

Vonets VAP11S-5G

VONETS VAP11S-5G 5GHz Industrial Mini WiFi Router Bridge Repeater User Manual

Model: VAP11S-5G

1. INTRODUCTION

The VONETS VAP11S-5G is an industrial-grade 5GHz wireless device designed to function as a WiFi bridge, wireless repeater, or WiFi router. It facilitates both wireless-to-wired and wired-to-wireless network conversions, making it suitable for various industrial and commercial applications. This device features a smart cooling fan for stable operation and supports multiple power supply options.

2. PACKAGE CONTENTS

Verify that all items are present in the package:

- 1 x VAP11S-5G Device
- 2 x 5G External Antennas
- 1 x Mounting Kit
- 1 x Industrial DC Connector
- 1 x DC/USB Power Cable
- 1 x RJ45 Ethernet Cable
- 1 x User Manual

3. PRODUCT OVERVIEW

The VAP11S-5G features a compact design with external antennas for enhanced signal reception. It includes essential ports for power and network connectivity, along with LED indicators for status monitoring.

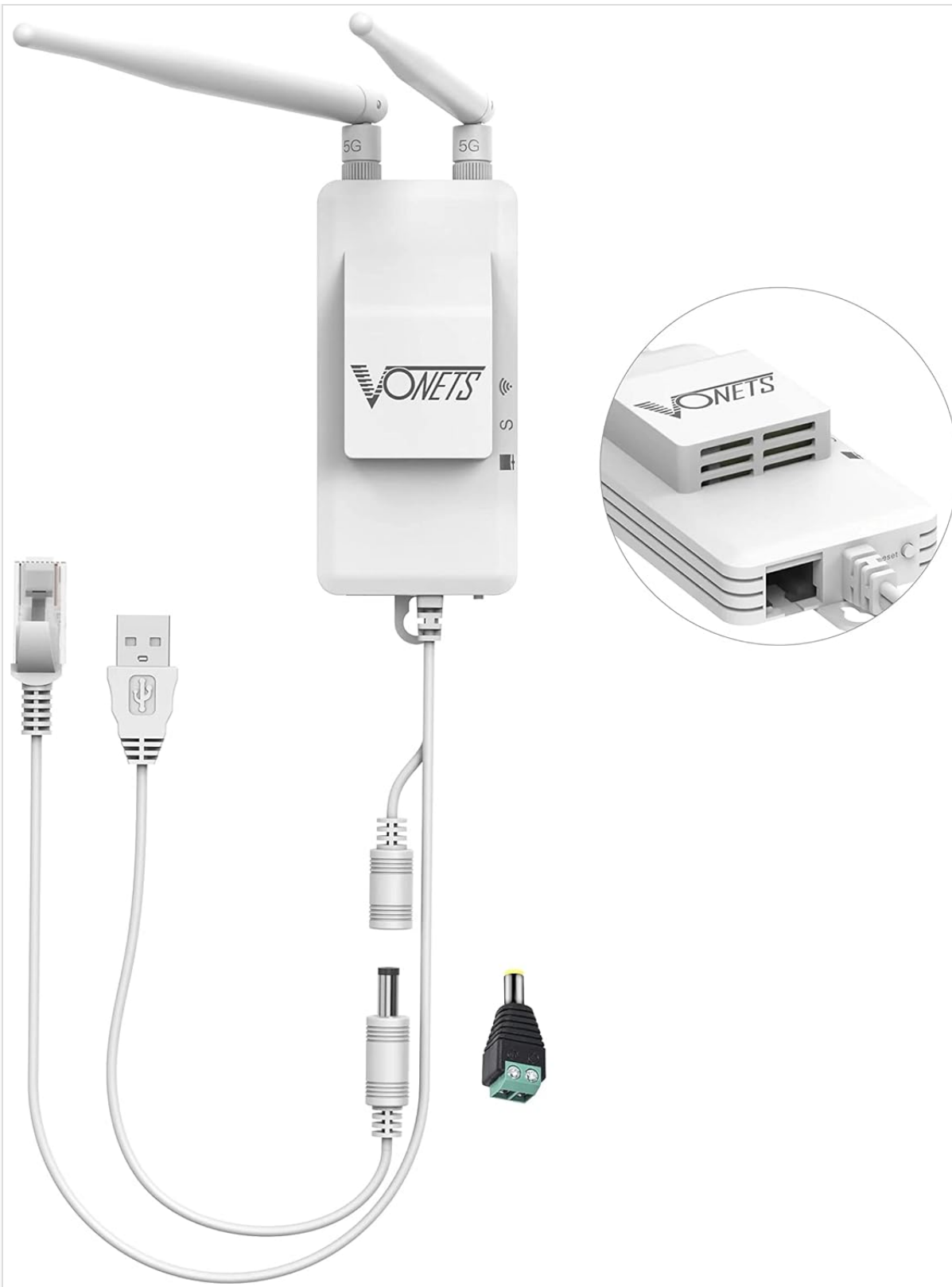


Image: The VONETS VAP11S-5G device, showing its main unit with two external antennas, a USB power cable, an Ethernet cable, and an industrial DC connector for flexible power and network connections.

Product Specification

Product Name	VAP11S-5G (With fan version)
Color	White
WiFi Function	Repeater/bridge/router
WiFi Protocol	802.11 AC/A/N
