tp-link | VIGI

Installation Guide

Intelligent Solar Power Supply System

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Chapter 1 Appearance

The TP-Link VIGI intelligent solar power supply system consists of three parts: horizontal mount, solar panel, and vertical mount.

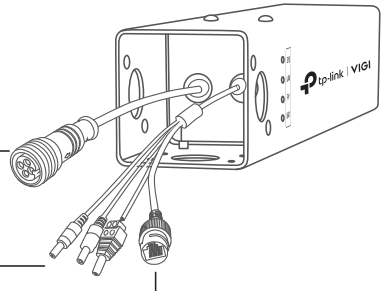
The TP-Link VIGI intelligent solar power supply system can provide stable and reliable voltage output for various electronic devices (such as security surveillance cameras, outdoor wireless APs, wireless bridges, 4G routers, etc.). It is widely used in rural areas, scenic spots, orchards, reservoirs, factories, mines, forests, etc., where power supply and networking are hard to provide.

The figures in this guide are for demonstration purposes only. Your device may differ in appearance from what is depicted.

- **Horizontal Mount (containing Controller and Modular Battery)**

The horizontal mount (containing controller and modular battery) is shown as the following figure.

Controller LED



Four-pin female connector for connecting a solar panel

Load Interface

Load Interface #1: 9-12.6VDC
Load Interface #2: 9-12.6VDC
Load Interface #3: 12VDC

RJ45 Network interface for connecting network devices such as 4G routers and bridges

• Controller LED

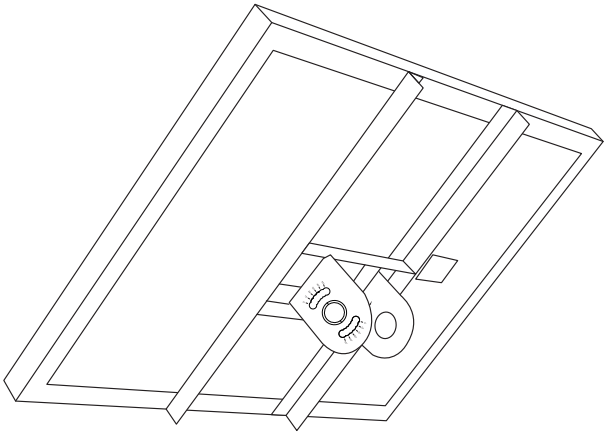
LED	Indication
SYS	**On**: The system is working and the load is enabled. **Flashing**: The system is working and the load is disabled. **Off**: The system is not working.
LAN	**On**: The RJ45 interface is connected. **Flashing**: Data is being transferred. **Off**: The RJ45 interface is not connected.
PV	**On**: PV panels are connected and have voltage. **Off**: PV panels have no voltage.
BAT	**On**: Battery power is higher than 20%. **Slow Flashing**: Battery power is lower than 20%. **Quick Flashing**: Intelligent auxiliary heating. **Off**: Battery is abnormal.

• Specifications

Items	VIGI SP6020	VIGI SP6030	VIGI SP9030
Size	622×613×690mm		622×613×998mm
Weight	14kg	15kg	17.5kg
Material	Galvanized Sheet, Polycarbonate Resin		
Battery Capacity	20.8AH	31.2AH	
Battery Working Voltage	9~12.6V		
Solar Panel	60W/18V		90W/18V
Output	12VDC 2A max per output port		
Operating Temperature	-30~60°C (With intelligent auxiliary heating)		

■ **Solar Panel**

The solar panel is shown as the following figure.

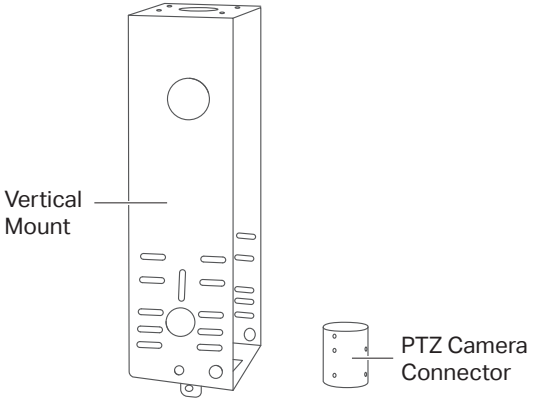


• Specifications

Items	VIGI SP6020/VIGI SP6030	VIGI SP9030
Size	690mm×516mm×30mm	998mm×516mm×30mm
Output Power/ Voltage	60W/18V	90W/18V
Material	Monocrystalline Silicon	

■ **Vertical Mount**

The mount is shown as the following figure.

