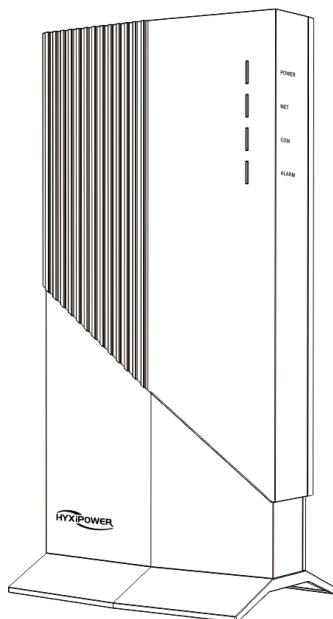


# DATA MANAGEMENT UNIT

HYX-DMU-4G / HYX-DMU-W



Carefully read this inverter user instructions before using.  
Read and save these instructions.



© 2024 ZHEJIANG HYXI TECHNOLOGY CO., LTD. All rights reserved.

This document cannot be copied fully or partially, transferred, or distributed in any form without the prior written permission of ZHEJIANG HYXI TECHNOLOGY CO., LTD (hereinafter referred to as "HYXiPOWER").

## TRADEMARKS



and other HYXiPOWER trademarks are the trademarks or registered trademarks of HYXiPOWER All other trademarks mentioned herein are the properties of their respective owners.

# Contents

---

<b>Preface.....</b>	<b>1</b>
Overview.....	1
Scope of Application.....	1
Safety Instructions.....	1
<b>1. Product Overview.....</b>	<b>3</b>
1.1 Product introduction.....	3
1.1.1 Microinverter.....	3
1.1.2 Data management unit ( DMU ).....	3
1.2 Product model.....	3
1.3 Monitoring System.....	4
1.4 Product Appearance.....	4
1.4.1 Dimension of Device.....	4
1.4.2 Interface Layout.....	5
1.5 LED Indicator Panel.....	5
1.6 Anti-countercurrent Function (RS485 port) .....	6
1.6.1 Device list.....	6
1.6.2 Meter Description.....	6
1.6.3 Cable Connection.....	7
1.7 DRM Function(Australia/New Zealand only).....	8
<b>2. Installation.....</b>	<b>9</b>
2.1 Unpack and check .....	9
2.1.1 Packing list.....	9
2.2 Preparation.....	9
2.2.1 Installation environment requirements.....	9
2.3 Installation sequence.....	10
2.3.1 Installation Procedure .....	10
<b>3. Human-Computer Interaction .....</b>	<b>13</b>
3.1 Installing the App.....	13
3.2 APP User manual.....	13
3.3 System debugging.....	13
<b>4. Appendix.....</b>	<b>14</b>
4.1 Technical Parameter.....	14

4.2 Frequency range & transmitted power..... 15

4.3 Installation Map..... 16

4.4 Contact Information ..... 16

# Preface

## Overview

This manual provides users with the product information of the data management unit (DMU) communication system device. Product information, detailed installation and usage, fault diagnosis and daily maintenance related precautions, does not include all information about the photovoltaic system.

To ensure the DMU communication system device can be correctly installed and used, and give full play to its superior performance. Before handling, installing, operating and maintaining the DMU, please read the instruction manual carefully and follow all safety precautions in the instruction manual.

## Scope of Application

This manual is intended for the following devices:

- HYX-DMU-W
- HYX-DMU-4G

Hereinafter, unless otherwise specified, it is referred to as "DMU" for short.

## Safety Instructions

In order to ensure the user's personal and property safety when using the product, and to use the product more efficiently and optimally, the manual provides relevant information and are highlighted using the following symbols.

The symbols that may be used in this manual are listed below, please read carefully to use this manual better.

### DANGER



- This symbol indicates a hazardous situation which may present a risk of fatal electric shock, serious personal injury or fire.

### CAUTION

- This symbol indicates that instructions must be followed strictly to avoid a potential safety hazard.

### NOTICE

- This symbol indicates that the operation is prohibited and the person concerned should discontinue the operation.

