




# TEST REPORT

|  |   |   |
|--|---|---|
| <b>FCC ID</b> ..... :                          | 2AUCLLM-1001  |   |
| <b>Test Report No</b> ..... :                  | TCT221205E905   |   |
| <b>Date of issue</b> ..... :                   | Dec. 27, 2022   |   |
| <b>Testing laboratory</b> .....                | SHENZHEN TONGCE TESTING LAB   |   |
| <b>Testing location/ address:</b>              | 2101 & 2201, Zhenchang Factory Renshan Industrial Zone, Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China |   |
| <b>Applicant's name</b> ..... :                | FX Technology Limited   |   |
| <b>Address</b> ..... :                         | 2 Stone Buildings, Lincoln's Inn, London WC2A 3TH, United Kingdom   |   |
| <b>Manufacturer's name</b> ... :               | FX Technology Limited   |   |
| <b>Address</b> ..... :                         | 2 Stone Buildings, Lincoln's Inn, London WC2A 3TH, United Kingdom   |   |
| <b>Standard(s)</b> .....                       | FCC CFR Title 47 Part 1.1307<br>KDB 447498 D04 Interim General RF Exposure Guidance v01   |   |
| <b>Product Name</b> ..... :                    | Linxdot Concentrator Module   |   |
| <b>Trade Mark</b> .....                        | Linxdot   |   |
| <b>Model/Type reference</b> ..... :            | LM-1001   |   |
| <b>Rating(s)</b> .....                         | DC 3.3V   |   |
| <b>Date of receipt of test item</b> .....      | Dec. 05, 2022   |   |
| <b>Date (s) of performance of test</b> ..... : | Jun. 08, 2022 - Dec. 27, 2022   |   |
| <b>Tested by (+signature)</b> ... :            | Aaron MO  |  |
| <b>Check by (+signature)</b> .... :            | Beryl ZHAO  |  |
| <b>Approved by (+signature)</b> :              | Tomsin  |  |



**General disclaimer:**

This report shall not be reproduced except in full, without the written approval of SHENZHEN TONGCE TESTING LAB. This document may be altered or revised by SHENZHEN TONGCE TESTING LAB personnel only, and shall be noted in the revision section of the document. The test results in the report only apply to the tested sample.

## Table of Contents

|   |          |
|---|----------|
| <b>1. General Product Information .....</b>       | <b>3</b> |
| 1.1. EUT description .....                        | 3        |
| 1.2. Model(s) list.....                           | 3        |
| <b>2. General Information.....</b>                | <b>4</b> |
| 2.1. Test environment and mode.....               | 4        |
| 2.2. Description of Support Units.....            | 4        |
| <b>3. Facilities and Accreditations .....</b>     | <b>5</b> |
| 3.1. Facilities .....                             | 5        |
| 3.2. Location .....                               | 5        |
| <b>4. Test Results and Measurement Data .....</b> | <b>6</b> |

## 1. General Product Information

### 1.1. EUT description

|                            |  |
|----------------------------|--|
| Product Name.....:         | Linxdot Concentrator Module                            |
| Model/Type reference.....: | LM-1001  |
| Sample Number.....:        | TCT221205E903-0101                                     |
| Operation Frequency .....  | 125KHz: 902.3MHz~914.9MHz<br>500KHz: 923.3MHz~927.5MHz |
| Modulation Type.....:      | LoRa   |
| Antenna Type.....:         | External Antenna                                       |
| Antenna Gain.....:         | 2dBi   |
| Rating(s) .....            | DC 3.3V  |

Note: The antenna gain listed in this report is provided by applicant, and the test laboratory is not responsible for this parameter.

### 1.2. Model(s) list

None.

## 2. General Information

### 2.1. Test environment and mode

| Item                  | Normal condition  |
|-----------------------|---|
| Temperature           | +25°C   |
| Voltage               | AC 120V/60Hz  |
| Humidity              | 56%   |
| Atmospheric Pressure: | 1008 mbar   |
| <b>Test Mode:</b>     |   |
| Engineering mode:     | Keep the EUT in continuous transmitting by select channel |

### 2.2. Description of Support Units

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| Equipment | Model No. | Serial No. | FCC ID | Trade Name |
|-----------|-----------|------------|--------|------------|
| /         | /         | /          | /      | /          |

**Note:**

1. All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.
2. Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.
3. For conducted measurements (Output Power, 20dB Occupied Bandwidth, Carrier Frequencies Separation, Hopping Channel Number, Dwell Time, Spurious Emissions), the antenna of EUT is connected to the test equipment via temporary antenna connector, the antenna connector is soldered on the antenna port of EUT, and the temporary antenna connector is listed in the Test Instruments.

### 3. Facilities and Accreditations

#### 3.1. Facilities

The test facility is recognized, certified, or accredited by the following organizations:

- FCC - Registration No.: 645098  
SHENZHEN TONGCE TESTING LAB  
Designation Number: CN1205

The testing lab has been registered and fully described in a report with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

- IC - Registration No.: 10668A-1  
SHENZHEN TONGCE TESTING LAB  
CAB identifier: CN0031

The testing lab has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing.

#### 3.2. Location

SHENZHEN TONGCE TESTING LAB

Address: 2101 & 2201, Zhenchang Factory Renshan Industrial Zone, Fuhai Subdistrict,  
Bao'an District, Shenzhen, Guangdong, 518103, People's Republic of China

TEL: +86-755-27673339

#### 4. Test Results and Measurement Data

According to §1.1307(b), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

Remark: 1) **For LoRa-DSS:** The maximum output power for antenna is 21.78dBm (150.66mW) at 914.9MHz, 2dBi antenna gain(with 1.58 numeric antenna gain.)  
**For LoRa-DTS:** The maximum output power for antenna is 27.23dBm (528.45mW) at 923.3MHz, 2dBi antenna gain(with 1.58 numeric antenna gain.)

2) For mobile or fixed location transmitters, no SAR consideration applied. The minimum separation generally be used is at least 20cm, even if the calculation indicate that the MPE distance would be lesser.

**Calculation:**

Given  $E = \frac{\sqrt{30 \cdot P \cdot G}}{d}$  &  $S = \frac{E^2}{3770}$

Where  $E =$  Field strength in Volts / meter

$P =$  Power in Watts

$G =$  Numeric antenna gain

$d =$  Distance in meters

$S =$  Power density in milliwatts / square centimeter

Substituting the MPE safe distance using d=20cm into above equation.

Yields:  $S=0.000199 \cdot P \cdot G$

| Mode     | Power(mW) | numeric antenna gain | Power density (mW/cm <sup>2</sup> ) | Limit (mW/cm <sup>2</sup> ) | Result |
|----------|-----------|----------------------|-------------------------------------|-----------------------------|--------|
| LoRa-DSS | 150.66    | 1.58                 | 0.047371                            | 0.61                        | PASS   |
| LoRa-DTS | 528.45    | 1.58                 | 0.166155                            | 0.62                        |        |

**Result:**

Base on the calculation value, No SAR measurement is required.

**\*\*\*\*\*END OF REPORT\*\*\*\*\***