

# Radio Test Report

Report No.:STS2403094H01

Issued for

Zhejiang Hyxi Technology Co., Ltd.

9-10F, Building 3, Jiuyao Commercial Center, Zhuantang  
Street, Xihu District, Hangzhou, Zhejiang, China

Product Name: HYX 2-in-1 MICRO INVERTER

Brand Name: N/A

Model Name: HYX-M1000-SW-NA

Series Model(s): HYX-M600-SW-NA,HYX-M700-SW-NA,  
HYX-M800-SW-NA,HYX-M900-SW-NA

FCC ID: 2BDBN-2MSWG1

Test Standard: FCC 47CFR §2.1091

The test results presented in this report relate only to the object tested. This report shall not be reproduced, except in full, without the written approval of the ShenZhen STS Test Services Co., Ltd.



### TEST REPORT

**Applicant's Name**.....: Zhejiang Hysi Technology Co., Ltd.  
 Address .....: 9-10F, Building 3, Jiuyao Commercial Center, Zhuantang Street, Xihu District, Hangzhou, Zhejiang, China

**Manufacturer's Name**.....: Zhejiang Hysi Technology Co., Ltd.  
 Address .....: 9-10F, Building 3, Jiuyao Commercial Center, Zhuantang Street, Xihu District, Hangzhou, Zhejiang, China

#### Product Description

Product Name.....: HYX 2-in-1 MICRO INVERTER  
 Brand Name .....: N/A  
 Model Name .....: HYX-M1000-SW-NA  
 Series Model(s).....: HYX-M600-SW-NA, HYX-M700-SW-NA, HYX-M800-SW-NA, HYX-M900-SW-NA,

**Test Standards**.....: FCC 47CFR §2.1091  
 447498 D01 Interim General RF Exposure Guidance v06

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**Date of Test**.....:

Date of receipt of test item.....: 14 Mar. 2024  
 Date (s) of performance of tests.....: 14 Mar. 2024 ~ 22 Mar. 2024  
 Date of Issue.....: 22 Mar. 2024  
 Test Result.....: **Pass**

Testing Engineer : Aaron Bu.  
 \_\_\_\_\_  
 (Aaron Bu)

Technical Manager : Chris Chen  
 \_\_\_\_\_  
 (Chris Chen)

Authorized Signatory : Bovey Yang  
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 (Bovey Yang)





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**Revision History**

Rev.	Issue Date	Report No.	Effect Page	Contents
00	22 Mar. 2024	STS2403094H01	ALL	Initial Issue



## 1. GENERAL INFORMATION

### 1.1 GENERAL DESCRIPTION OF THE EUT

Product Name	HYX 2-in-1 MICRO INVERTER	
Brand Name	N/A	
Model Name	HYX-M1000-SW-NA	
Series Model(s)	HYX-M600-SW-NA,HYX-M700-SW-NA, HYX-M800-SW-NA,HYX-M900-SW-NA	
Model Difference	Only difference in model name.	
Product Description	The EUT is HYX 2-in-1 MICRO INVERTER	
	Operation Frequency:	802.11b/g/n 20: 2412~2462 MHz 802.11n(40MHz):2422~2452MHz
	Modulation Type:	802.11b(DSSS):CCK,DQPSK,DBPSK 802.11g(OFDM): BPSK,QPSK,16-QAM,64-QAM 802.11n(OFDM): BPSK,QPSK,16-QAM,64-QAM
	Antenna gain:	3.18 dBi dBi
	Antenna Designation:	Feed coupling
Rating	Input: DC 65V 16A Output: AC 240V 4A/AC 208V 4.62A	
Hardware version number	V1.0	
Software version number	V01.00.02	



1.2 TEST FACTORY

SHENZHEN STS TEST SERVICES CO., LTD

Add. : 101, Building B, Zhuoke Science Park, No.190 Chongqing Road, ZhanChengShequ, Fuhai Sub-District, Bao'an District, Shenzhen, Guang Dong, China

FCC test Firm Registration Number: 625569

IC test Firm Registration Number: 12108A

A2LA Certificate No.: 4338.01



## 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

Friss Formula

Friss Transmission Formula:  $Pd = (Pout * G) / (4*pi*r^2)$

Where

Pd = power density in mW/cm<sup>2</sup>

Pout = 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 TEST RESULT

Turn up

Mode	Detector	Turn up Power
2.4G WLAN	AV	13±1dBm

Protocol	Fre. (GHz)	Separati on distance (cm)	Max Turn up power (dBm)	ANT Gain (dBi)	Max EIRP (dBm)	Max EIRP (mW)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Ratio	Result
2.4G WIFI	2.437	20	14.00	3.18	17.18	52.24	0.0104	1	0.0104	Pass

Note: 1. The Maximum power is less than the limit, complies with the exemption requirements.

2. ERP = EIRP - 2.15

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