Symbol	Description
	Do not dispose of the inverter as household waste.
	The symbol indicates DC voltage.

Note that only professionals should install or replace the DMU.

Do not attempt to repair the DMU without Hyxi’s permission, otherwise it will affect the warranty of the device. If any DMU is damaged, please send the DMU back to Hyxi’s dealer for repair or replacement.

Please read all instructions and warnings in this manual carefully.

Please use the device according to the installation or usage method described in this document, otherwise it may cause personal injury or equipment damage.

# 1. Product Overview

This chapter mainly introduces the DMU appearance, packaging accessories, technical parameters, etc.

## 1.1 Product introduction

PV microinverter system

### 1.1.1 Microinverter

Microinverter (hereinafter referred to as microinverter) converts the DC output of PV panels into AC power that meets the requirements of the grid and transmits it in the power grid, the DMU continuously collects the operating data of each microinverter port and sends it to the monitoring platform, which constitutes the module-level monitoring of the microinverter system hardware base.

### 1.1.2 Data management unit ( DMU )

The DMU data management unit is a key component of the microinverter system. It is the power generation information transfer station of the microinverter system, which communicates through the Sub-1 communication module with the microinverter, collects the real-time operation data of the microinverter, and sends the collected microinverter operation data through Ethernet to Hyxi monitoring service system.

A single DMU data management unit can communicate up to 400 PV modules, i.e. it can communicate up to 400 1-in-1 series of microinverters or 200 2-in-1 series of microinverters or 100 4-in-1 series of microinverters. If the DMU data management unit is installed in a place with poor communication signal the environment may cause signal attenuation, resulting in the reduction of communication devices.

#### CAUTION

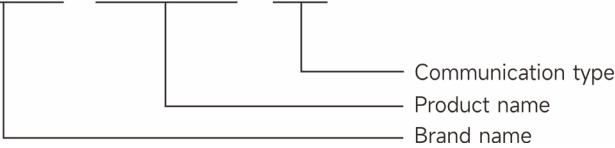
- If the DMU is required to monitor as many photovoltaic modules as possible, the on-site installation of the DMU and the microinverter should follow the requirements in the user manual. The execution is performed, and the distance between the microinverter and the DMU is as close as possible to reduce obstruction.

## 1.2 Product model

This article mainly involves the following product models:

- HYX-DMU-W
- HYX- DMU-4G

# HYX - DMU - W

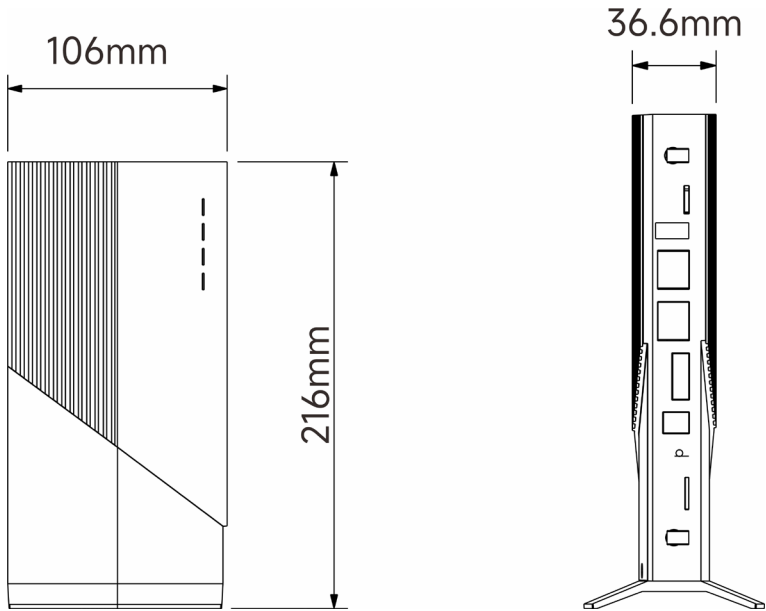


## 1.3 Monitoring System

The monitoring system collects the operating data and status of each microinverter in the system through the DMU data management unit, and uses the PC or APP to provide users with module-level monitoring to realize remote operation and maintenance. It is mainly composed of components, microinverters, DMU data management unit and other devices.

