

**TEST REPORT**
Nr. R20190501**Federal Communication Commission (FCC)**

Report Reference No.	R20190501
Date of issue:	23.12.2020
Total number pages:	15
Applicant's name	Texa S.p.A.
Address	Via 1° Maggio, 9 – 31050 Monastier di Treviso (TV) – Italy
Test specification:	
Standards	KDB 447498 D01 General RF Exposure Guidance v06
Non-standard test method	N/A
Test Report Form No.	SAR_FCCCMC
Test Report Form(s) Originator ..	CMC Centro Misure Compatibilità S.r.l.
Master TRF	2020-09
General disclaimer:	
The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of CMC Centro Misure Compatibilità S.r.l.	
Test item description	Vehicle communication interface
Trademark	Texa
Manufacturer	Texa S.p.A.
Model / Type reference	Navigator TXT Multihub
FCC ID	T8RTXT1MW
Rating(s)	12-24 Vdc from vehicular battery
Report	
Tested by (name + signature)	M. Segalla
Approved by (name + signature)	R. Beghetto



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2 Reference standard	
KDB 447498 D01 General RF Exposure Guidance v06	RF exposure procedures and equipment authorization policies for mobile and portable devices
3 List of attachments	
Attachment 1: Instruments list, measurement uncertainty, judgement of compliance and quality manual references	
4 Deviation(s) from test specification	
None	
5 Testing location	
CMC Centro Misure Compatibilità S.r.l. Via della Fisica, 20 – 36016 Thiene (VI) – Italy Test site facility's FCC registration number: 182474	

Revision index	Date	Change history
1.0	23.12.2020	--



Testing and sampling:	
Date of receipt of test item	23.07.2020
Testing start date	23.12.2020
Testing end date	23.12.2020
Sampling procedure.....	Equipment used for testing was picked up by the manufacturer, at the end of the production process with random criterion. The results relate to the sample as it has been received.
Internal identification	Adhesive label with the product number P200752
General remarks:	
This report shall not be reproduced, except in full, without the written approval of CMC. The test results presented in this report relate only to the object tested. “(see appended table)”: refers to a table appended to the report. Throughout this report a comma is used as the decimal separator.	
Possible test case verdicts:	
Test case does not apply to the test object:	N/A (Not Applicable)
Test object does meet the requirement:	P (Pass)
Test object does not meet the requirement:	F (Fail)
Test object does not performed:	N/E (Not Executed)
Definition of symbols used in this test report:	
☒ Indicates that the listed condition, standard or equipment is applicable for this report.	
☐ Indicates that the listed condition, standard or equipment is not applicable for this report.	

