VIGI
by tp-link

# Installation Guide

VIGI Intelligent Solar Power Supply System/
VIGI Solar System Controller

 7106512069 REV1.20.0

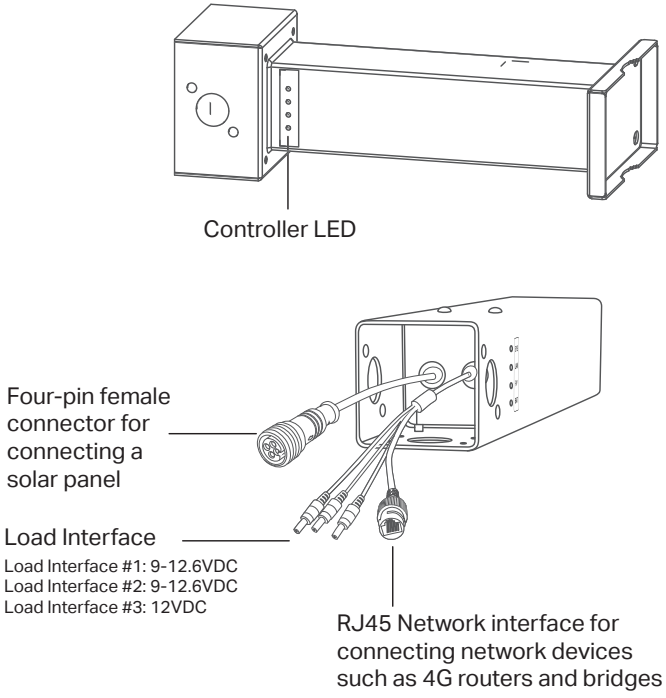
# Contents

# Chapter 1 Overview

The TP-Link VIGI intelligent solar power supply system consists of three parts: horizontal mount (containing the controller and modular battery), solar panel, and vertical mount. The VIGI solar system controller consists of a horizontal mount (containing the controller and modular battery) and vertical mount.

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)**




• Controller LED

| LED | Indication |
|---|---|
| SYS | **On**: The system is working and the load is enabled.<br>**Flashing**: The system is working and the load is disabled.<br>**Off**: The system is not working. |

| LED | Indication |
|---|---|
| LAN | **On**: The RJ45 interface is connected.<br>**Flashing**: Data is being transferred.<br>**Off**: The RJ45 interface is not connected. |
| PV | **On**: PV panels are connected and have voltage.<br>**Off**: PV panels have no voltage. |
| BAT | **On**: Battery power is higher than 20%.<br>**Flashing Slowly**: Battery power is lower than 20%.<br>**Flashing Quickly**: Intelligent auxiliary heating.<br>**Off**: Battery is abnormal. |

• Specifications

| Items | VIGI SP6020 | VIGI SP6030 | VIGI SP9030 |
|---|---|---|---|
| Battery Type | Lithium | | |
| 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) | | |

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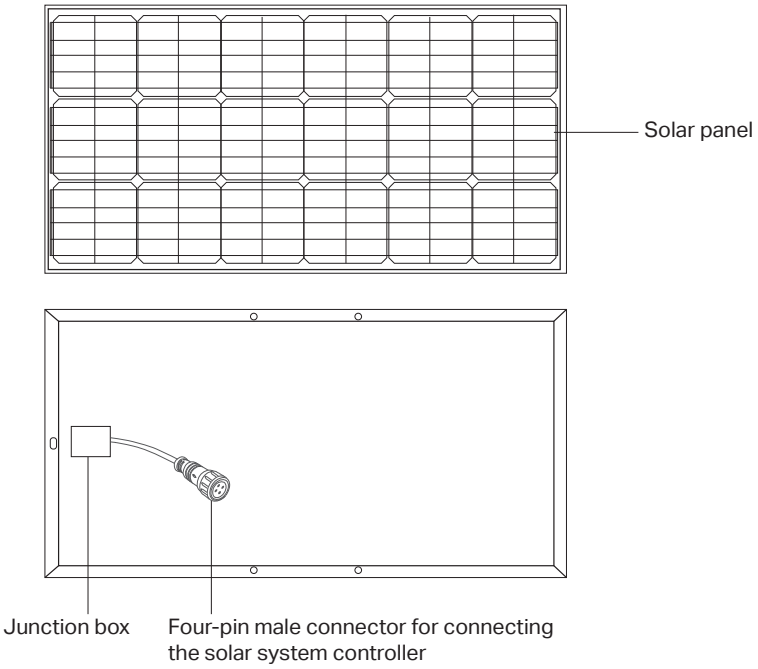
## ■ Solar Panel

