br/>Manufacturer: BARTEC GmbH<br/>Max-Eyth-Strasse 16<br/>67980 Bad Mergentheim, DE<br/>www.bartec.com</p> <p>UL 24.ATEK 3100X<br/>VII 10 Ex es op iso IIIC T4 Ga<br/>VII 20 Ex es op iso IIIC T4C Dc IP64<br/>IECEx-UL 24.000AX</p> <p>Class I, Div 1, Groups A, B, C and D;<br/>Class II, 1, Groups E, F and G;<br/>Class III, T4</p> <p>Zone 1, ATEX is op IIIC T4 Ga<br/>Zone 21, ATEX is op IIIC T30°C Dc<br/>Zone 0, Ex es op IIIC T4 Ga<br/>Zone 21, Ex es op IIIC T30°C Dc<br/>-20° T +4 +50°C</p> <p>USB port: USB-BD compatible – 5-20Vdc / max 3 A<br/>DC-In port: 12Vdc / max 3 A<br/>USB Ume = 20V DCIn Ume = 12V</p> <p><b>WARNING/ATTENTION:</b><br/>Use only replaceable battery pack BARTEC GmbH type: 17-8122-0008*****<br/>Utiliser uniquement une batterie de rechange BARTEC GmbH type: 17-8122-0008*****<br/><b>INTRINSICALLY SAFE/SECURITE INTRINSIQUE</b><br/>Warning - Substitution of components may impair intrinsic safety.<br/>Avertissement - La substitution des composants peut nuire à la sécurité intrinsique.</p> |   <p><b>BARTEC SC9EX2</b><br/>Type 17-619C-*****<br/>Manufacturer: BARTEC GmbH<br/>Max-Eyth-Strasse 16<br/>67980 Bad Mergentheim, DE<br/>www.bartec.com</p> <p>UL 24.ATEK xxxx<br/>VII 10 Ex es op IIIC T4 Ga<br/>VII 20 Ex es op iso IIIC T4C Dc IP64<br/>IECEx-UL 24.000AX</p> <p>Class I, Div 2, Groups A, B, C and D;<br/>Class II, 2, Groups E, F and G;<br/>Class III, T4</p> <p>Zone 1, ATEX is op IIIC T4 Ga<br/>Zone 2, ATEX is op IIIC T4C Dc<br/>Zone 2, Ex es op IIIC T4C Dc<br/>-20° T +4 +50°C</p> <p>USB port: USB-BD compatible – 5-20Vdc / max 3 A<br/>DC-In port: 12Vdc / max 3 A<br/>USB Ume = 20V DCIn Ume = 12V</p> <p><b>WARNING/ATTENTION:</b><br/>Use only replaceable battery pack BARTEC GmbH type: 17-8122-0008*****<br/>Utiliser uniquement une batterie de rechange BARTEC GmbH type: 17-8122-0008*****<br/><b>INTRINSICALLY SAFE/SECURITE INTRINSIQUE</b><br/>Warning - Substitution of components may impair intrinsic safety.<br/>Avertissement - La substitution des composants peut nuire à la sécurité intrinsique.</p> |



### 1.3 Product Specification of Equipment Under Test

| Standards-related Product Specification |                                  |
|---|----------------------------------|
| <b>Tx Frequency</b>                     | LTE Band 48: 3550 MHz ~ 3700 MHz |
| <b>Rx Frequency</b>                     | LTE Band 48: 3550 MHz ~ 3700 MHz |
| <b>Antenna Gain</b>                     | <Ant. 5>: 0.9 dBi                |
| <b>Type of Modulation</b>               | QPSK / 16QAM / 64QAM / 256QAM    |

### 1.4 Testing Location

Sportun International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

|                           |  |                            |                                       |
|---------------------------|--|----------------------------|---------------------------------------|
| <b>Test Firm</b>          | Sportun International Inc. (Kunshan)   |                            |                                       |
| <b>Test Site Location</b> | No. 1098, Pengxi North Road, Kunshan Economic Development Zone<br>Jiangsu Province 215300 People's Republic of China<br>TEL : +86-512-57900158 |                            |                                       |
| <b>Test Site No.</b>      | <b>Sportun Site No.</b>  | <b>FCC Designation No.</b> | <b>FCC Test Firm Registration No.</b> |
|                           | DFS01-KS   | CN1257                     | 314309                                |
| <b>Test Engineer</b>      | Chad Wang  |                            |                                       |
| <b>Temperature</b>        | 20 ~ 24.5 °C   |                            |                                       |
| <b>Relative Humidity</b>  | 40 ~ 60 %  |                            |                                       |