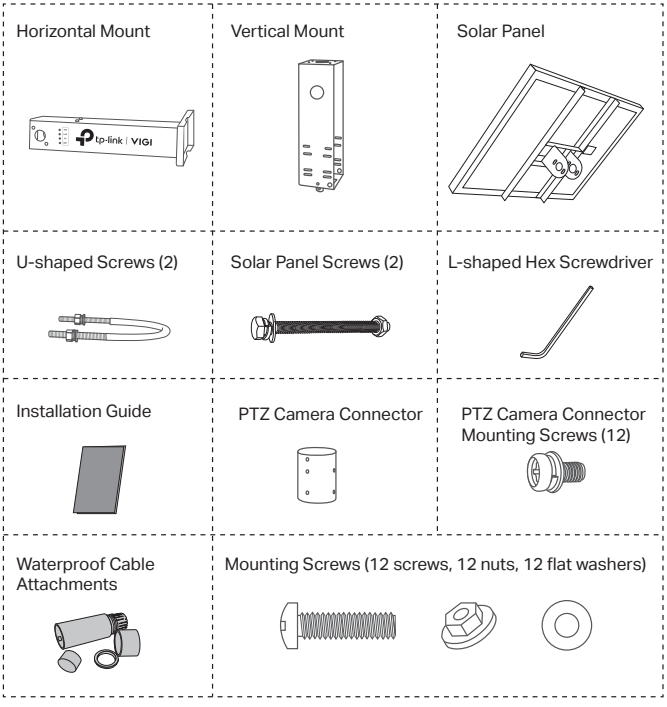


Items	VIGI SP6020/VIGI SP6030/VIGI SP9030
Size	191mm×40mm×82mm
Operating Temperature	-30~60°C (With intelligent auxiliary heating)
Operating Environment	Outdoor

Chapter 2 Installation

2.1 Package Contents

Make sure that the package contains the following items. Please contact your distributor, if any of the listed items are damaged or missing.
The figures are for demonstration only. The actual items may differ in appearance and quantity from what is depicted.



2.2 Safety Precautions

- During installation, collision and knocking are strictly prohibited to avoid damage.
- When placing the modular battery, make sure that the solar panel is facing upwards and placed horizontally. Uneven ground may scratch or damage the solar panel.
- Make sure there are no fixed obstructions. If installed around buildings or trees, it is necessary to ensure the installation height of the battery panel is higher than the obstacle.

- All modular battery load interfaces should take strict waterproof measures to avoid short circuit, leakage, and other problems.

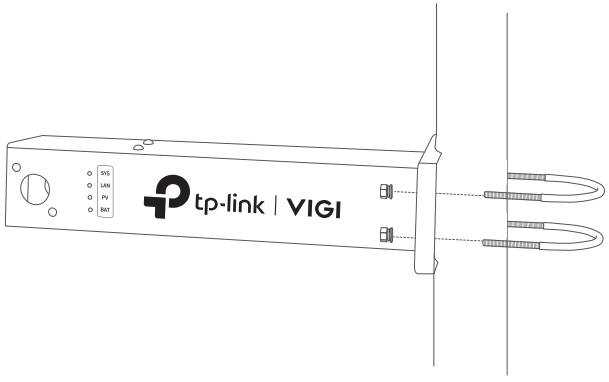
2.3 Installation

Step 1. Determine the installation location

Choose a location where the solar panel receives the most sunlight throughout the year. Position the solar panel south-facing in the Northern Hemisphere or north-facing in the Southern Hemisphere.

Step 2. Install the horizontal mount

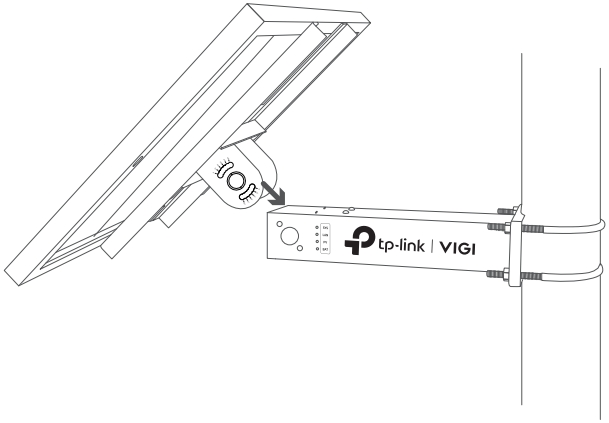
Fix the horizontal mount to the vertical pole with U-shaped screws.