**Note:** The PS20 and PS30 VIGI solar system controllers do not include a solar panel in the package.

The solar panel is shown in the following figure.

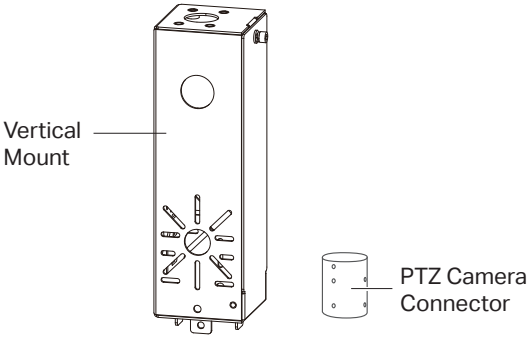



• Specifications

| 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 in the following figure.

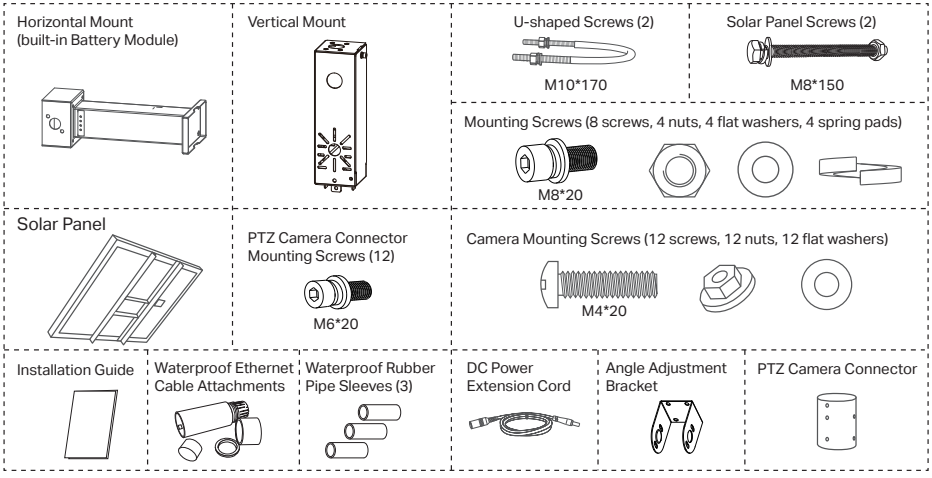


# Chapter 2 Installation

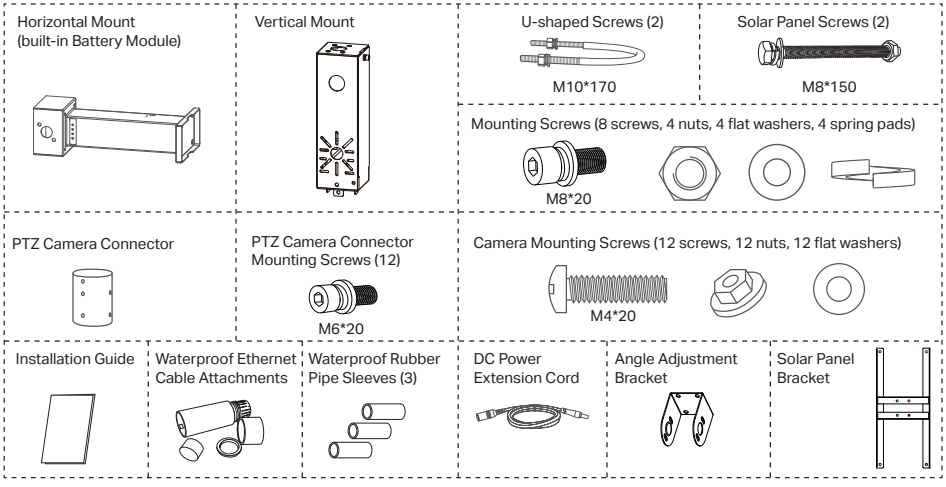
## 2.1 Package Contents

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.