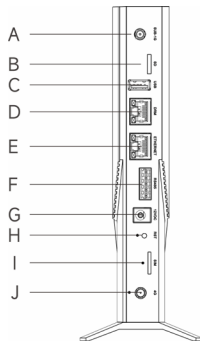
## 1.4 Product Appearance

### 1.4.1 Dimension of Device



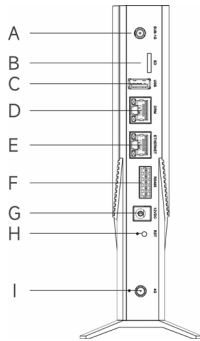
1.4.2 Interface Layout

HYX-DMU-4G (4G Version)



No.	Description
A	Sub-1G antenna interface
B	SD card slot
C	USB port (Software upgrades only)
D	DRM port
E	Ethernet port
F	RS485
G	Power port
H	Reset button
I	SIM card slot
J	4G antenna

HYX-DMU-WIFI (WIFI Version)



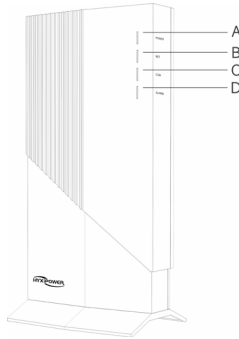
No.	Description
A	Sub-1G antenna
B	SD card slot
C	USB port (Software upgrades only)
D	DRM port
E	Ethernet port
F	RS485
G	Power port
H	Reset button
I	WIFI antenna

**\*Reset Button:**

Press 2 times to restart, Press 4 times to restore factory settings ( Within 1 second between pressing ).

1.5 LED Indicator Panel

The LED indicator is used as a human-computer interaction interface to indicate the current working status of the DMU.



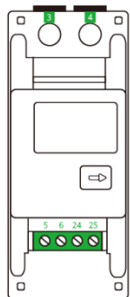
No.	Ligtht
A	POWER
B	NET
C	COM.
D	ALARM

**LED Indicator Status Description:**

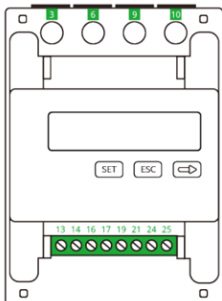
No.	Description	LED status	Device status
A	Power indicator	ON	Power on
		OFF	Power off
B	Network communication (connecting to the server)	Solid	Normal
		Flashing	Abnormal
C	Microinverter communication (connecting to microinverter)	Solid	Normal
		Flashing	Abnormal
D	Fault condition	ON	Abnormal
		OFF	Normal

**1.6 Anti-countercurrent Function (RS485 port)****1.6.1 Device list**

- Microinverter 1-in-1, 2-in-1, 4-in-1 series.
- DMU : HYX-DMU-W / HYX-DMU-4G.
- Electricity meter: Single phase meter (DDSU666) / Three phase meter (DTSU666).

**1.6.2 Meter Description****DDSU666 (100 A) Single-phase Meter**

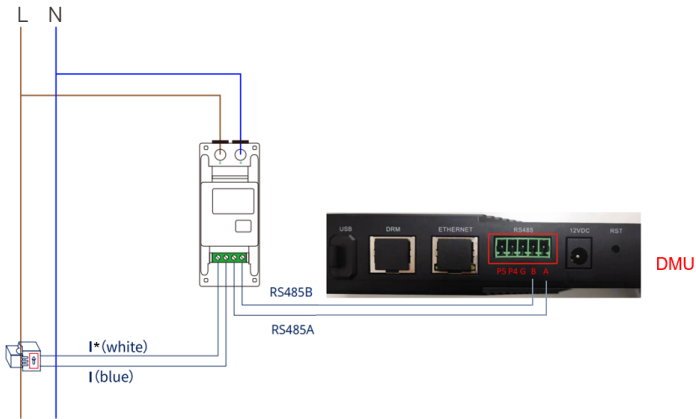
- Port 3: connect to the L line •  
 Port 4: connect to the N line •  
 Port 5: connect to the white wire (I \* ) from CT  
 Port 6: connect to the blue wire (I) from CT  
 Port 24: connect to the RS485A of the DMU  
 Port 25: connect to the RS485B of the DMU