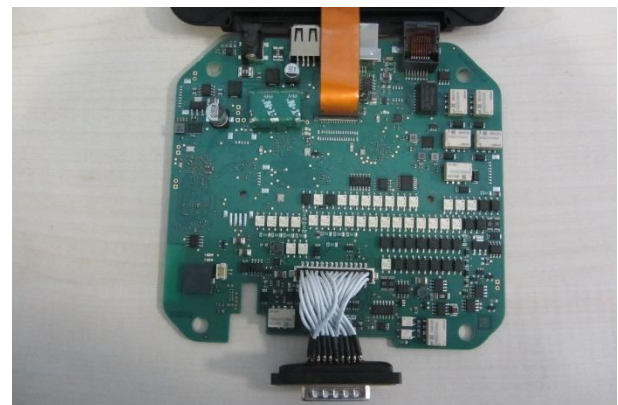


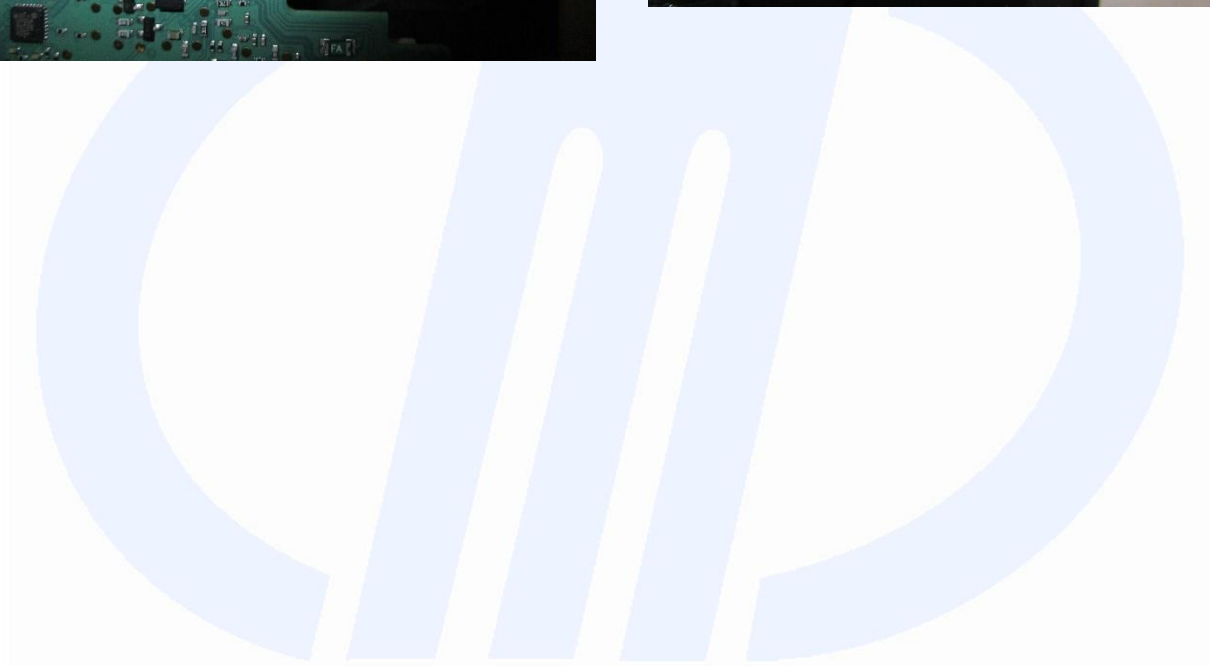
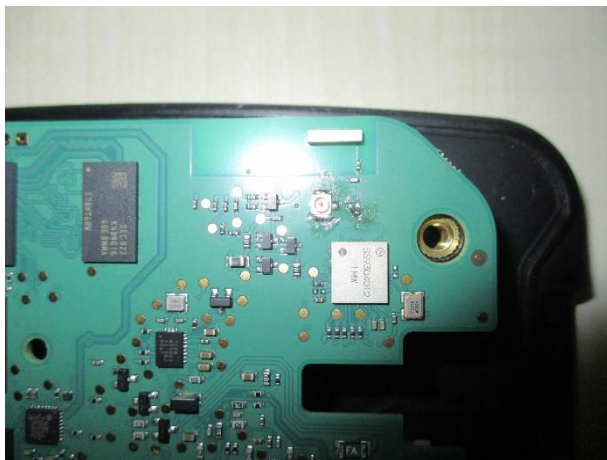
6 General description of test item(s)

Description	Vehicle communication interface						
Model Number	Navigator TXT Multihub						
FCC ID	T8RTXT1MW						
Serial Number	--						
Brand name	Texa						
Frequency band	2400 – 2483,5 MHz						
Nominal frequencies	F _L : 2412 MHz		F _M : 2437 MHz		F _H : 2462 MHz		
Rated power supply	Voltage and Frequency			Reference poles			
			N	L1	L2	L3	PE
	☐	AC:	☐	☐	☐	☐	☐
	☐	AC:	☐	☐	☐	☐	☐
	☒	DC: 12 V from vehicular battery					☐
Software version	1.0.0.28						
Test configuration	☒	Table top equipment					
	☐	Floor standing equipment					
	☐	Hand-held equipment					
Type of equipment	☒	Transmitter unit					
	☒	Receiver unit					
Type of station	☐	Fixed station					
	☐	Portable station					
	☒	Mobile station					
Operating modes	No.	Operating mode of test item					
	1	EUT in continuous transmission at maximum power, WiFi mode					



6.1 Photos of the test item







7 Verdict summary section

KDB 447498 D01 General RF Exposure Guidance v06			
Clause	Requirement – Test case	Basic standard	Verdict
cl. 4	RF Exposure analysis	ANSI C63.10	P





Normative references	
Reference no.	Description
KDB 447498 D01 General RF Exposure Guidance v06	RF exposure procedures and equipment authorization policies for mobile and portable devices
ANSI C63.10:2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices





8 Test conditions

8.1 General

Environmental reference conditions.....:	The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:		
	Temperature	Humidity	Atmospheric pressure
	15 °C – 35 °C	30 % - 60 %	800 hPa – 1060 hPa
	If explicitly required in the basic standard or applied product standard the climatic values are recorded and documented separately in this test report.		
Measurement uncertainties	Attachment 1		



9 Test results

9.1 RF Exposure analysis

Tested by	M. Segalla
Test date	23.12.2020
Reference standards	KDB 447498 D01 cl. 4 ANSI C63.10
Test specification	--

Acceptance limits

1 mW/cm² max at 20 cm of distance

Result – WiFi mode N (MCS0)

Transmission channel (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density at 20 cm (mW/cm ²)	Power Density Limit (mW/cm ²)
2412	20,47	111,43	2,22E-02	1,00
2437	20,77	119,40	2,38E-02	1,00
2462	20,54	113,24	2,25E-02	1,00

Remarks: Power Density = $(P \times G) / (4\pi R^2)$

Result – WiFi mode B

Transmission channel (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density at 20 cm (mW/cm ²)	Power Density Limit (mW/cm ²)
2412	16,75	47,32	9,41E-03	1,00
2437	17,09	51,17	1,02E-02	1,00
2462	16,76	47,42	9,43E-03	1,00

Remarks: Power Density = $(P \times G) / (4\pi R^2)$

Result – WiFi mode G

Transmission channel (MHz)	Peak Output Power (dBm)	Peak Output Power (mW)	Power Density at 20 cm (mW/cm ²)	Power Density Limit (mW/cm ²)
2412	22,48	177,01	3,52E-02	1,00
2437	23,42	219,79	4,37E-02	1,00
2462	23,31	214,29	4,26E-02	1,00