For SP9030/SP6030/SP6020 VIGI Intelligent Solar Power Supply System:




For PS20/PS30 VIGI Solar System Controller:



## 2.2 Safety Precautions

- During installation, collision and knocking are strictly prohibited to avoid damage.
- When placing the solar panel, 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 solar panel is higher than the obstacle.
- All modular battery load interfaces must be thoroughly waterproofed to prevent short circuits, leaks, and other issues.

## 2.3 Installation

### Step 1. Prepare the solar panel

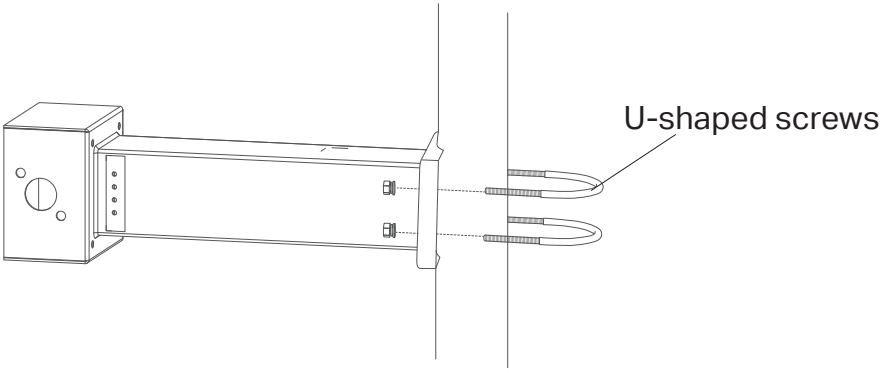
- The SP9030/SP6030/SP6020 VIGI Intelligent Solar Power Supply System comes with a solar panel inside the package.
- For the PS20/PS30 VIGI Solar System Controller, you need to purchase the solar panel separately. It is recommended to use the VIGI Solar System Controller with the VIGI Solar Panel.

### Step 2. 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 3. Install the horizontal mount

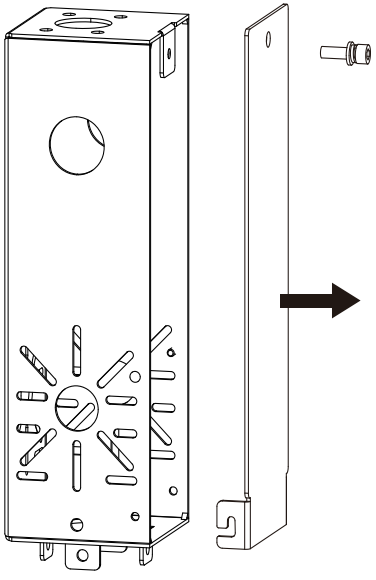
Fix the horizontal mount to a vertical pole.



