

TEST REPORT

Report No.: SHE22080011-02HE

Date: 2022-11-09

Page 1 of 6

Applicant : Trimble Europe BV.
Address of Applicant : Industrieweg 187a, 5683 CC Best, Netherlands

Product Name : Handheld Data Collector
Brand Name : Trimble & Spectra Geospatia
Model Name : TDC650, SP30
Sample Acquisition Method : Sent by Client
Sample No. : E22080011-01#01
E22080011-01#02

FCC ID : NZI-11705920
ISED Number : 9288A-11705920
Standards : FCC CFR47 Part 15, Subpart E
RSS-Gen (Issue 5, Amd.2-Feb 2021)
RSS-247 (Issue 2, February 2017)

Date of Receipt : 2022-09-14
Date of Test : 2022-11-04 ~ 2022-11-08
Date of Issue : 2022-11-09

Remark:

The original test report Ref. No. SHE20100017-02IE (dated 2021-03-15), was modified on 2022-11-09 to include the following changes:

Since only add the external GNSS module in the equipment enclosure, using new OEM board (Rev B (115376) which was working as a high accuracy GNSS receiver, The OEM board (Rev A (106960) or Rev B (115376)) doesn't include any radio transmitters, as well as no other intentional transmitters. Meanwhile, the other parts are completely consistent with the previous samples, So added the worst case data of the Radiated emission and Band Edge test item.

- Test plots please refer to the annex document "SHE22080011-02HE DATA WIFI5GHz-TX EXHIBIT A".
 - Measurement Uncertainty, Uncertainty of Radiated Emission below 1GHz, $U_c = \pm 5.00\text{dB}$, $k=2$.
 - Measurement Uncertainty, Uncertainty of Radiated Emission above 1GHz, $U_c = \pm 4.88\text{dB}$, $k=2$.
 - Update the software version information; Software version changes do not affect any RF performance and the operating band remains the same, for details, see Appendix 1.1.
 - Equipment List please refer to Appendixes 1.2.
 - Photographs of the Sample please refer to Appendixes 1.3.
 - Set-up for Radiated Emission please refer to Appendixes 1.4.
 - updated product name, model name, contact person and factory
- in addition, Update the RSS-Gen standard version.

Prepared by:



(Erik Yang)

Reviewed by:



(Jennifer Zhou)

Approved by:



(Authorized signatory: Guoyou Chi)

TEST REPORT

Report No.: SHE22080011-02HE

Date: 2022-11-09

Page 2 of 6

1 Appendixes

1.1 Details of EUT

Product Name	Handheld Data Collector
Brand Name	Trimble, Spectra Geospatial
Test Model Name	TDC650
Series Model Name	SP30
Difference Description	All model are same with electrical paramters and Internal circult structure,but only different on model name,brand name and colors and software version.
FCC ID	NZI-11705920
ISED Number	9288A-11705920
Mode of Operation	WLAN 802.11a/n(HT20/40)/ac(HT20/40/80)
Frequency Range	Band I: 5150 MHz ~ 5250 MHz Band IV: 5725 MHz ~ 5850 MHz
Modulation Type	256QAM, 64QAM, 16QAM, BPSK, QPSK
Channel Bandwidth	802.11a: 20MHz 802.11n: 20MHz, 40MHz 802.11ac: 20MHz, 40MHz, 80MHz
Antenna Type	Internal Antenna
Antenna Gain	1.09dBi
Extreme Temperature Range	-20℃~ +55℃
Test Voltage	DC 3.8V
Extreme Voltage	Low Voltage: DC 3.7V High Voltage: DC 4.35V
Product Type	Mobile and portable for FCC standard Indoor for IC standard
Hardware version	C603_V1.00_PCB (model:TDC650) C603KB_V1.00_PCB (model: SP30)
Software version	TDC600_2.53.10.45 (model:TDC650) MM60_2.53.10.36 (model: SP30)
Test SW Version	BL410_R;BL410_E
RF power setting in TEST SW	QRCT

TEST REPORT

Report No.: SHE22080011-02HE

Date: 2022-11-09

Page 3 of 6

1.2 Equipment List

Name of Equipment	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	Rohde & Schwarz	FSV40N	101450	2022-06-10	2023-06-09
Signal Generator	Rohde & Schwarz	SMR27	100184	2022-08-02	2023-08-01
EMI Test Receiver	Rohde & Schwarz	ESR 7	101911	2022-06-10	2023-06-09
Broadband Antenna	SCHWARZBECK	VULB9163	9163-1037	2021-06-08	2023-06-07
Horn Antenna-18G	SCHWARZBECK	BBHA9120D	9120D-1775	2021-06-08	2023-06-07
Horn Antenna-40G	YINGLIAN	LB-180400-KF	N/A	2021-06-12	2024-06-11
Loop Antenna	SCHWARZBECK	FMZB 1513	/	2022-06-10	2023-06-09
Broadband Preamplifier	SCHWARZBECK	BBV 9718	346	2022-06-10	2023-06-09
EMC chamber 9*6*6 (L*W*H)	CHANGNING	966	N/A	2022-06-10	2023-06-09
Test Software	BL	BL410_E	N/A	N/A	N/A