### 1.5 Test Software

| Item | Site     | Manufacturer | Name                        | Version |
|------|----------|--------------|-----------------------------|---------|
| 1.   | DFS01-KS | Sportun      | DFS & Adaptivity Test Tools | 1.0     |

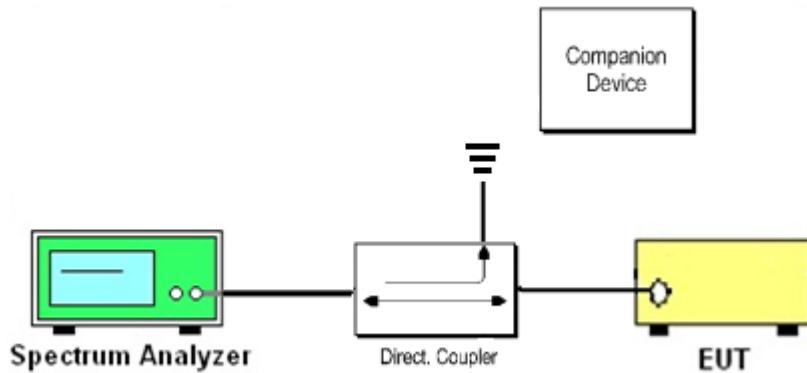
### 1.6 Applicable Standards

- FCC Part 96.47
- FCC KDB 940660 D01 Part 96 CBRS Eqpt v03
- WINNF-TS-0122-V1.0.2 CBRS CBSD Test Specification

**Remark:** All test items were verified and recorded according to the standards and without any deviation during the test.

## 2 Test Configuration of Equipment Under Test

### 2.1 Connection Diagram of Test System



The companion device is certified CBRS (FCC ID: S9GQ910US02)



### 3 End User Device additional requirement

#### 3.1 Test Requirement

FCC Part 96.47

- (a) End User Devices may operate only if they can positively receive and decode an authorization signal transmitted by a CBSD, including the frequencies and power limits for their operation.
  - (1) An End User Device must discontinue operations, change frequencies, or change its operational power level within 10 seconds of receiving instructions from its associated CBSD.

#### 3.2 Test Procedure

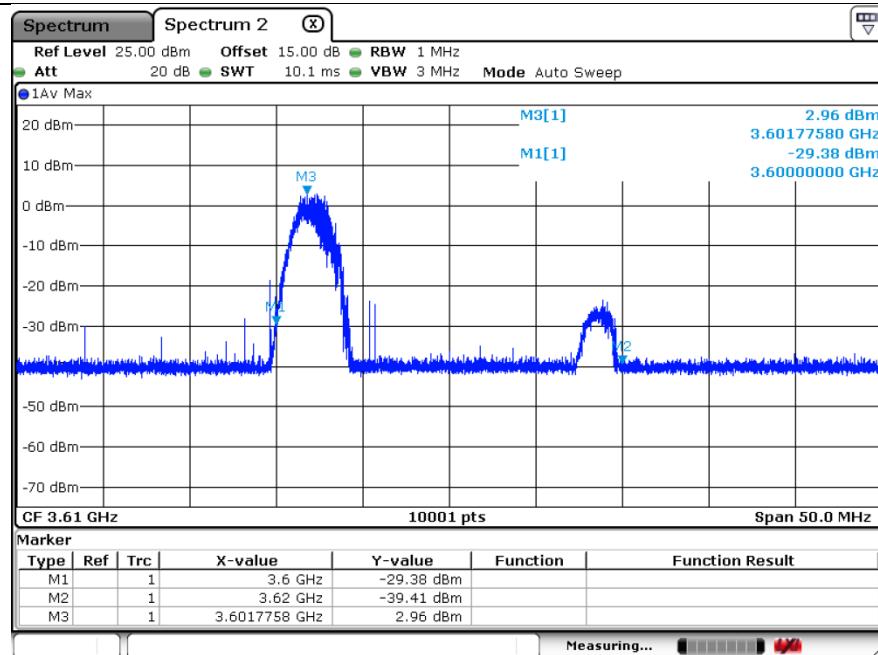
Following procedure can be done by applying WINNF-TS-0122-V1.0.2 CBRS CBSD Test Specification, use the certified Ruckus CBSD (FCC ID: S9GQ910US02) as companion device to show compliance with Part 96.47 requirement for End User Device (EUD):