Tip: Determine the direction according to a compass or mobile phone compass software, and adjust the orientation of the bracket to obtain the maximum solar energy.

Step 3. Install the solar panel

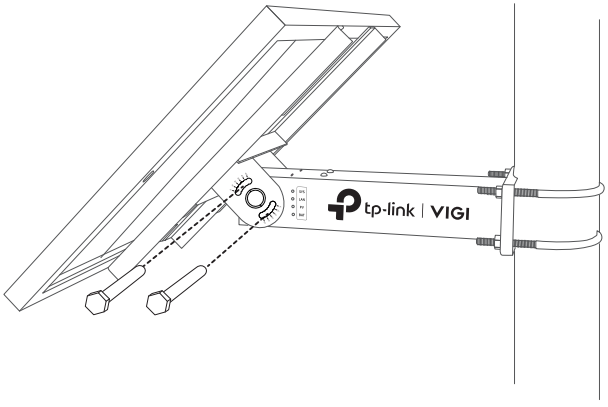
1. Fix the solar panel on the mount. Determine the installation inclination according to the location (the inclination can be determined according to the latitude of the location).



Recommended solar panel inclination angles (the following inclination angles correspond to the holes on the mount):

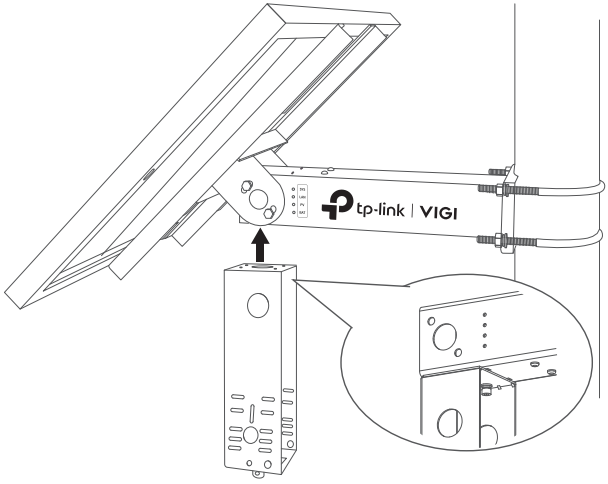
Latitude Range	Recommended Inclination
0-5°	5°
5-15°	15°
15-25°	25°
25-35°	35°
35-45°	45°
>45°	55°

2. Install the solar panel using the solar panel matching screws.



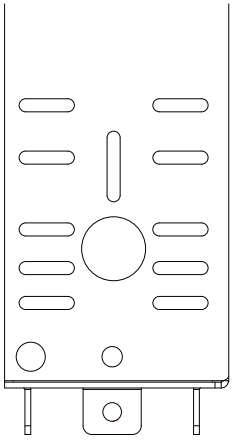
Step 4. Install the vertical mount

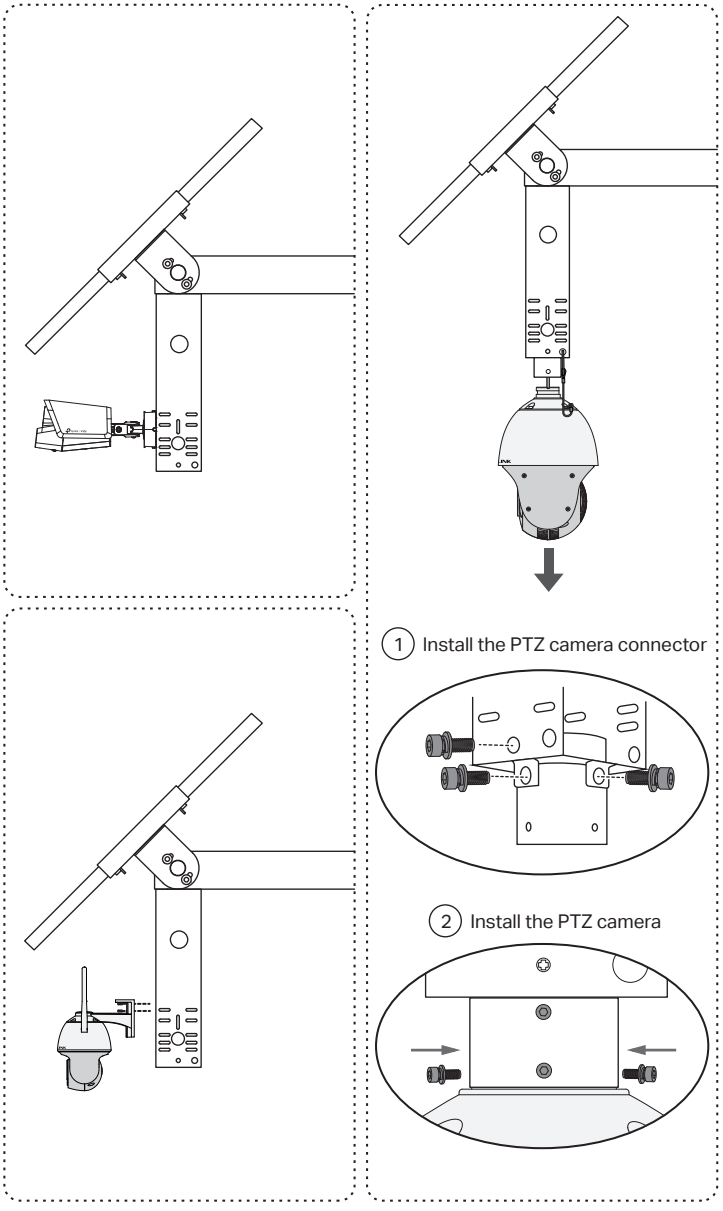
1. Install the vertical mount to cross the horizontal mount.