**DTSU666 (100/250 A) Three-Phase Meter**

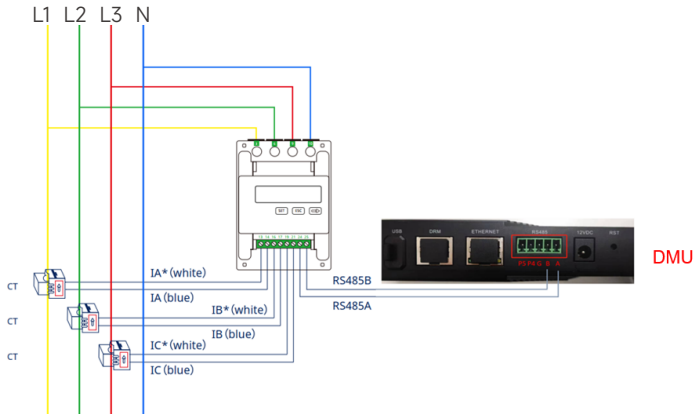
- Port 3: connect to the L line from Phase A  
 Port 6: connect to the L line from Phase B  
 Port 9: connect to the L line from Phase C  
 Port 10: connect to the N line from Grid  
 Port 13: connect to the white wire from CT for IA\*  
 Port 14: connect to the blue wire from CT for IA  
 Port 16: connect to the white wire from CT for IB\*  
 Port 17: connect to the blue wire from CT for IB  
 Port 19: connect to the white wire from CT for IC\*  
 Port 21: connect to the blue wire from CT for IC  
 Port 24: connect to the RS485A of the DMU  
 Port 25: connect to the RS485B of the DMU

### 1.6.3 Cable Connection

#### Single-Phase 220V Cable Connection



#### Three-Phase 230/400V Cable Connection



#### ⚠ CAUTION

- CTs are directional. Check that I\* and I connections are correct as per wiring diagram. If the I\* (white) and I (blue) are swapped at the meter, the measured power will be negative.
- Be sure to install the CT with the arrow (printed on the shell of the CT) facing towards the grid. Otherwise, there will be incorrect power measurements and problems with the meter.



# 1.7 DRM Function(Australia/New Zealand only)

The DMU is connected to external control device through the standard RJ-45 port, and the DRM port to support the following requirements response mode.

DRM 0/5/6/7/8 and other modes can be supported when the DMU is connected with microinverter.

No.	Description
DRM0	Disconnect the device
DRM1	Stop using electricity
DRM2	Do not use more than 50% of the rated power
DRM3	Do not use more than 75% of the rated power, and generate reactive power
DRM4	Increased electrical power usage (subject to other active DRMs)
DRM5	Stop power generation
DRM6	Generating power should not exceed 50% of rated power
DRM7	Generating power should not exceed 75% of rated power, and absorb reactive power
DRM8	Increased power generation (subject to other valid DRMs)

# 2. Installation

## 2.1 Unpack and check

The device has been fully tested and strictly inspected before leaving the factory, but damage may still occur during transportation, please conduct a detailed inspection before signing for the product.

- Check the box for damage.
- Check whether the goods are complete and in accordance with the order according to the packing list.
- Unpack and check that all device inside is intact.
- Check whether the products in the box are in accordance with the packing list (adapter, green terminal, installation map, fixed base (including screws), quick safety guide, etc.).