1. Configure SAS granted CBSD to operate at frequency 3600-3620MHz & power level 17dBm/MHz
2. Enable AP service from Ruckus Cloud management
3. Check EUD Tx Frequency and power
4. Disable AP service from Ruckus Cloud management
  - a. Check EUD stops transmission within 10seconds.
5. Configure SAS granted CBSD to operate at frequency 3670-3690MHz & power level 7dBm/MHz
6. Enable AP service from Ruckus Cloud management
7. Check EUD Tx Frequency and power
8. Disable AP service from Ruckus Cloud management
  - a. Check EUD stops transmission within 10seconds.

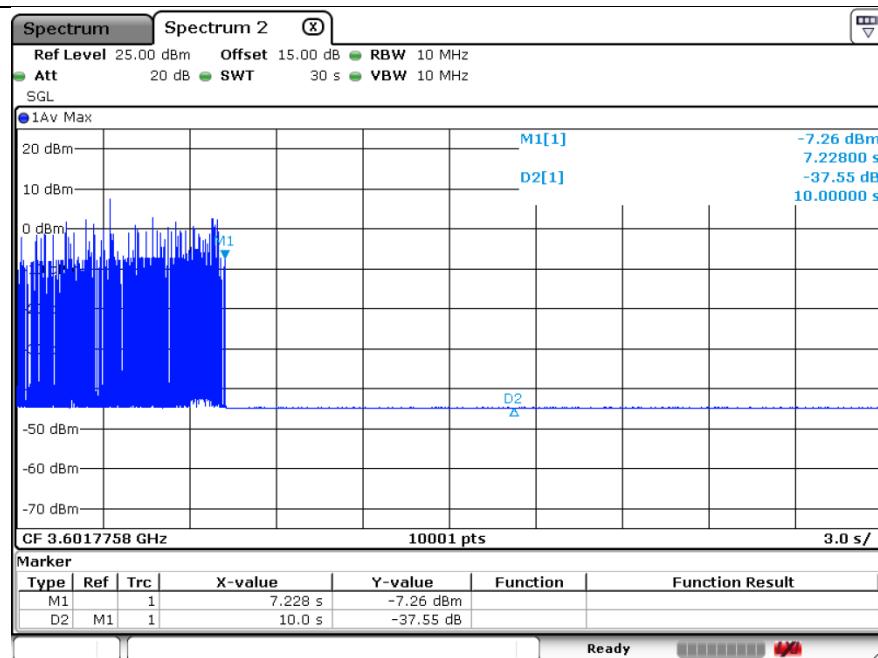
### 3.3 Test Result

[Step 1] Configure SAS granted CBSD to operate at frequency 3600-3620MHz & power level 17dBm/MHz