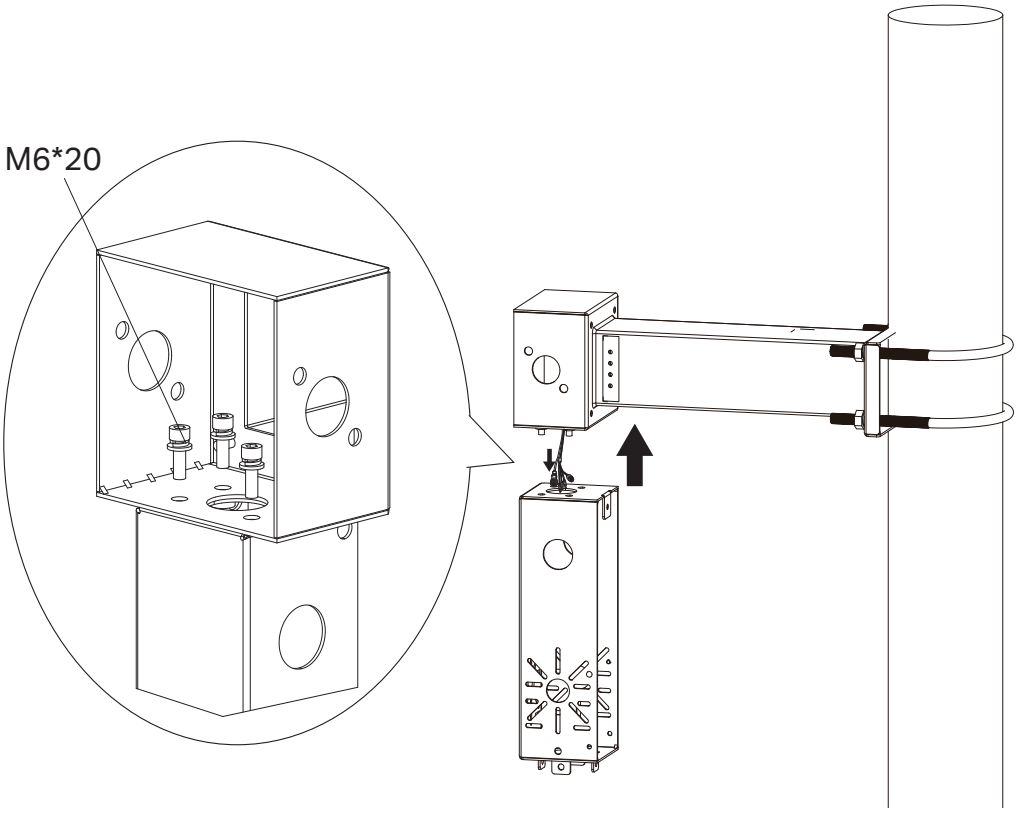

**Tip:** Determine the direction according to a compass or mobile phone compass software, and adjust the orientation of the bracket to obtain the maximum solar energy.

### Step 4. Install the vertical mount

1. Remove the side panel of the vertical mount.



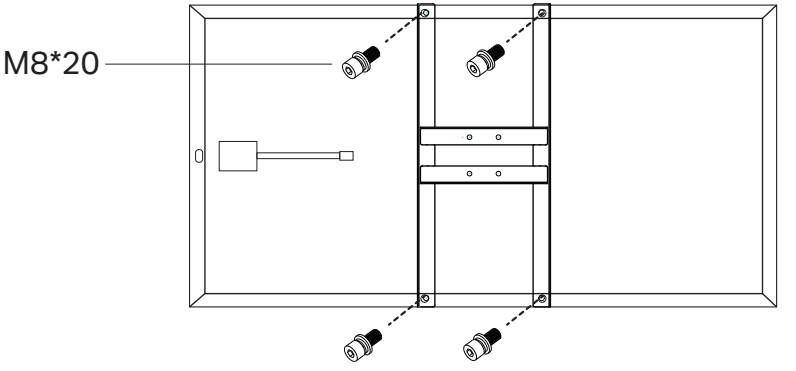
2. Install the vertical mount to cross the horizontal mount, and route the controller's cables through the top hole of the vertical mount.



