

RF EXPOSURE EVALUATION REPORT

FCC ID : UZ7ZEC500
Equipment : Enterprise Computer
Brand Name : Zebra
Model Name : ZEC500
Applicant : Zebra Technologies Corporation
3 Overlook Point, Lincolnshire, IL 60069 USA
Manufacturer : Zebra Technologies Corporation
3 Overlook Point, Lincolnshire, IL 60069 USA
Standard : 47 CFR Part 2.1091

We, SPORTON INTERNATIONAL INC has been evaluated this product in accordance with 47 CFR Part2.1091 and it complies with applicable limit.

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 3786) and the FCC designation No. TW3786 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC evaluation.

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Approved by: Cona Huang / Deputy Manager



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History of this test report

Report No.	Version	Description	Issued Date
FA522804	Rev. 01	Initial issue of report	Jun. 20, 2025

**1. Description of Equipment Under Test (EUT)**

Product Feature & Specification	
EUT Type	Enterprise Computer
Brand Name	Zebra
Model Name	ZEC500
FCC ID	UZ7ZEC500
Wireless Technology and Frequency Range	WLAN 2.4 GHz Band: 2400 MHz ~ 2483.5 MHz WLAN 5.2 GHz Band: 5150 MHz ~ 5250 MHz WLAN 5.3 GHz Band: 5250 MHz ~ 5350 MHz WLAN 5.6 GHz Band: 5470 MHz ~ 5725 MHz WLAN 5.8 GHz Band: 5725 MHz ~ 5850 MHz WLAN 6GHz Band: 5925 MHz ~ 6425 MHz, 6425 MHz ~ 6525 MHz, 6525 MHz ~ 6875 MHz, 6875 MHz ~ 7125 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz NFC : 13.56 MHz
Mode	WLAN: 802.11a/b/g/n/ac/ax HT20/HT40/VHT20/VHT40/VHT80/VHT160/HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE NFC: ASK
HW Version	EV1
SW Version	14-28-18.00-UG-U00-PRD-ATH-04
FW Version	NA
OS Version	Android 14
MFD	11APR25
EUT Stage	Identical Prototype

Reviewed by: Jason Wang**Report Producer: Daisy Peng**

Accessories Information				
Adapter 1	Brand Name	ZEBRA	Model Name	PWR-BGA24V78W4WW
Adapter 2	Brand Name	ZEBRA	Model Name	PWR-BGA12V50W0WW
Power Cable	Brand Name	ZEBRA	Model Name	23844-00-00R
Earphone 1	Brand Name	ZEBRA	Model Name	HDST-USBC-PTT1-01
USB C to C cable	Brand Name	ZEBRA	Part Number	CBL-ECX-USBC3A-01
USB A to C cable	Brand Name	ZEBRA	Part Number	CBL-TC5X-USBC2A-01
Scanner_USB cable 1 (RJ50 to USB-A)	Brand Name	ZEBRA	Part Number	CBA-UF0-S07PAR
Scanner_USB cable 2 (RJ50 to USB-A)	Brand Name	ZEBRA	Part Number	CBA-U42-S07PAR
Printer	Brand Name	ZEBRA	Model Name	ZD230t
2nd display	Brand Name	ZEBRA	Model Name	TD50-15F00
Scanner	Brand Name	ZEBRA	P/N	DS3678
POE	Brand Name	ZEBRA	P/N	POE90U-BTAX460-R
USB Cable for printer	Brand Name	ZEBRA	P/N	300283-002

**2. Maximum RF average output power among production units**

Band	Tune-Up Limit (dBm)
	MIMO Ant 1+2
2.4GHz WLAN	26.5
5.2GHz WLAN..	22.5
5.3GHz WLAN	22.5
5.5GHz WLAN	22.5
5.8GHz WLAN	22.5
6GHz WLAN Standard Client CDD	22.5
6GHz WLAN Indoor Client CDD	5.5
6GHz WLAN Indoor Client SDM	17.5

Band	Tune-Up Limit (dBm)	
	SISO Ant 1	SISO Ant 2
Bluetooth BR / EDR 1 Mbps / 2 Mbps / 3 Mbps	6.5	6.5
Bluetooth LE 1 Mbps / 2 Mbps	6.5	6.0

Band	EIRP(dBm)
NFC	-69.27

Note : EIRP is calculated using 3-meter field strength conversion.

3. RF Exposure Limit Introduction

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

The MPE was calculated at 20 cm to show compliance with the power density limit.

The following formula was used to calculate the Power Density:

$$S = \frac{PG}{4\pi R^2}$$

Where:

S = Power Density

P = Output Power at Antenna Terminals

G = Gain of Transmit Antenna (linear gain)

R = Distance from Transmitting Antenna

4. Radio Frequency Radiation Exposure Evaluation

4.1. Standalone Power Density Calculation

Band	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum PG (mW)	Power Density at 20cm (mW/cm ²)	Limit (mW/cm ²)	Power Density / Limit
2.4GHz WLAN	2.98	26.50	29.48	887.16	0.177	1.000	0.177
5.2GHz WLAN	3.09	22.50	25.59	362.24	0.072	1.000	0.072
5.3GHz WLAN	3.61	22.50	26.11	408.32	0.081	1.000	0.081
5.5GHz WLAN	4.09	22.50	26.59	456.04	0.091	1.000	0.091
5.8GHz WLAN	4.10	22.50	26.60	457.09	0.091	1.000	0.091
6GHz WLAN	3.98	22.50	26.48	444.63	0.089	1.000	0.089
Bluetooth	2.98	6.50	9.48	8.87	0.002	1.000	0.002
NFC			-69.27	< 0.001	< 0.001	0.979	< 0.001

4.2. Collocated Power Density Calculation

WLAN Power Density / Limit	Bluetooth Power Density / Limit	NFC Power Density / Limit	Σ (Power Density / Limit) of WLAN+Bluetooth +NFC
0.177	0.002	0.001	0.180

Note:

1. Σ (Power Density / Limit): This is a summation of [(power density for each transmitter/antenna included in the simultaneous transmission)/ (corresponding MPE limit)], for WLAN + Bluetooth + NFC.
2. Considering the WLAN collocation with the NFC and Bluetooth transmitter of the EIRP performance listed in the table above, the aggregated (power density /limit) is smaller than 1, and MPE of 3 collocated transmitters is compliant

Conclusion:

According to 47 CFR §2.1091, the RF exposure analysis concludes that the RF Exposure is FCC compliant.