2. Install devices on the vertical mount. Different types of mounts have varying access methods, and the corresponding type of bracket should be selected for installation according to the actual situation of the device.

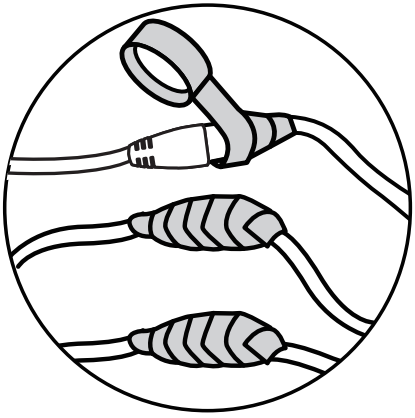
   The installation hole diagram of the load at the end of the vertical mount is as follows:





Note: If the product is used in a windy area, it is recommended to tie VIGI 5-Series cameras directly to the pole to reduce the impact of strong wind on the image quality of the camera.

3. After connecting the camera to the load interface, wrap the connection with over two layers of waterproof tape (not included), as shown below.

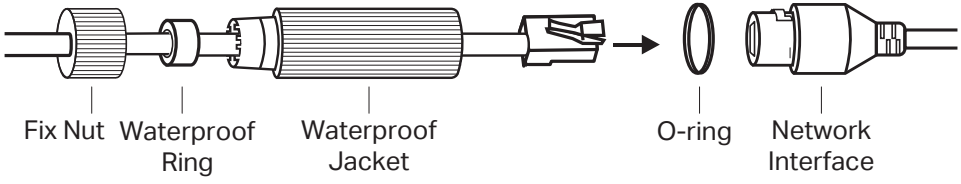


Note: When using waterproof tape, wrap the first layer, then cut. Apply a second layer, ensuring no gaps between the connection and tape for secure waterproofing.

Step 5. Install Waterproof Cable Attachments

Install the waterproof cable attachments for the network interface if needed.

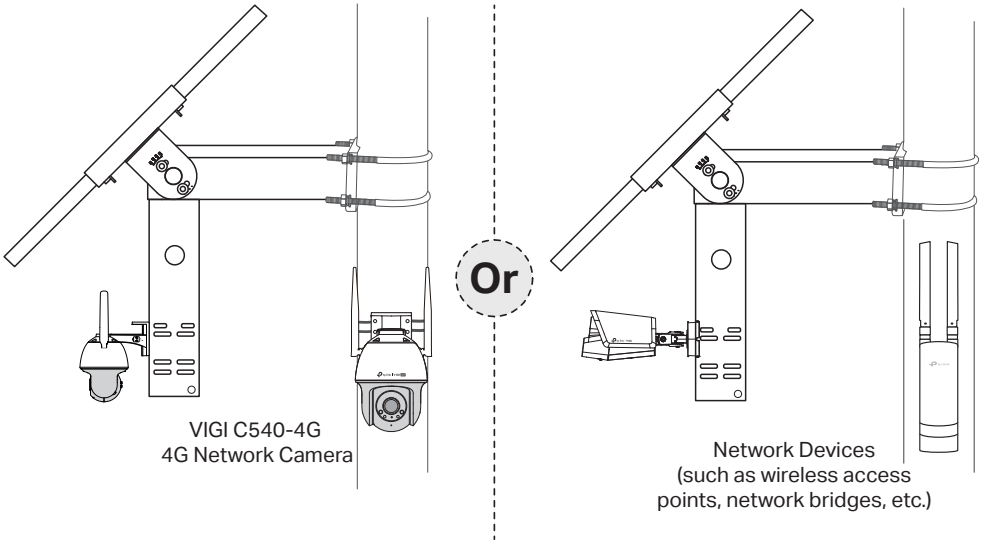
Note: Make sure each part is securely attached and the waterproof rings are flush to keep out water.



