



# RF TEST REPORT

Product Name: LoRa Module

Model Name: F8L10C, F8L10C-00L, F8L10C-00H, F8L10C-00LU,  
F8L10C-00LN, F8L10C-00HU, F8L10C-00HN,  
F8L10C-01L, F8L10C-01H, F8L10C-01LU, F8L10C-01LN, F8L10C-01HU,  
F8L10C-01HN

FCC ID: 2ALUWF8L10C

Issued For : Xiamen Four-Faith Communication Technology Co., Ltd.

11th Floor, A-06 Area, No.370, Chengyi Street, Jimei,  
Xiamen, Fujian, China.

Issued By : Shenzhen LGT Test Service Co., Ltd.

Room 205, Building 13, Zone B, Chen Hsiong Industrial Park,  
No.177 Renmin West Road, Jinsha Community, Kengzi  
Street, Pingshan New District, Shenzhen, China

Report Number: LGT25A016HA01

Sample Received Date: Jan. 06, 2025

Date of Tested: Jan. 06, 2025 – Feb. 20, 2025

Date of Issue: Feb. 20, 2025

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## TEST REPORT CERTIFICATION

**Applicant** Xiamen Four-Faith Communication Technology Co., Ltd.  
Address 11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

**Manufacturer** Xiamen Four-Faith Communication Technology Co., Ltd.  
Address 11th Floor, A-06 Area, No.370, Chengyi Street, Jimei, Xiamen, Fujian, China.

Product Name LoRa Module

Trademark Four-Faith

Model Name F8L10C, F8L10C-00L, F8L10C-00H, F8L10C-00LU, F8L10C-00LN, F8L10C-00HU, F8L10C-00HN, F8L10C-01L, F8L10C-01H, F8L10C-01LU, F8L10C-01LN, F8L10C-01HU, F8L10C-01HN

Sample Status: Normal

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
FCC 47CFR §2.1091 KDB 447498 D01 General RF Exposure Guidance v06	PASS

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### Revision History

Rev.	Issue Date	Contents
00	Feb. 20, 2025	Initial Issue



## 1. GENERAL INFORMATION

### 1.1 GENERAL DESCRIPTION OF THE EUT

Product Name	LoRa Module				
Brand Name	Four-Faith				
Model Name	F8L10C-00H				
Series Model	F8L10C, F8L10C-00L, F8L10C-00LU, F8L10C-00LN, F8L10C-00HU, F8L10C-00HN, F8L10C-01L, F8L10C-01H, F8L10C-01LU, F8L10C-01LN, F8L10C-01HU, F8L10C-01HN				
Model Difference	Only difference in model name				
Product Description	<p>The EUT is LoRa Module</p> <table border="1"><tr><td>Operation Frequency:</td><td>915 MHz</td></tr><tr><td>Modulation Type:</td><td>CSS</td></tr></table>	Operation Frequency:	915 MHz	Modulation Type:	CSS
Operation Frequency:	915 MHz				
Modulation Type:	CSS				
Hardware Version:	N/A				
Software Version:	F8L10C_ACCESS_XXXXX_LRWAN				

### 1.2 TEST FACTORY

Company Name:	Shenzhen LGT Test Service Co., Ltd.
Address:	Room 205, Building 13, Zone B, Chen Hsiong Industrial Park, No.177 Renmin West Road, Jinsha Community, Kengzi Street, Pingshan New District, Shenzhen, China
Accreditation Certificate	A2LA Certificate No.: 6727.01
	FCC Registration No.: 746540
	CAB ID: CN0136



## 2. FCC 47CFR §2.1091 REQUIREMENT

### 2.1 TEST STANDARDS

The limit for Maximum Permissible Exposure (MPE) specified in FCC 1.1310 is followed. The gain of the antennas used in the product is extracted from the Antenna data sheets provided and also the maximum total power input to the antenna is measured. Through the Friis transmission formula and the maximum gain of the antenna, we can calculate the distance, away from the product, where the limit of MPE is reached.

Although the Friis Transmission formula is far field assumption, the calculated result of that is an over-prediction for near field power density. It is taken as worst case to specify the safety range.

### 2.2 LIMIT

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environmental impact of the 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 <sup>2</sup> )
Limits for Occupational / controlled Exposures			
300 - 1500	--	--	F/300
1500 – 100000	--	--	5.0
Limits for General population / Uncontrolled Exposure			
300 - 1500	--	--	F/1500
1500 – 100000	--	--	1.0

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/cm<sup>2</sup>

$P_{out}$  = output power to antenna in mW

$G$  = gain of antenna in linear scale

$\pi$  = 3.1416

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

If we know the maximum gain of the antenna and the total output power to the antenna, through calculation, we will know MPE value at distance 20cm.

### 2.3 EUT OPERATION CONDITION

EUT was enabled to transmit and receive at lowest, middle and highest channels.

### 2.4 CLASSIFICATION

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user. Warning statement to the user for keeping at least 20cm or more separation distance from the antenna should be included in the User manual. So, this device is classified as Mobile device.



## 2.5 TEST RESULT

Turn up

Frequency (MHz)	Detector	Turn up Power (dBm)
902-928	Peak	17.57±1

Max Turn up Power (dBm)	Max Turn up Power (mW)	ANT Gain (dBi)	ANT Gain (gain of antenna in linear scale)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
18.57	71.94	6	3.98	0.057	0.61	Pass

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