TEST REPORT

Applicant:	Xirgo Technologies LLC
Address:	2100 GOLF RD STE 290 Rolling Meadows Illinois 60008 United States
Equipment Type:	XFV-100
Model Name:	XFV-100 (refer to section 2.3)
Brand Name:	Xirgo
FCC ID:	GKM-XFV-100
Test Standard:	47 CFR Part 2.1091 KDB 447498 D04 v01
Sample Arrival Date:	Apr. 23, 2026
Test Date:	May 07, 2026
Date of Issue:	May 07, 2026

ISSUED BY:

Shenzhen BALUN Technology Co., Ltd.

Tested by: Xiong Lining **Checked by:** Xu Rui **Approved by:** Tolan Tu (Testing Director)

Revision History

Version	Issue Date	Revisions Content
Rev. 01	May 07, 2026	Initial Issue

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1 GENERAL INFORMATION

1.1 Test Laboratory

Name	Shenzhen BALUN Technology Co., Ltd.
Address	601, Building 2, Intelligent Connected Vehicle Industrial Park, No.55,Xiangshan Road, Luotian Community, Yanluo Sub-district, Bao'an District, Shenzhen
Phone Number	+86 755 6685 0100

1.2 Test Location

Name	Shenzhen BALUN Technology Co., Ltd.
Location	☐ Building 2, Intelligent Connected Vehicle Industrial Park, No.55, Xiangshan Road, Luotian Community, Yanluo Sub-district, Bao'an District, Shenzhen, Guangdong
	☑ 1/F., Building B, Ganghongji High-Tech Intelligent Industrial Park, No.1008, Songbai Road, Yangguang Community, Xili Subdistrict, Nanshan District, Shenzhen, Guangdong
Accreditation Certificate	The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Xirgo Technologies LLC
Address	2100 GOLF RD STE 290 Rolling Meadows Illinois 60008 United States

2.2 Manufacturer Information

Manufacturer	Xirgo Technologies LLC
Address	2100 GOLF RD STE 290 Rolling Meadows Illinois 60008 United States

2.3 General Description for Equipment under Test (EUT)

<table>
<tr><td>EUT Name</td><td>XFV-100</td></tr>
<tr><td>Model Name Under Test</td><td>XFV-100</td></tr>
<tr><td>Series Model Name</td><td>Variants: XFV-104NA,XFV-103NA,XFV-102NA,XFV-101NA</td></tr>
<tr><td>Description of Model name differentiation</td><td>1.2 types of enclosures (IP67 & IP54) for each series and different modems for each region.
<table>
<tr><td colspan="2">IP67 Enclosure</td><td colspan="2">IP54 Enclosure</td></tr>
<tr><td>XFV-104 (8-Pin) (Parent)</td><td>XFV-103 (5-Pin)</td><td>XFV-102 (8-Pin)</td><td>XFV-101 (5-Pin)</td></tr>
<tr><td>XFV-104NA</td><td>XFV-103NA</td><td>XFV-102NA</td><td>XFV-101NA</td></tr>
</table>
(this information provided by the applicant)</td></tr>
<tr><td>Hardware Version</td><td>KALE-NA-C</td></tr>
<tr><td>Software Version</td><td>XFV-100NA-001</td></tr>
<tr><td>Dimensions (Approx.)</td><td>N/A</td></tr>
<tr><td>Weight (Approx.)</td><td>N/A</td></tr>
</table>

2.4 Technical Information

Network and Wireless connectivity	4G Network FDD LTE Band 2/4/12/13/66 Bluetooth BLE GPS, Glonass

The requirement for the following technical information of the EUT was tested in this report:

Operating Mode	WWAN, Bluetooth		
Frequency Range	LTE Band 2	Tx: 1850 ~ 1910 MHz	Rx: 1930 ~ 1990 MHz
	LTE Band 4	Tx: 1710 ~ 1755 MHz	Rx: 2110 ~ 2155 MHz
	LTE Band 5	Tx: 824 ~ 849 MHz	Rx: 869 ~ 894 MHz
	LTE Band 12	Tx: 699 ~ 716 MHz	Rx: 729 ~ 746 MHz
	LTE Band 13	Tx: 777 MHz ~ 787 MHz	Rx: 746 ~ 756 MHz
	LTE Band 17	Tx: 704 ~ 716 MHz	Rx: 734 ~ 746 MHz
	LTE Band 66	Tx: 1710 ~ 1780 MHz	Rx: 2110 ~ 2180 MHz
	Bluetooth	2402 ~ 2480 MHz	
Antenna Type	WWAN	internal antenna	
	Bluetooth	internal antenna	
Exposure Category	General Population/Uncontrolled Exposure		
Product Type	Mobile Device		

3 SUMMARY OF TEST RESULT

3.1 Test Standards

No.	Identity	Document Title
1	KDB 447498 D04 v01	447498 D04 Interim General RF Exposure Guidance v01

3.2 Limit Standards

No.	Identity	Document Title
1	47 CFR Part 2.1091	Radiofrequency radiation exposure evaluation: mobile devices

4 DEVICE CATEGORY AND LEVELS LIMITS

Mobile Devices:

CFR Title 47 §2.1091(b)

For purposes of this section, a mobile device is defined as a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 centimeters is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons.

