# **RF Exposure Evaluation Report**

Report No.: FA072303-04

APPLICANT : Telrad Networks Ltd

**EQUIPMENT**: CPE-12300XG-PRO-1D-3.x

**BRAND NAME**: Telrad

MODEL NAME : 735330

FCC ID : ARA-CPE12300XG

STANDARD : 47 CFR Part 2.1091

FCC KDB 447498 D01 v06

We, Sporton International (Kunshan) Inc., would like to declare that the device has been evaluated in accordance with 47 CFR Part 2.1091 and FCC KDB 447498 D01 v06, and pass the limit. Without written approval of Sporton International (Kunshan) Inc., the test report shall not be reproduced except in full.

Reviewed by: Rose Wang / Supervisor

Kat Yin

Approved by: Kat Yin / Manager

Sporton International (Kunshan) Inc.

No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China

 TEL: 86-512-57900158
 Page Number
 : 1 of 8

 FAX: 86-512-57900958
 Report Issued Date
 : Mar. 29, 2021

 FCC ID: ARA-CPE12300XG
 Report Version
 : Rev. 01

## **Table of Contents**

1.	ADMINISTRATION DATA	4
	1.1. Testing Laboratory	4
2.	DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)	5
3.	MAXIMUM RF TUNE UP POWER AMONG PRODUCTION UNITS	6
4.	RF EXPOSURE LIMIT INTRODUCTION	7
5.	RADIO FREQUENCY RADIATION EXPOSURE EVALUATION	8
	5.1 Standalone Power Density Calculation	8

TEL: 86-512-57900158 FAX: 86-512-57900958 FCC ID: ARA-CPE12300XG Page Number : 2 of 8
Report Issued Date : Mar. 29, 2021

Report No.: FA072303-04

Report Version : Rev. 01



## SPORTON LAB. RF Exposure Evaluation Report

### **Revision History**

Report No.: FA072303-04

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE	
FA072303-04	Rev. 01	Initial issue of report	Mar. 29, 2021	

 TEL: 86-512-57900158
 Page Number
 : 3 of 8

 FAX: 86-512-57900958
 Report Issued Date
 : Mar. 29, 2021

 FCC ID: ARA-CPE12300XG
 Report Version
 : Rev. 01

## 1. Administration Data

### 1.1. <u>Testing Laboratory</u>

Sporton International (Kunshan) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Report No.: FA072303-04

Testing Laboratory						
Test Firm	Sporton International (Kunshan) Inc.					
	No. 1098, Pengxi North Road, Kunshan Economic Development Zone					
Test Site Location	Jiangsu Province 215300 People's Republic of China					
rest Site Location	TEL: +86-512-57900158					
	FAX: +86-512-57900958					
Test Site No.	FCC Designation No.	FCC Test Firm Registration No.				
Test Site No.	CN1257	314309				

	Applicant
Company Name	Telrad Networks Ltd
Address	Industrial Center PO Box 6118 Lod, 711600 Israel

Manufacturer				
Company Name	Asiatelco			
Address	No. 68 Huatuo Road, Building-8, Zhangjiang Hi-Tech Park, Pudong, Shanghai, PRC			

 TEL: 86-512-57900158
 Page Number
 : 4 of 8

 FAX: 86-512-57900958
 Report Issued Date
 : Mar. 29, 2021

 FCC ID: ARA-CPE12300XG
 Report Version
 : Rev. 01

## 2. Description of Equipment Under Test (EUT)

Product Feature & Specification					
EUT Type	CPE-12300XG-PRO-1D-3.x				
Brand Name	Telrad				
Model Name	735330				
FCC ID	ARA-CPE12300XG				
Wireless Technology and Frequency Range	LTE Band 42: 3552.5 MHz ~ 3597.5 MHz LTE Band 43: 3602.5 MHz ~ 3697.5 MHz LTE Band 48: 3552.5 MHz ~ 3697.5 MHz				
Mode	LTE: QPSK, 16QAM, 64QAM, 256QAM (Downlink Only)				
HW Version	P1				
SW Version	KT2A_OTE30_TRD_1.0.0.1				
Antenna Type	Fixed Internal Antenna				
Antenna Gain	20dBi				
EUT Stage	Identical Prototype				
Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more					

Report No. : FA072303-04

#### **Comments and Explanations:**

detailed description.

- The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.
- 2. The maximum RF output tune up power, antenna gain also the safe distance used for evaluate RF exposure were declared by manufacturer.

 TEL: 86-512-57900158
 Page Number
 : 5 of 8

 FAX: 86-512-57900958
 Report Issued Date
 : Mar. 29, 2021

 FCC ID: ARA-CPE12300XG
 Report Version
 : Rev. 01



## 3. Maximum RF Tune Up Power among production units

#### < LTE >

Мо	ode	Maximum Average power(dBm)		
LTE Band 42/43/48		23.0		

Report No.: FA072303-04

 TEL: 86-512-57900158
 Page Number
 : 6 of 8

 FAX: 86-512-57900958
 Report Issued Date
 : Mar. 29, 2021

 FCC ID: ARA-CPE12300XG
 Report Version
 : Rev. 01

### 4. 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 <sup>2</sup> )	Averaging time (minutes)	
500 St.	(A) Limits for O	ccupational/Controlled Expos	sures	W	
0.3-3.0	614	1.63	*(100)	6	
3.0-30	1842/	f 4.89/1	*(900/f2)	6	
30-300	61.4	0.163	1.0	6	
300-1500			f/300	6	
1500-100,000			5	6	
	(B) Limits for Gene	ral Population/Uncontrolled I	Exposure		
0.3-1.34	614	1.63	*(100)	30	
1.34-30	824/	f 2.19/1	*(180/f2)	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 50 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

TEL: 86-512-57900158 FAX: 86-512-57900958 FCC ID: ARA-CPE12300XG Page Number : 7 of 8
Report Issued Date : Mar. 29, 2021
Report Version : Page 24

Report No.: FA072303-04

Report Version : Rev. 01



### 5. Radio Frequency Radiation Exposure Evaluation

### 5.1. Standalone Power Density Calculation

Band	Frequency (MHz)	Antenna Gain (dBi)	Maximum Power (dBm)	Maximum EIRP (dBm)	Maximum EIRP (W)	Average EIRP (mW)	Power Density at 50cm (mW/cm^2)	Limit (mW/cm^2)
LTE Band 48	3552.5	20	23.00	43.00	19.953	19952.623	0.635	1.000

Report No.: FA072303-04

#### Note:

- 1. For conservativeness, the lowest frequency of each band is used to determine the MPE limit of that band
- 2. Chose the maximum power to do MPE analysis.
- 3. LTE band 42 and LTE band 43 covered by LTE band 48 with the same power level, so only chose LTE band 48 to perform standalone power density calculation.

### **Conclusion:**

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

 TEL: 86-512-57900158
 Page Number
 : 8 of 8

 FAX: 86-512-57900958
 Report Issued Date
 : Mar. 29, 2021

 FCC ID: ARA-CPE12300XG
 Report Version
 : Rev. 01