1. Route the network cable through the following components in order: fix nut, waterproof ring, and then the waterproof jacket.
2. Fix the O-ring to the network interface of the solar panel and connect the network cables.
3. Attach the network interface with the waterproof jacket, then twist to lock.
4. Insert the waterproof ring into the waterproof jacket. Rotate the fix nut to secure it to the waterproof jacket.

Chapter 3 Configuration

Here is a typical network topology for the solar panel.



Step 1. Connect the RJ45 network interface of the solar panel to the network devices (such as access points, bridges, and 4G cameras).

Step 2. Follow the instructions to finish Quick Setup.

1. Download and install the latest TP-Link VIGI app.

Download on the App Store

GET IT ON Google Play

2. Open the app and log in with your TP-Link ID. If you don't have an account, sign up first.
3. Tap the + button on the top right and follow the app instructions to add the solar panel.

Step 3. Done.

The solar panel system is added to your network and can provide power to your devices. You can control and manage the solar panel system via the VIGI app remotely.

Appendix FAQ

Q1. The controller LED status is abnormal.

- SYS LED is off: It may be out of power or the system board is damaged.
- LAN LED is off: There is no connection. Check whether the RJ45 interface is firmly connected to the network device.
- PV LED is off: The PV panel is not connected or works abnormally and cannot generate electricity.
- BAT LED is off: The battery is working abnormally.

Q2. Short system runtime and short monitoring time

- The battery board is disconnected: Check whether the solar panel interface is connected well, and ensure that the solar panel is in working condition.
- The solar panel is blocked: Check whether the solar panel is blocked by foreign objects or the front of the solar panel is dirty, which will affect its power generation efficiency.
- Inefficient equipment system: Confirm the power consumption of the equipment. If the power consumption is large, it is recommended to replace it with a solar-powered product with a higher specification.

Safety Information

- Do not attempt to disassemble, repair, or modify the device.
- Do not use damaged charger or USB cable to charge the device.
- Do not use any other chargers than those recommended.
- Adapter shall be installed near the equipment and shall be easily accessible.
- Use only power supplies which are provided by manufacturer and in the original packing of this product. If you have any questions, please don't hesitate to contact us.
- Avoid disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an explosion.
- Place the device with its bottom surface downward. Install it at stable places, and prevent it from falling.
- Keep the device away from fire or hot environments. DO NOT immerse in water or any other liquid.

This equipment is not suitable for use in locations where children are likely to be present.

*Some devices may be incompatible, such as wireless mouse.

Please read and follow the above safety information when operating the device. We cannot guarantee that no accidents or damage will occur due to improper use of the device. Please use this product with care and operate at your own risk.

CAUTION!

Avoid replacement of a battery with an incorrect type that can defeat a safeguard.

Avoid disposal of a battery into fire or a hot oven, or mechanically crushing or cutting of a battery, that can result in an explosion.

Do not leave a battery in an extremely high temperature surrounding environment that can result in an explosion or the leakage of flammable liquid or gas.

Do not leave a battery subjected to extremely low air pressure that may result in an explosion or the leakage of flammable liquid or gas.

EU Declaration of Conformity

TP-Link hereby declares that the device is in compliance with the essential requirements and other relevant provisions of directives 2014/30/EU, 2014/35/EU, 2011/65/EU and (EU)2015/863.

The original EU Declaration of Conformity may be found at https://www.tp-link.com/en/support/ce/

UK Declaration of Conformity

TP-Link hereby declares that the device is in compliance with the essential requirements and other relevant provisions of the Electromagnetic Compatibility Regulations 2016 and Electrical Equipment (Safety) Regulations 2016.

The original UK Declaration of Conformity may be found at https://www.tp-link.com/support/ukca/

To ask questions, find answers, and communicate with TP-Link users or engineers, please visit **https://community.tp-link.com** to join the TP-Link Community.

For technical support, user guides and other information, please visit **https://www.tp-link.com/support**, or simply scan the QR code.

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