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MPE TEST REPORT

Manufacturer: TeraCode Inc.
801 Brickell Avenue, 8th Floor
Miami, Florida 33131 USA

Applicant: Same as Above

Product Name: Communication Card

Model: TCCC024

FCC ID: 2BCX2TCCC024

Testing Commenced: 2023-09-29

Testing Ended: 2023-12-22

Test Results: In Compliance

The EUT complies with the EMC requirements when manufactured identically as the unit tested in this report, including any required modifications. Any changes to the design or build of this unit subsequent to this testing may deem it non-compliant.

Standards:

- KDB447498



Order No(s): F2P30494A

Applicant: TeraCode Inc.
Model: TCCC024

Evaluation Conducted by:

Julius Chiller, Senior Wireless Project Engineer

Report Reviewed by:

Ken Littell, Vice President of Operations

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TABLE OF CONTENTS

1	ADMINISTRATIVE INFORMATION
2	SUMMARY OF TEST RESULTS/MODIFICATIONS
3	ENGINEERING STATEMENT
4	EUT INFORMATION AND DATA
5	RF EXPOSURE FOR DEVICE >20cm FROM HUMAN



1 ADMINISTRATIVE INFORMATION

1.1 Measurement Location:

F2 Labs in Middlefield, Ohio. Site description and attenuation data are on file with the FCC's Sampling and Measurement Branch at the FCC Laboratory in Columbia, MD.

1.2 Measurement Procedure:

All measurements were performed according to KDB558074.

1.4 Document History

Document Number	Description	Issue Date	Approved By
F2P30494A-03E	First Issue	2023-12-22	K. Littell



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2 SUMMARY OF TEST RESULTS

Test Name	Standard(s)	Results
RF Exposure for Device >20cm from Human	KDB447498	Complies

Modifications Made to the Equipment
None



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3 ENGINEERING STATEMENT

This report has been prepared on behalf of TeraCode Inc. to provide documentation for the testing described herein. This equipment has been tested and found to comply with KDB447498. The test results found in this test report relate only to the item(s) tested.



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4 EUT INFORMATION AND DATA

4.1 Equipment Under Test:

Product: Communication Card – Bluetooth Radio

Model: TCCC024

Serial No.: TCCC024-63294153DA022CF8

Firmware: v14.0.10

Hardware: v2.4

FCC ID: 2BCX2TCCC024

4.2 Trade Name:

TeraCode Inc.

4.3 Power Supply:

3.3VAC from AC Adapter

4.4 Applicable Rules:

KDB447498

4.5 Equipment Category:

DTS-Radio Transmitter

4.6 Antenna:

Integral

4.7 Accessories:

Device	Manufacturer	Model Number	Serial Number
Serial Converter	Moyina	FT232	None Specified
Power Supply	CUI	SW16-3.3N	None Specified



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5. RF EXPOSURE FOR DEVICE >20cm FROM HUMAN

5.1 Requirements: **Distance used is 20cm**

Limit: $\text{Bluetooth} = 1 \text{ mW/cm}^2$
 $\text{LoRa} = 0.6 \text{ mW/cm}^2$

Formulas used for result:
$$\frac{\text{E.I.R.P.}}{4 \pi R^2}$$

$$P(\text{dBm}) = E(\text{dBuV/m}) + 20\text{LOG}(d) - G - 104.77$$
$$88.6 + 9.542425 - 0 - 104.77 = -6.63\text{dBm}$$

$P(\text{dBm}) = -6.63\text{dBm}$ which is 0.2172mW for the Bluetooth.

Results: $\text{Bluetooth E.I.R.P.} = 0.2172\text{mW}$

$$\frac{0.2172\text{mW}}{4 \pi R^2} = \frac{0.2172\text{mW}}{5026.55} = 0.00004\text{mW/cm}^2$$

$$\frac{0.00004\text{mW/cm}^2}{1 \text{mW/cm}^2} \text{ Ratio} = 0.0004$$

LoRa E.I.R.P = 20.75mW

$$\frac{20.75\text{mW}}{4 \pi R^2} = \frac{20.75\text{mW}}{5026.55} = 0.0041\text{mW/cm}^2$$

$$\frac{0.0041\text{mW/cm}^2}{0.6 \text{mW/cm}^2} \text{ Ratio} = 0.007$$