

## Compliance Certification Services (Kunshan) Inc.

CCSEM-TRF-001 Rev. 02 Sep 01, 2023

Report No.: KSCR230700114602

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### 1 Cover Page

# RF MPE REPORT

<b>Application No.:</b>	KSCR2307001146AT
<b>FCC ID:</b>	2BDAESI512325416677
<b>Applicant:</b>	PROSE Technologies (Suzhou) Co., Ltd
<b>Address of Applicant:</b>	No. 6, Shen'an Road, Dianshanhu, Suzhou, Jiangsu 215345, China
<b>Manufacturer:</b>	PROSE Technologies (Suzhou) Co., Ltd
<b>Address of Manufacturer:</b>	No. 6, Shen'an Road, Dianshanhu, Suzhou, Jiangsu 215345, China
<b>Factory:</b>	1. PROSE Technologies (Suzhou) Co., Ltd 2. PROSE Technologies India Pvt. Ltd.
<b>Address of Factory:</b>	1. No. 6, Shen'an Road, Dianshanhu, Suzhou, Jiangsu 215345, China 2. Block A, Horizon Industrial Park, Off MIDC Phase II, Chakan, Pune-410501
<b>Equipment Under Test (EUT):</b>	
<b>EUT Name:</b>	Integrated Remote Unit-Optical (Indoor)
<b>Model No.:</b>	IRU-O-24-S5S12S13S25S41S66S77-ANT-10, IRU-O-XX-XX- XX-XX
<b>Trade mark:</b>	PROSE
<b>Standard(s) :</b>	FCC Rules 47 CFR §2.1091 KDB447498 D01 General RF Exposure Guidance v06
<b>Date of Receipt:</b>	2023-07-05
<b>Date of Test:</b>	2023-09-01 to 2023-10-15
<b>Date of Issue:</b>	2023-10-16
<b>Test Result:</b>	<b>Pass*</b>

\* In the configuration tested, the EUT complied with the standards specified above.

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Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 30 days only.

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Revision Record			
Version	Description	Date	Remark
00	Original	2023-10-16	/

Authorized for issue by:			
Tested By		 Cloud Peng	
		Cloud_Peng/Project Engineer	
Approved By		 Terry Hou	
		Terry Hou /Reviewer	



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### 3 General Information

#### 3.1 General Description of E.U.T.

Power supply:	DC 40V ~56V
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#### 3.2 Technical Specifications

Frequency Band:	LTE Band 5:869MHz to 894MHz LTE Band 12:729MHz to 746MHz LTE Band 13:746MHz to 756MHz LTE Band 25:1930MHz to 1995MHz LTE Band 66:2110MHz to 2200MHz 5GNR N41:2496MHz to 2690MHz 5GNR N77:3450MHz to 3550MHz 5GNR N77:3700MHz to 3980MHz
Antenna Type:	External antenna
Antenna Gain:	2.63 dBi for 869MHz to 894MHz (Provided by manufacturer) 3.06 dBi for 729MHz to 746MHz (Provided by manufacturer) 3.06 dBi for 746MHz to 756MHz (Provided by manufacturer) 1.50 dBi for 1930MHz to 1995MHz (Provided by manufacturer) 5.43 dBi for 2110MHz to 2200MHz (Provided by manufacturer) 5.14 dBi for 2496MHz to 2690MHz (Provided by manufacturer) 2.00 dBi for 3450MHz to 3550MHz (Provided by manufacturer) 2.00 dBi for 3700MHz to 3980MHz (Provided by manufacturer)
Modulation Type:	5G NR: CP-OFDM: QPSK, 16QAM, 64QAM, 256QAM LTE: QPSK, 16QAM, 64QAM, 256QAM
MIMO:	SISO
Temperature Range:	-40°C to 55°C

**Note:**

The antenna gain value is provided by the customer. The test lab will not be responsible for wrong test result due to incorrect information about antenna gain values.



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### 3.3 Test Location

All tests were performed at:

Compliance Certification Services (Kunshan) Inc.

No.10 Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China.

Tel: +86 512 5735 5888 Fax: +86 512 5737 0818

No tests were sub-contracted.

Note:

1.SGS is not responsible for wrong test results due to incorrect information (e.g., max. internal working frequency, antenna gain, cable loss, etc) is provided by the applicant. (If applicable).

2.SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (If applicable).

3. Sample source: sent by customer.

### 3.4 Test Facility

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

- **A2LA**

Compliance Certification Services (Kunshan) Inc. is accredited by the American Association for Laboratory Accreditation (A2LA). Certificate No. 2541.01.

- **FCC**

Compliance Certification Services (Kunshan) Inc. has been recognized as an accredited testing laboratory. Designation Number: CN1172.

- **ISED**

Compliance Certification Services (Kunshan) Inc. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory. Company Number: 2324E

- **VCCI**

The 3m and 10m Semi-anechoic chamber and Shielded Room of Compliance Certification Services (Kunshan) Inc. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-20134, R-11600, C-11707, T-11499, G-10216 respectively.

## 4 Test Standards and Limits

### 4.1 FCC Radiofrequency radiation exposure limits:

According to §1.1310, the limit for general population/uncontrolled exposures

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm <sup>2</sup> )	Averaging time (minutes)
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 <sup>2</sup> )	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

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## 5 Measurement and Calculation

### 5.1 Maximum transmit power

The Power Data is based on the RF Test Report KSCR230700114601

### 5.2 MPE Calculation

According to the formula  $S=P*G/4\pi R^2$ , we can calculate S which is MPE.

Note:

1)P (mW)

2)R = distance to the center of radiation of antenna (in centimeter)

Test Mode	Frequency Band (MHz)	Max E.I.R.P	Turn up E.I.R.P	Operation Distance	Power Density	Limit of Power Density	Ratio (Power Density/Limit)	Result
		(dBm)	(dBm)	R(cm)	(mW/cm <sup>2</sup> )	S(mW/cm <sup>2</sup> )		
LTE	869~894	21.39	22.00	20	0.0315	0.579	0.054	Pass
LTE	729~ 746	21.69	22.00	20	0.0315	0.458	0.069	Pass
LTE	746 ~ 756	21.95	22.00	20	0.0315	0.497	0.063	Pass
LTE	1930-1995	23.36	24.00	20	0.0500	1	0.050	Pass
LTE	2110-2200	30.01	31.00	20	0.2505	1	0.251	Pass
5G NR	2496 ~ 2690	29.30	30.00	20	0.1989	1	0.199	Pass
5G NR	3450 ~ 3550	26.55	27.00	20	0.0997	1	0.100	Pass
5G NR	3700~ 3980	26.59	27.00	20	0.0997	1	0.100	Pass

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**Simultaneous transmission:**

Test Mode	Wireless Configure	Tune Up EIRP (dBm)	Power Density S at R = 20 cm (mW/cm <sup>2</sup> )	Limit of Power Density S(mW/cm <sup>2</sup> )	Ratio (Power Density/Limit)	Limit
LTE	869~894	22.00	0.0315	0.579	0.886	1
LTE	729~ 746	22.00	0.0315	0.458		
LTE	746 ~ 756	22.00	0.0315	0.497		
LTE	1930-1995	24.00	0.0500	1		
LTE	2110-2200	31.00	0.2505	1		
5G NR	2496 ~ 2690	30.00	0.1989	1		
5G NR	3450 ~ 3550	27.00	0.0997	1		
5G NR	3700~ 3980	27.00	0.0997	1		

Note:

(1) The EUT can support four band simultaneous transmitted.

According to the KDB447498 section 7.2 determine the device is exclusion from SAR test.

**--End of the Report--**