FCC KDB 447498 D04 General RF Exposure Guidance v01 Limit

Evaluation of compliance with the exposure limits in § 1.1310 is necessary if the ERP of the device is greater than ERP20cm in Formula (B.1) [repeated from § 2.1091(c)(1) and § 1.1307(b)(1)(i)(B)].

$$P_{\text{th}}\ (\text{mW}) = ERP_{20\ \text{cm}}\ (\text{mW}) = \begin{cases} 2040f & 0.3\ \text{GHz} \le f < 1.5\ \text{GHz} \\ 3060 & 1.5\ \text{GHz} \le f \le 6\ \text{GHz} \end{cases} \qquad (\text{B.1})$$

If the ERP is not easily obtained, then the available maximum time-averaged power may be used (i. e., without consideration of ERP only if the physical dimensions of the radiating structure(s) do not exceed the electrical length of λ/4 or if the antenna gain is less than that of a half-wave dipole.

SAR-based exemptions are constant at separation distances between 20 cm and 40 cm to avoid discontinuities in the threshold when transitioning between SAR-based and MPE-based exemption criteria at 40 cm, considering the importance of reflections.

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold Pth (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). Pth is given by Formula (B.2).

$$P_{\text{th}}\,(\text{mW}) = \begin{cases} ERP_{20\,\text{cm}}(d/20\ \text{cm})^{x} & d \le 20\ \text{cm} \\ ERP_{20\,\text{cm}} & 20\ \text{cm} < d \le 40\ \text{cm} \end{cases} \qquad \text{(B.2)}$$

where

$$x = -\log_{10}\left(\frac{60}{ERP_{20\,\text{cm}}\sqrt{f}}\right)$$

and f is in GHz, d is the separation distance (cm), and $ERP_{20\text{cm}}$ is per Formula (B.1). The example values shown in Table B.2 are for illustration only.

Table B.2—Example Power Thresholds (mW)

Frequency (MHz)	Distance (mm)									
	5	10	15	20	25	30	35	40	45	50
300	39	65	88	110	129	148	166	184	201	217
450	22	44	67	89	112	135	158	180	203	226
835	9	25	44	66	90	116	145	175	207	240
1900	3	12	26	44	66	92	122	157	195	236
2450	3	10	22	38	59	83	111	143	179	219
3600	2	8	18	32	49	71	96	125	158	195
5800	1	6	14	25	40	58	80	106	136	169

5 ASSESSMENT RESULT

5.1 Output Power

Mode	Bluetooth
Conducted Power (dBm)	2.04
Antenna Gain (dBi)	0.00
EIRP (dBm)	2.04
Note: This report listed the worst case conducted power value, please refer to Ti-CC26040184-601 report for more details.	

Mode	LTE				
	LTE Band 2	LTE Band 4	LTE Band 12	LTE Band 13	LTE Band 66
Conducted Power (dBm)	23.88	23.86	21.12	21.10	23.75
Antenna Gain (dBi)	0.00	0.00	0.00	0.00	0.00
ERP/EIRP (dBm)	23.88	23.86	18.97	18.95	23.75
Note: This report listed the worst case conducted power value, please refer to Ti-CC26040184-501 report for more details.					

5.2 Tune-up power

Mode	Conducted Power Range (dBm)	EIRP Range (dBm)	ERP Range (dBm)
Bluetooth	[2.00,4.00]	[2.00,4.00]	[-0.15,1.85]
LTE Band 2	[23.00,25.00]	[23.00,25.00]	[20.85,22.85]
LTE Band 4	[23.00,25.00]	[23.00,25.00]	[20.85,22.85]
LTE Band 12	[20.00,22.00]	/	[17.85,19.85]
LTE Band 13	[20.00,22.00]	/	[17.85,19.85]
LTE Band 66	[23.00,25.00]	[23.00,25.00]	[20.85,22.85]
Note1: ERP= EIRP -2.15dB. Note2: According KDB 447498 D04, used the greater of maximum conducted power and ERP to compare with the threshold value Pth.			

5.3 RF Exposure Evaluation Result

Evolution Mode	Maximum Power (dBm)	Maximum Power (mw)	Distance (mm)	Threshold Power (mW)	Power / Limit	Verdict
Bluetooth	4.00	2.51	200	3060.00	0.001	Pass
LTE Band 2	25.00	316.23	200	3060.00	0.103	Pass
LTE Band 4	25.00	316.23	200	3060.00	0.103	Pass
LTE Band 12	22.00	158.49	200	1460.64	0.109	Pass
LTE Band 13	22.00	158.49	200	1605.48	0.099	Pass
LTE Band 66	25.00	316.23	200	3060.00	0.103	Pass

5.4 Collocated Power Calculation

Evolution Mode	Power / Limit	Σ(Power / Limit) of Bluetooth + LTE Band 12	Verdict
Bluetooth	0.001	**0.110**	Pass
LTE Band 12	0.109		

Note:

1. Σ(Power / Limit): This is a summation of [(power for each transmitter/ antenna included in the simultaneous transmission)/ (corresponding Power limit)], for Bluetooth + LTE Band 12.
2. Both of the Bluetooth + LTE Band 12 can transmit simultaneously, the formula of calculated the Power is
   CP1 / LP1 + CP2 / LP2 + ……etc. < 1
   CP = Calculation power
   LP = Limit of power
3. Both of the Bluetooth and LTE Band 12 can't transmit simultaneously at same time.
4. The worst-case situation is 0.110, which is less than "1". This confirmed that the device comply with FCC KDB 447498 D04 Power limit.
5. The DUT work frequency range used is 2400 MHz ~ 2483.5 MHz, 699 MHz ~ 787 MHz and 1710 MHz ~ 1910 MHz the result close to the limit by the above formula, so we select worst case power to calculate the exclusion power threshold.

5.5 Conclusion

This EUT is deemed to comply with the reference level limits, therefore the basic restrictions are compliant with human exposure limits.

Statement

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--END OF REPORT--