[Step 3] Check EUD Tx Frequency and power

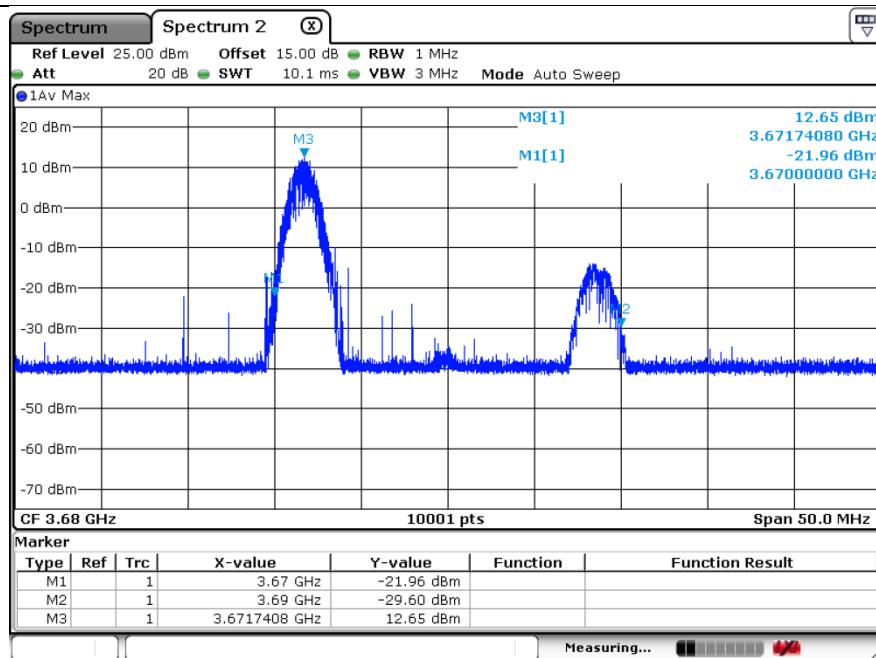


[Step 4.a.] EUD stops transmission within 10 seconds of receiving instructions from its associated CBSD.



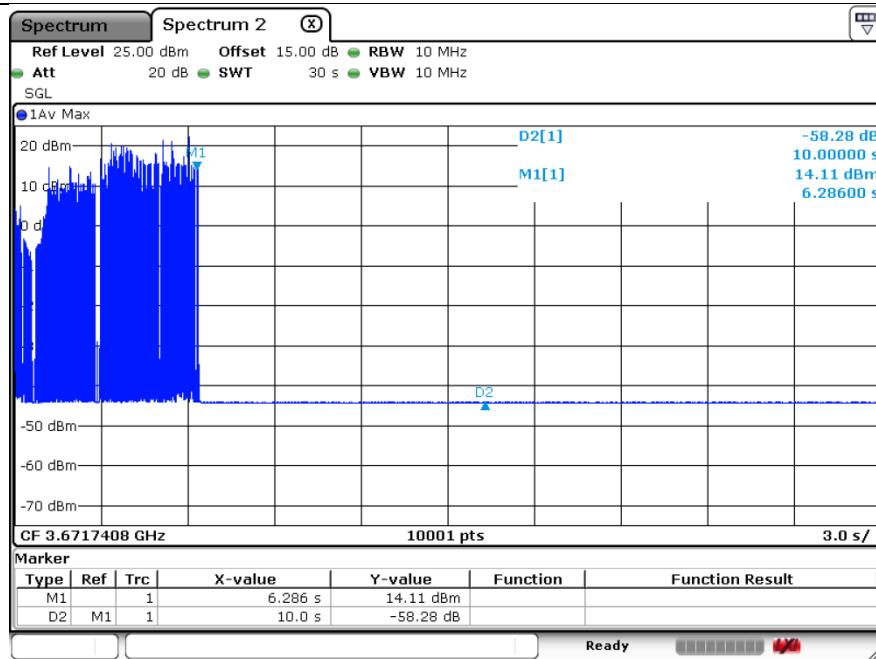
[Step 5] Configure SAS granted CBSD to operate at frequency 3670-3690MHz & power level 7dBm/MHz

[Step 7] Check EUD Tx Frequency and power



[Step 8.a.] After changing the frequency and power level,

The module (EUT) discontinues operations, change frequencies, or change its operational power level within 10 seconds of receiving instructions from its associated CBSD. Test result is PASS.





## 4 List of Measuring Equipment

| Instrument      | Manufacturer    | Model No. | Serial No. | Characteristics | Calibration Date | Test Date    | Due Date      | Remark               |
|-----------------|-----------------|-----------|------------|-----------------|------------------|--------------|---------------|----------------------|
| Signal Analyzer | R&S             | FSV7      | 101472     | 10Hz~7GHz       | Jan. 02, 2024    | May 16, 2024 | Jan. 01, 2025 | Conducted (DFS01-KS) |
| Combiner        | MTJ Cooperation | MTJ7112   | N/A        | 0.4-6GHz        | NCR              | May 16, 2024 | NCR           | Conducted (DFS01-KS) |



## 5 Measurement Uncertainty

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.10-2013. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

### Uncertainty of Conducted Measurement

|                                   |                 |
|-----------------------------------|-----------------|
| Conducted Generated signal Levels | <b>±0.56 dB</b> |
| Conducted Time                    | <b>0.38%</b>    |

----- THE END -----