

RF Exposure Evaluation Report

Product Name : EDB10

Model No. : 121132

FCC ID : S9E-121132

Applicant : Trimble Inc.

Address : 5475 Kellenburger Rd., Dayton, Ohio 45424, United States

Date of Receipt : Nov. 20, 2020

Date of Declaration : May 18, 2021

Report No. : 20B0761R-E3082100013

Report Version : V1.0



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration report of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF or any agency of the government.

The test report shall not be reproduced without the written approval of DEKRA Testing and Certification Co., Ltd.

Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

Issued Date: May 18, 2021


Report No.: 20B0761R-E3082100013



Product Name	EDB10	
Applicant	Trimble Inc.	
Address	5475 Kellenburger Rd., Dayton, Ohio 45424, United States	
Manufacturer	Trimble Inc.	
Model No.	121132	
FCC ID.	S9E-121132	
Trade Name	Trimble	
Applicable Standard	KDB 447498 D01 v06	<input checked="" type="checkbox"/> Minimum test separation distance ≥ 20 cm <input type="checkbox"/> For low power devices
Test Result	Complied	

Documented By : Jinn Chen
(Senior Adm. Specialist / Jinn Chen)

Tested By : wen Lee
(Senior Engineer / Wen Lee)

Approved By : 
(Director / Vincent Lin)

Revision History

Report No.	Version	Description	Issued Date
20B0761R-E3082100013	V1.0	Initial issue of report.	May 18, 2021

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	EDB10
Trade Name	Trimble
Model No.	121132
FCC ID.	S9E-121132
Frequency Range	802.11b/g/n -20: 2412-2472MHz BT: 2402 – 2480MHz
Channel Number	802.11b/g/n-20: 13CH Bluetooth: V2.1+EDR: 79CH, V5.0: 40CH
Type of Modulation	802.11b: DSSS (DBPSK, DQPSK, CCK) 802.11g/n: OFDM (BPSK, QPSK, 16QAM, 64QAM) BT: V2.1+EDR: GFSK(1Mbps) / π / 4DQPSK(2Mbps) / 8DPSK(3Mbps), V5.0: GFSK(1Mbps,2Mbps)
Channel Control	Auto
Antenna Type	Chip Antenna
Antenna Gain	Refer to the table “Antenna List”

1.2. Antenna List

No.	Manufacturer	Part No.	Antenna Type	Peak Gain
1	Pulse LARSEN Antennas	W3008	Chip Antenna	1.1 dBi for 2.4 GHz

2. RF Exposure Evaluation

2.1. Standard Applicable

According to KDB 447498 D01 (7.1), A minimum test separation distance ≥ 20 cm is required between the antenna and radiating structures of the device and nearby persons to apply mobile device exposure limits.

2.2. Limits

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation as specified in 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	F/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	F/1500	6
1500-100,000	--	--	1	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

2.3. Test Result of RF Exposure Evaluation

Product : EDB10
Test Item : RF Exposure Evaluation

WLAN 2.4G Peak Gain: 1.1dBi

Channel	Frequency	Conducted Peak Power (dBm)	Output Power to Antenna (mW)	Power Density at R = 20 cm (mW/cm ²)	Limit (mW/cm ²)	Pass/Fail
6	2437	24.97	314.051	0.0805	1	Pass

Note: The conducted output power is refer to report No.: 20B0761R-E3032110108, 20B0761R-E3032110108-A, 20B0761R-E3032110113 from the DEKRA.