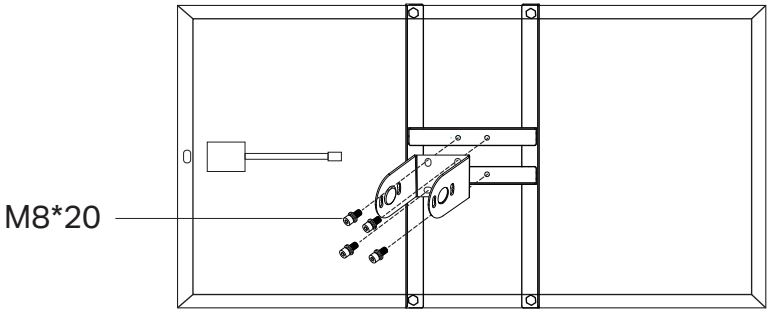

## Step 5. Install the solar panel

**Note:** For the SP9030/SP6030/SP6020 VIGI Intelligent Solar Power Supply System, skip step 1.

1. Install the solar panel bracket to the solar panel.



2. Install the angle adjustment bracket to the solar panel bracket.

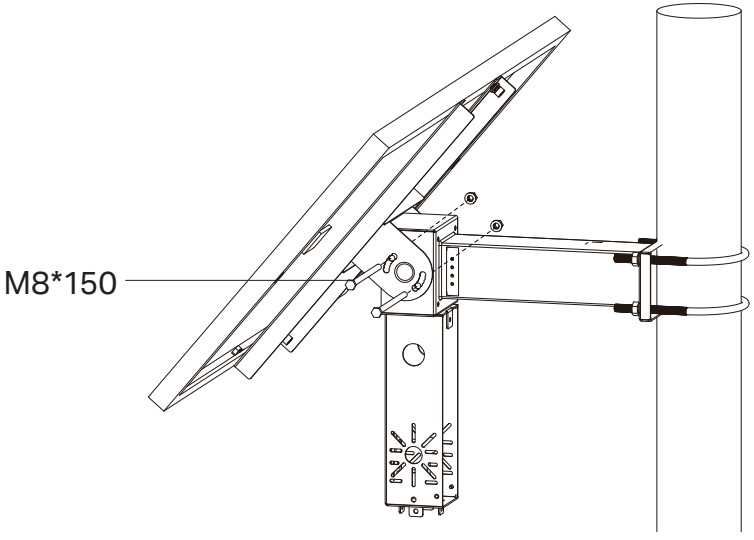



3. Determine the installation inclination according to the location (the inclination can be determined according to the location's latitude).

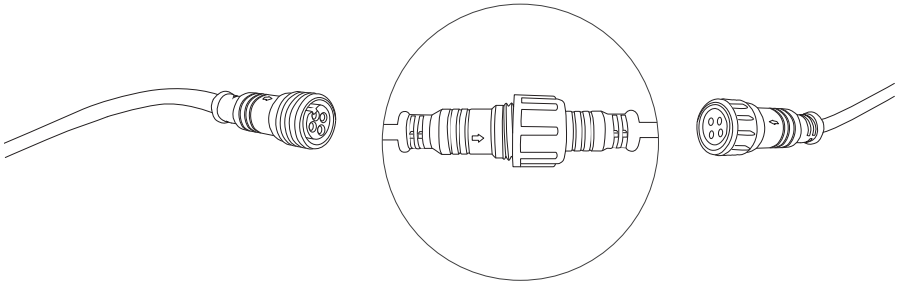
   Recommended Solar Panel Inclination Angles (The inclination angles correspond to the holes on the mount):