### 2.1.1 Packing list

Name	Quantity	Unit
Power adapter	1	Set
Green terminal	1	PC
Installation map	1	PC
Quick installation guide	1	PC
Fixed base	1	PC
Mount	1	PC
Screws	1	Set
M6*50 expansion screw	4	PC
ST3.5*9.5 Cross tapping screws	2	PC
ST4.8*16Cross tapping screws	2	PC

#### NOTICE

- If there is any damage or incomplete goods, please contact the shipping company or contact Zhejiang Hyxi Technology Co., Ltd. directly, and provide photos of the damage to facilitate service.
- Do not discard the original packaging of the device. It is best to store it in the original packing box after the device is out of service and disassembled.

## 2.2 Preparation

### 2.2.1 Installation environment requirements

**Before installing the DMU, make sure the site meets the following requirements:**

- Has a standard AC outlet
- Router/LAN/4G network with Ethernet interface.

**DMU installation environment requirements:**

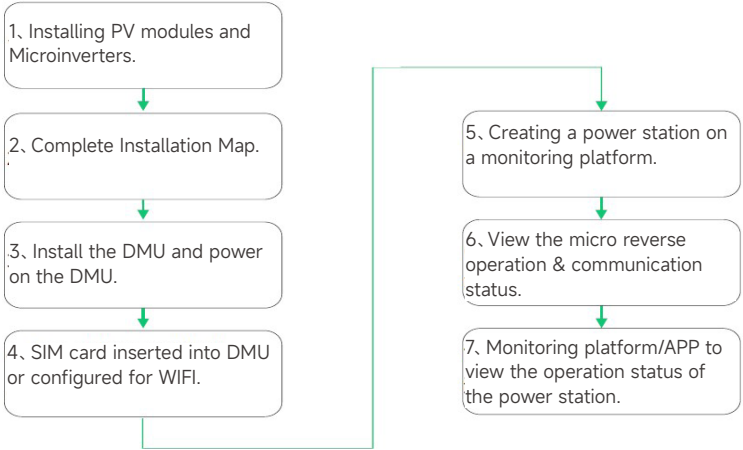
- Keep away from dust, liquid, acid or corrosive gas.
- Ambient temperature -20°C to + 65°C.

- DMU cannot be used outdoors alone. If installed outdoors, the DMU should be placed in a waterproof box.

**⚠ CAUTION**

- It is forbidden to install it where children can reach it.

## 2.3 Installation sequence

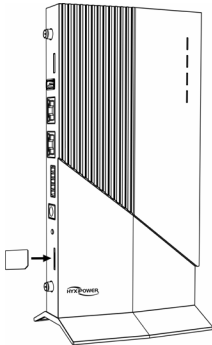


### 2.3.1 Installation Procedure

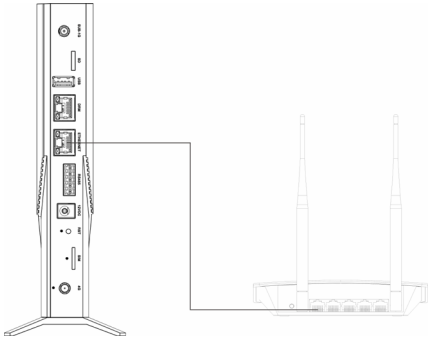
#### Step 1: Connect to a network

##### HYX-DMU-4G (4G Version)

Step 1: Using 4G: Insert the SIM card into the SIM card slot on the side of the DMU until you hear a sound of "click".



4G mode



Cable mode

**NOTICE**

- One mode selection between Wi-Fi mode and cable mode is enough.

**HYX-DMU-WIFI(WIFI version )**

- Send the wireless network account password to the DMU through the APP, see chapter XX for details
- Cable mode: Insert one end of the cable into the Ethernet port of the DMU, and the other end into the broadband router port.



WIFI

Cable mode

**NOTICE**

- One mode selection between Wi-Fi mode and cable mode is enough.
- If the DMU is installed in a metal box or under a metal roof, place the external antenna outdoors or on the roof. External antenna customers can purchase it themselves or from Hyxi (please contact Hyxi technical support).
- For more information about the sucker antenna please email [support@hyxipower.com](mailto:support@hyxipower.com).

