

RF Exposure Evaluation Report

Product : smart fitness system
Trade mark : HYGEAR
Model/Type reference : STRAPS,SPIDER S
Serial Number : N/A
Report Number : EED32Q81090102
FCC ID : 2AV6I-HY100H
Date of Issue : Aug. 14, 2024
Test Standards : 47 CFR Part 1.1307
47 CFR Part 1.1310
47 CFR Part 2.1091(mobile devices)
47 CFR Part 2.1093(portable devices)
KDB 447498 D04 Interim General RF
Exposure Guidance v01
Test result : PASS

Prepared for:

Hygear Inc.

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Prepared by:

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Aug. 14, 2024



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1 General Information

1.1 Client Information

Applicant:	Hygear Inc.
Address of Applicant:	3415 South Sepulveda Blvd., Suite 1100, Los Angeles, CA, 90034, USA
Manufacturer:	Hygear Inc.
Address of Manufacturer:	3415 South Sepulveda Blvd., Suite 1100, Los Angeles, CA, 90034, USA
Factory:	Huizhou Sunwinon Electronics Co., Ltd.
Address of Factory:	Floor 3 of No.9 Building, No. 10 Building, Floor 3 of No. 21 Building, No. 22 Building, Sunwoda Industrial Park, Dongpo Avenue, Yuanzhou Town, Boluo County, Huizhou City, Guangdong Province, P.R.China

1.2 General Description of EUT

Product Name:	smart fitness system
Model No.(EUT):	STRAPS,SPIDER S
Test Model No.:	STRAPS
Trade Mark:	HYGEAR
Product Type:	<input type="checkbox"/> Mobile <input checked="" type="checkbox"/> Portable <input type="checkbox"/> Fix Location

1.3 Product Specification subjective to this standard

Frequency Range:	2402MHz~2480MHz	
Modulation Type:	GFSK	
Test Software:	nRF Connect for Desktop.exe (manufacturer declare)	
EUT Power Grade:	Default (Power level is built-in set parameters and cannot be changed and selected)	
Antenna Type:	Ceramic Chip Antenna	
Antenna Gain:	4.75dBi	
Power Supply:	USB Port:	DC 5.0V
	Battery:	DC 3.7V
Test Voltage:	DC 3.7V	
Sample Received Date:	Apr. 10, 2024	
Sample tested Date:	Apr. 10, 2024 to Apr. 24, 2024	

Remark:

This test report (Ref. No.: EED32Q81090102) is only valid with the original test report (Ref. No.: EED32Q80349702).Review this report and original report, this report just updated model No..

Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.

Model No.: STRAPS,SPIDER S

Only the model STRAPS was tested. Only the color and accessories are different. STRAPS and SPIDER S with same inner construction for circuitry and electrical. SPIDER S is a subset of STRAPS without accessories.

1.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

1.5 Deviation from Standards

None.

1.6 Abnormalities from Standard Conditions

None.

1.7 Other Information Requested by the Customer

None.

2 SAR Evaluation

2.1 RF Exposure Compliance Requirement

2.1.1 Limits

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

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

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 ERP20cm is per Formula (B.1).

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

The 1 mW Blanket Exemption of § 1.1307(b)(3)(i)(A) applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power of no more than 1 mW, regardless of separation distance.

2.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

2.1.3 EUT RF Exposure Evaluation

For Stand alone:

For Bluetooth LE:

Frequency (MHz)	Max. Conducted Output power (dBm)	Antenna Gain (dBi)	ERP (dBm)	ERP (mW)	Limit (mW)	Result
2480	-3.30	4.75	1.45	1.3964	2.7172	PASS

Note:

① EIRP=conducted power+antenna gain;

② ERP=EIRP-2.15;

③ EIRP(dBm) = Field strength of the fundamental signal(dBuV/m@3m) – 95.23;

④ ERP(mW) = $10^{(ERP (dBm)/10)}$;

⑤ The estimation distance is 0.5cm;

⑥ The test data please refer to the report of EED32Q81090101 and only the worst case data was recorded in the report.

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.

*** End of Report ***