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

4. Fix the solar panel onto the mount.

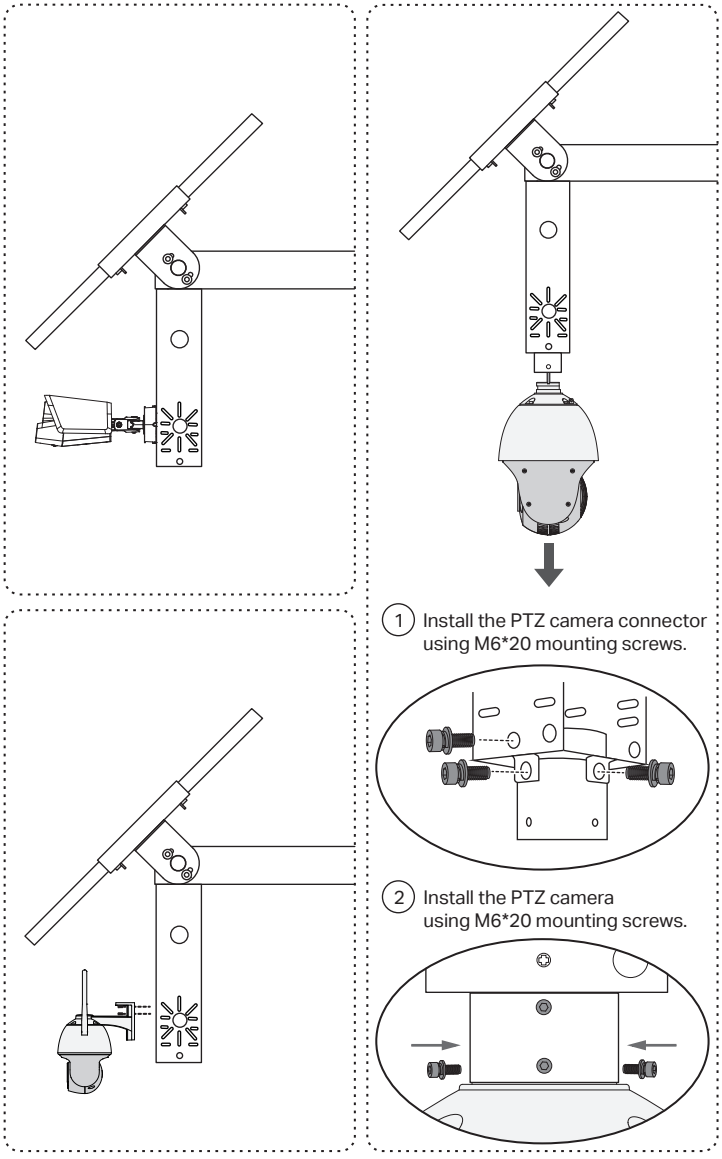


5. Thread the solar panel's four-pin male connector through the side hole of the vertical mount, and connect it to the four-pin female connector of the controller.



**Step 6. Install the load device**

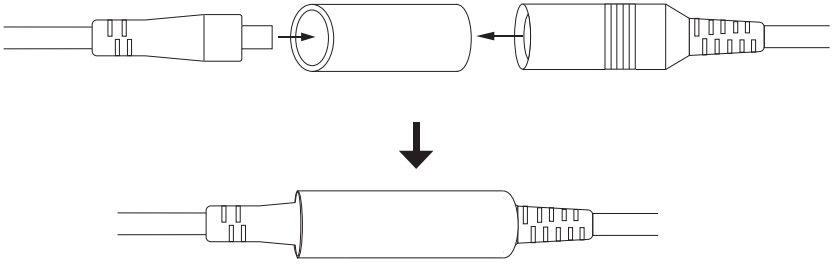
1. Install cameras on the vertical mount using camera mounting screws (M4*20). For PTZ cameras, use PTZ camera connector mounting screws (M6*20). The corresponding type of bracket should be selected for installation according to the actual situation of the device.



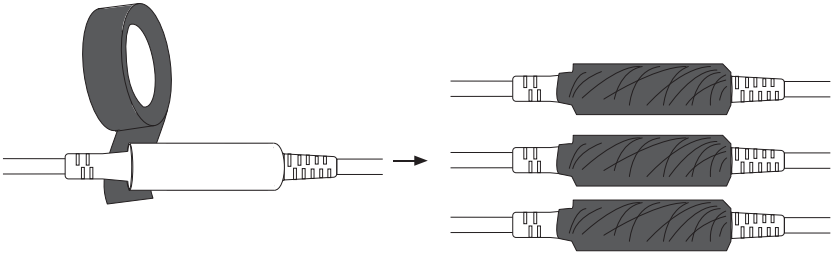

**Note:**

1. Third-party PTZ cameras are compatible.
2. If the product is used in a windy area, it is recommended to securely attach VIGI 5-Series cameras directly to the pole to minimize the impact of strong winds on image quality.