**Step 2: Installation location**

- Installing on the roof can increase the signal strength.
- Installed in the center of the PV array.
- Install at least 0.5m from the ground and at least 0.8m from corners.

**CAUTION**

- Do not mount the DMU directly above metal or concrete to prevent signal attenuation.

**Step 3: Installation method****Wall-mounted method**

Wall-mounted installation method needs to be installed in a cool and dry indoor location. It should be

kept away from heating equipment (wall heaters, ovens, etc.);

Note: You need to prepare yourself: marker pens, electric drills, screwdrivers and other tools.

- Hang the mount on the wall, adjust the angle, and mark it with a marker pen.
- Drill the hole at the mark using the corresponding specification drill.
- Align the mount with the hole, and put the expansion screw through the hanging plate into the hole to fix it.
- Use special screws to connect the base with the DMU device.
- Fix the installed device on the mount with the supplied screws.
- After connecting the power supply and the network, carry out debugging.



### Desktop installation

Put the DMU on the table

- Use special screws to connect the base fixture with the DMU device and place it vertically on the table.
- After connecting the power supply and the network, carry out debugging.



## 3. Human-Computer Interaction

### 3.1 Installing the App

#### Method 1

Download and install the App through the following application stores:

- App Store (iOS)
- Google Play

#### Method 2

Scan the following QR code to download and install the App according to the prompt information:



### 3.2 APP User manual

For more information on using the HYXiPower APP, please refer to the user manual "HYXiPower APP".



### 3.3 System debugging

For system configuration and debugging, please refer to the user manual "HYXipower Local Debugging APP".



# 4. Appendix

## 4.1 Technical Parameter

Product Model	HYX-DMU-W	HYX-DMU-4G
Communication to Microinverter		
Signal	Sub-1G	Sub-1G
Monitoring data limit from solar panels	400	400
Communication to Hyxi Cloud		
Ethernet	RJ45×1, 100Mbps	RJ45×1, 100Mbps
Wireless	WI-FI:802.11b/g/n	4G:TDD-LTE, FDD-LTE 3G:SCDMA 2G:GSM/GPRS
Data Acquisition Interval	Default: 5 mins (1-15 mins Configurable)	
Power Supply (Adapter)		
Type	External adapter	
Adapter input voltage/frequency	100-240V AC / 50-60Hz	
Adapter output voltage/current	12V/1A	
Power consumption	1.5W	2.5W
General Data		
Operating Ambient Temperature	- 20 to +65℃	
Dimensions (W*H*D)	106*79*216mm	
Weight	320g	
Cooling	Natural Cooling	
Enclosure Rating	IP20	
Installation method	Desktop mounting / Wall mounting	

## 4.2 Frequency range & transmitted power

	Frequency Range		Transmitted Power
LTE	B1	1920MHz--2170MHz	<24dBm
	B3	1710MHz--1880MHz	<24dBm
	B7	2500MHz--2690MHz	<24dBm
	B8	880MHz--960MHz	<24dBm
	B20	791MHz--862MHz	<24dBm
	B28	703MHz--803MHz	<24dBm
	B38	2570MHz--2620MHz	<24dBm
	B40	2300MHz--2400MHz	<24dBm
WCDMA	B1	1920MHz--2170MHz	<24.5dBm
	B8	880MHz--960MHz	<24.5dBm
GSM	900	870MHz--960MHz	<33.5dBm
	1800	1710MHz--1880MHz	<30.5dBm
Sub-1G	868MHz--868.58MHz		<15dBm
	433.1-433.6MHz		< 12.15dBm
WiFi	2400MHz--2483MHz		<15dBm



Version: UM\_HYX-DMU-4G(W)\_V1.4-202412\_Global

The manual is subject to change without notice while the product is being improved.



**Zhejiang Hyxi Technology Co., Ltd.**

Room 216, Block A, Building 1, No. 57 Jiang'er Road, Changhe Street,

Binjiang District, Hangzhou, Zhejiang Province, China

[www.hyxipower.com](http://www.hyxipower.com)

[support@hyxipower.com](mailto:support@hyxipower.com)