

RF Exposure Evaluation declaration

Product Name : Verizon Receiver

Model No. : LV65

FCC ID : NKR-LVSK-65

Applicant : Wistron NeWeb Corporation

Address : 20 Park Avenue II, Hsinchu Science Park, Hsinchu 308, Taiwan

Date of Receipt : Mar. 09, 2022

Date of Declaration : June 21, 2022

Report No. : 2230313R-RFUSBLEV01-A

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: June 21, 2022

Report No.: 2230313R-RFUSBLEV01-A



Product Name	Verizon Receiver	
Applicant	Wistron NeWeb Corporation	
Address	20 Park Avenue II, Hsinchu Science Park, Hsinchu 308, Taiwan	
Manufacturer	Wistron NeWeb Corporation	
Model No.	LV65	
FCC ID	NKR-LVSK-65	
Trade Name	Verizon	
Applicable Standard	KDB 447498 D01 v06	<input checked="" type="checkbox"/> Minimum test separation distance \geq 20 cm <input type="checkbox"/> For low power devices
Test Result	Complied	

Documented By : Genie Chang
 (Senior Project Specialist / Genie Chang)

Tested By : Alan Chen
 (Senior Engineer / Alan Chen)

Approved By : Tim Sung
 (Manager / Tim Sung)

Revision History

Report No.	Version	Description	Issued Date
2230313R-RFUSBLEV01-A	V1.0	Initial issue of report.	2022-06-21

1. GENERAL INFORMATION

1.1. EUT Description

Product Name	Verizon Receiver
Model No.	LV65
Trade Name	Verizon
FCC ID	NKR-LVSK-65

For more detailed information please refer to report No.:

2230313R-RFUSBLEV01-A, 2230313R-RFUSWW5V06-A, 2230313R-RFUSWWAV02-A,
2230313R-RFUSWW5V02-A, 2230313R-RFUSWWAV06-A.

Note:

The product both supports the standalone and inter-carrier aggregation mode. After evaluation and comparison, the worst case is investigated in the standalone mode. Therefore, there is only displayed the test result for standalone mode in the test report.

1.2. Test Facility

USA : **FCC Registration Number: TW0033**

Canada : **CAB Identifier Number: TW3023 / Company Number: 26930**

Site Description : Accredited by TAF
Accredited Number: 3023

Test Laboratory : DEKRA Testing and Certification Co., Ltd
Address : No. 5-22, Ruishukeng Linkou District, New Taipei City, 24451, Taiwan
Performed Location : No. 26, Huaya 1st Rd., Guishan Dist., Taoyuan City 333411, Taiwan,
R.O.C.
Phone number : +886-3-275-7255
Fax number : +866-3-327-8031
Email address : info.tw@dekra.com
Website : <http://www.dekra.com.tw>

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				
3.0-30	1842/f	4.89/f	900/f ²	6
300-1500	--	--	F/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
1.34-30	824/f	2.19/f	180/f ²	30
300-1500	--	--	F/1500	30
1500-100,000	--	--	1	30

F= Frequency in MHz

Friis Formula

Friis transmission formula: $Pd = (Pout * G) / (4 * \pi * r^2)$

Where

Pd = power density in mW/cm²

Pout = output power to antenna in mW

G = gain of antenna in linear scale

Pi = 3.1416

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

Simultaneous transmission MPE test exclusion applies when the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is ≤ 1.0

2.3. Test Result of RF Exposure Evaluation

Product : Verizon Receiver
 Test Item : RF Exposure Evaluation

Simultaneous Transmission Configurations 1 (with FR1) for both indoor and outdoor installation:

The front side of mmWave Antenna							
Type	EIRP (dBm)	EIRP (mW)	Duty cycle (%)	Distance (cm)	Power Density (mW/cm ²)	Total Power Density (mW/cm ²)	Limit (mW/cm ²)
5G FR2	51.01	126182.75	25	53.34	0.8823139	0.9106	1
5G FR1	30	1000.00	100	53.34	0.0279694		
BLE	10	10.00	100	53.34	0.0002797		

The side of FR1/BT antenna							
Type	EIRP (dBm)	EIRP (mW)	Duty cycle (%)	Distance (cm)	Power Density (mW/cm ²)	Total Power Density (mW/cm ²)	Limit (mW/cm ²)
5G FR1	30	1000.00	100	20	0.1989432	0.2009	1
BLE	10	10.00	100	20	0.0019894		

Note: The E.I.R.P output power is refer to the tune-up procedure provided by the customer.

Simultaneous Transmission Configurations 2 (with LTE) for both indoor and outdoor installation:

The front side of mmWave Antenna							
Type	EIRP (dBm)	EIRP (mW)	Duty cycle (%)	Distance (cm)	Power Density (mW/cm ²)	Total Power Density (mW/cm ²)	Limit (mW/cm ²)
5G FR2	51.01	126182.75	25	53.34	0.8823139	0.9002	1
LTE	28	630.96	100	53.34	0.0176475		
BLE	10	10.00	100	53.34	0.0002797		

The side of LTE/BT antenna							
Type	EIRP (dBm)	EIRP (mW)	Duty cycle (%)	Distance (cm)	Power Density (mW/cm ²)	Total Power Density (mW/cm ²)	Limit (mW/cm ²)
LTE	28	630.96	100	20	0.1255247	0.1275	1
BLE	10	10.00	100	20	0.0019894		

Note: The E.I.R.P output power is refer to the tune-up procedure provided by the customer.