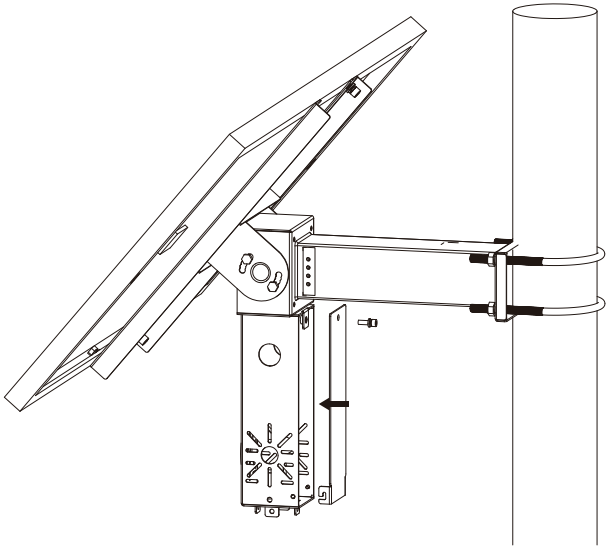
2. Connect the cameras to the solar system controller's load intefaces. When connecting the cameras, use the provided waterproof rubber pipe sleeves for waterproofing.



**Note:** For secure waterproofing, you can wrap the connection with over two layers of waterproof tape (not included), as shown below. Wrap the first layer, then cut. Apply a second layer, ensuring no gaps between the connection and tape.

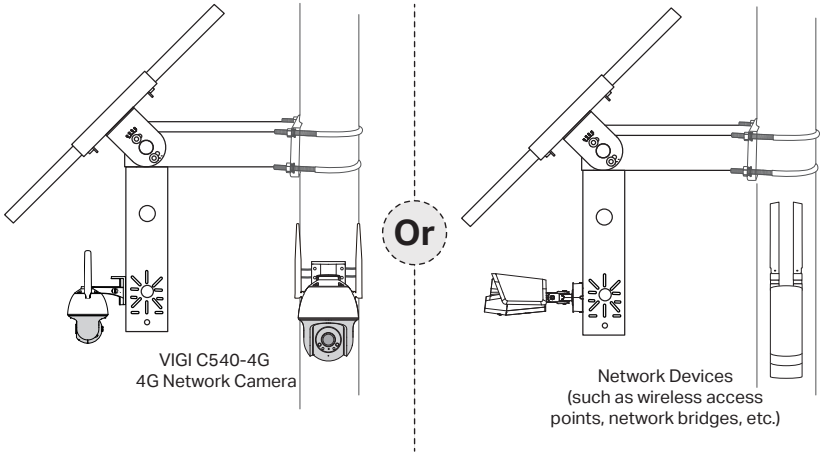


3. Reattach the side panel of the vertical mount.



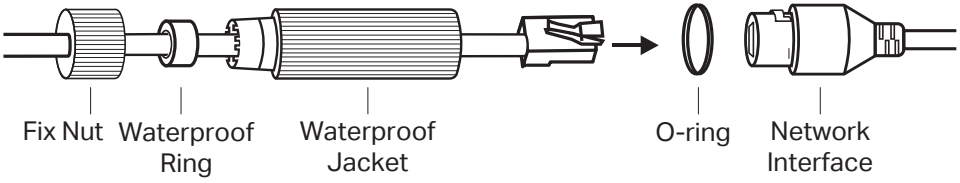
# Chapter 3 Configuration

Here is a typical network topology for the VIGI solar system controller.




**Step 1. Connect the RJ45 network interface to the network devices (such as access points, bridges, and 4G cameras) and waterproof the connection.**

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




**Step 2. Follow the instructions to finish the quick setup.**

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

Download on the App Store
GET IT ON Google Play
or

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 VIGI solar system controller.

**Step 3. Done.**

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

## Appendix FAQ

**Q1. What should I do if the controller's LED status is abnormal?**

- SYS LED is off: This could indicate a power issue or a damaged system board.
- 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 solar panel is not connected or works abnormally and cannot generate electricity.
- BAT LED is off: The battery is working abnormally.

**Q2. Why am I experiencing a 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, such as family environment, school, children's playground and so on.

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!

Risk of fire or explosion if the battery is replaced by an incorrect type

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/

For technical support, user guides, and other information, please visit https://support.vigi.com/.