TEST REPORT

Report No.: SHE22080011-02HE

Date: 2022-11-09

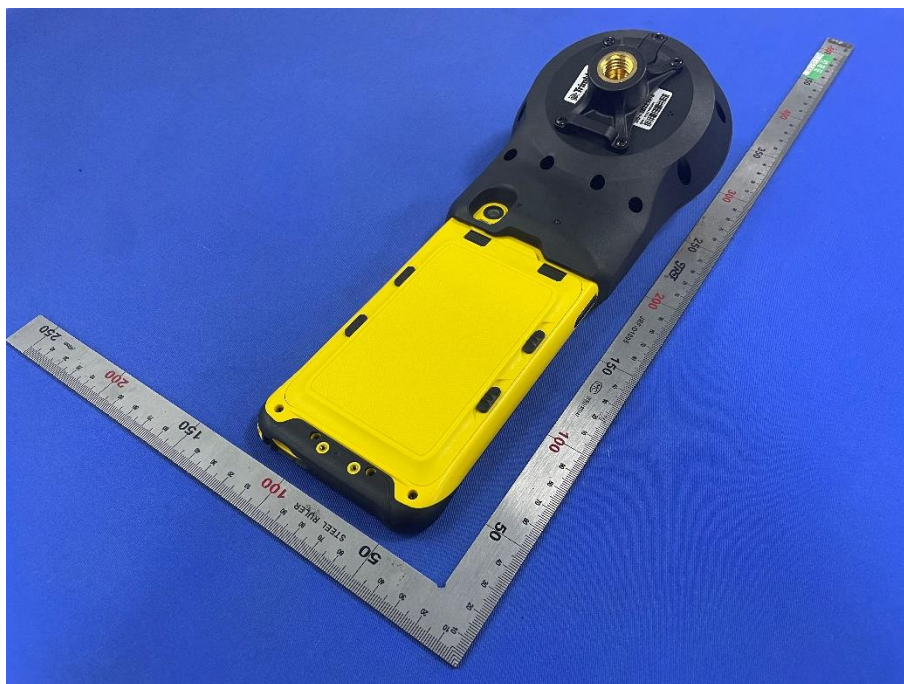
Page 4 of 6

1.3 Photographs of the Sample

TDC650



Front of the sample



Rear of the sample

TEST REPORT

Report No.: SHE22080011-02HE

Date: 2022-11-09

Page 5 of 6

SP30



Front of the sample



Rear of the sample

TEST REPORT

Report No.: SHE22080011-02HE

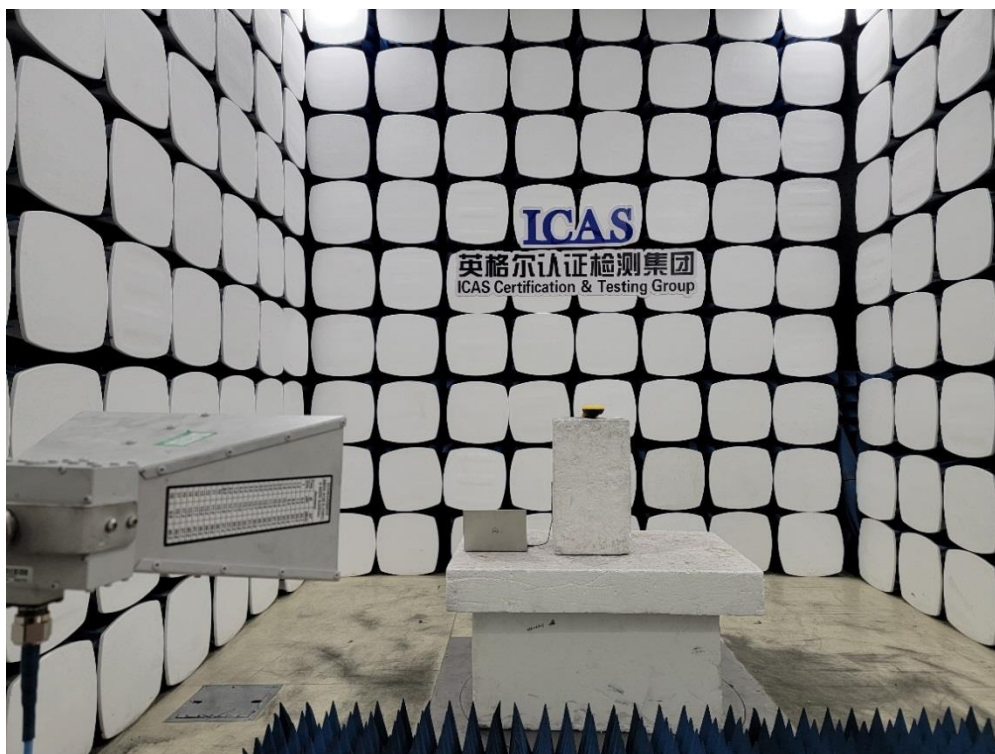
Date: 2022-11-09

Page 6 of 6

1.4 Set-up for Radiated Emission



below 1GHz



above 1GHz

End of the report