Remarks: Power Density = $(P \times G) / (4\pi R^2)$



Attachment 1

Instruments list

<i>Id. number</i>	<i>Manufacturer</i>	<i>Model</i>	<i>Description</i>	<i>Serial number</i>	<i>Last calibration</i>	<i>Due date calibration</i>
CMC S164	Rohde & Schwarz	ESU26	EMC interference receiver	100052	January '20	January '21





Attachment 1

Measurement uncertainty

Test	Test Setup	Expanded uncertainty	Note
Conducted emission CISPR 16 LISN 50uH 0,009-0,0150MHz	PE001_01	3,4 dB	1
Conducted emission CISPR 16 LISN 50uH 0,150-30,0MHz	PE001_01	3,0 dB	1
Conducted emission CISPR 16 Voltage Probe 0,15-30MHz	PE001_02	2,9 dB	1
Conducted emission CISPR 16 Current Probe 0,15-30MHz	PE001_03	2,6 dB	1
Conducted emission CISPR 16 ISN 0,15-30MHz	PE001_04	4,7 dB	1
Clic CISPR 16 LISN 50uH 0,150-30,0MHz	PE001_05	3,1 dB	1
Disturbance Power 30-300 MHz	PE002_01	3,6 dB	1
Radiated Emission LAS 0,15-30MHz	PE003_01	2,0 dB	1
Radiated Emission CISPR 16 Loop Ant. 0,15-30MHz	PE004_01	4,0 dB	1
Radiated Emission CISPR 16 Bicon. Ant. 30-300MHz	PE004_02	3,9 dB	1
Radiated Emission CISPR 16 LogP. Ant. 300-1000MHz	PE004_03	3,8 dB	1
Radiated Emission CISPR 16 Horn Ant. 1-18GHz	PE004_04	4,2 dB	1
Human Exposure to electromagnetic fields	PE005_01	23,6 %	1
Harmonic current emissions test	PE006_01	10 mA + 2,6 %	1
Voltage fluctuation and flicker test	PE007_01	4,8 %	1
Radiated Immunity 80MHz-6GHz	PE102_XX	2,1 dB 0,82 V/m a 3V/m	1
Conducted Immunity 0,15-230MHz	PE105_XX	1,2 dB 0,44 V a 3V	1
AC Magnetic field	PE106_01	1,55 % 0,15 A/m a 10A/m	1
Pulse Magnetic field	PE107_01	6,25 % 18,7 A/m a 300A/m	1
Dumped Magnetic field	PE108_01	6,25 % 1,87 A/m a 30A/m	1
Common mode conducted immunity	PE112_01	2,21 % 0,22 V a 10V	1



Attachment 1

Test	Test Setup	Expanded uncertainty	Note
Power/Spurious 9kHz-30MHz	PR001_01	4,0 dB	1
Power/Spurious ERP 30-1000MHz d=10m	PR001_02+03	4,7 dB	1
Misura della potenza EIRP 1-18GHz d=3m	PR001_04	4,7 dB	1
Misura della potenza EIRP 18-40GHz d=3m	PR001_05	5,4 dB	1
Frequency error	PR002_01+02	< 1x10 ⁻⁷	1
Timing zero span (1001pts.)	PR002_01+02	0,2 % SWT	1
Modulation bandwidth	PR002_01+02	< 1x10 ⁻⁷	1
Conducted RF power and spurious emission	PR002_01+02	1,1 dB	1
Adjacent channel power	PR002_01+02	1,1 dB	1
Blocking	PR002_01+02	1,1 dB	1

Test	Test Setup	Expanded uncertainty	Note
Electrostatic discharge immunity test	PE101_0X		2
Electrical fast transients / burst immunity test	PE103_0X		2
Surge immunity test	PE104_0X		2
Short interruption immunity test	PE109_01		2
Rev_19_02 date 27/03/2019			

Note 1:

The expanded uncertainty reported according to the document EA-4-02 is based on a standard uncertainty multiplied by a coverage factor of K=2, providing a level of confidence of p = 95%

Note 2:

It has been demonstrated that the used test equipment meets the specified requirements in the standard with at least a 95% confidence, covering factor k = 2



Attachment 1

Judgement of compliance

Case 1	Case 2	Case 3	Case 4
The sample complies with the requirements. The measurement results is within the specification limit when the measurement uncertainty is taken into account.	The sample complies with the requirements. It is not possible to state compliance using a 95% coverage probability for the expanded uncertainty although the measurement result is below the limit.	The sample does not comply with the requirements. It is not possible to state compliance using a 95% coverage probability for the expanded uncertainty also the measurement result is upper the limit.	The sample does not comply with the requirements. The measurement results is outside the specification limit when the measurement uncertainty is taken into account.

In agreement with ILAC-G8: 03/2009 Guidelines on the Reporting of Compliance with Specification

Quality manual references – Internal procedure

Internal Procedure PM001 rev. 3.0 (Quality Manual)	Measure procedure
Internal Procedure INC_M rev. 9.1 (Quality Manual)	Measurement uncertainty calculation