transmission rate	900Mbps
WiFi Band	5GHz
Work Voltage	5V-24V(Typical 5V/2A)
Device size	94X45X15mm
Package Size	158X116X31mm
Product Weight	94g

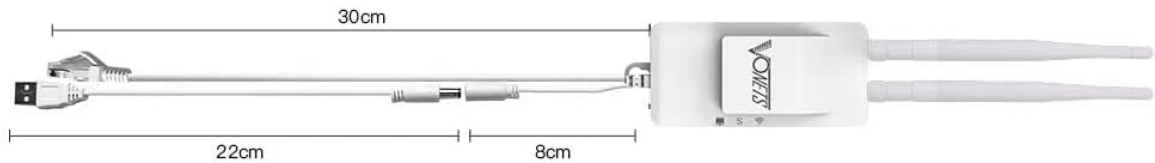
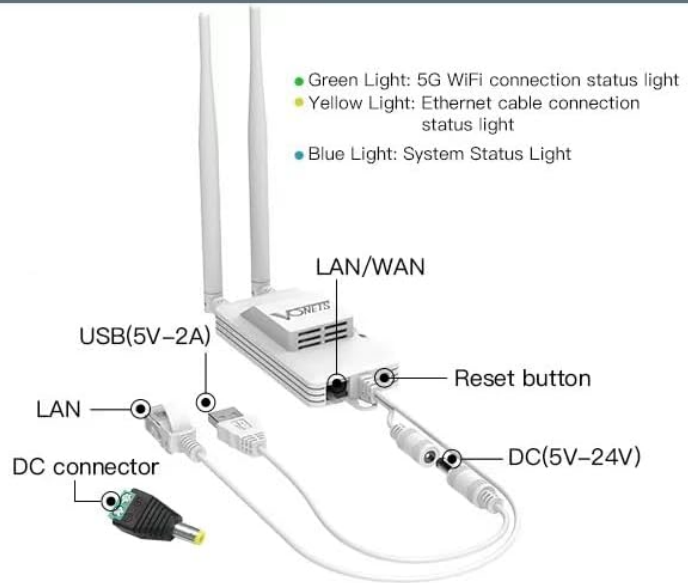


Image: A detailed diagram illustrating the VAP11S-5G's external interfaces, including the LAN/WAN port, USB power input, DC power input, reset button, and LED indicators for WiFi, Ethernet, and system status.

3.1. External Interfaces

- **USB/DC Power Supply Cable:** For device power.
- **10/100 Mbps Adaptive Ethernet Port:** For wired network connection.
- **Reset Button:** Used to restore factory settings.

3.2. LED Status Indicators

- **Green Light:** Indicates 5G WiFi connection status.
- **Yellow Light:** Indicates Ethernet cable connection status.
- **Blue Light:** Indicates system status.

4. SPECIFICATIONS

Feature	Description
Product Name	VAP11S-5G (With fan version)
Color	White
WiFi Function	Repeater/Bridge/Router
WiFi Protocol	802.11a/ac/n

Transmission Rate	900Mbps (5GHz)
WiFi Band	5GHz
Work Voltage	DC5V-24V (Typical 5V/2A or 12V/1A)
Product Dimensions	3.66 x 1.77 x 0.94 inches (94 x 45 x 15mm)
Item Weight	3.53 ounces (94g)
Operating Temperature	-20°C to 50°C
Antennas	2 x 5G External Antennas
Transmission Power	19dBm/23dBm (Adjustable)
Special Features	Access Point Mode, Bridge/Repeater Mode, Router Mode, WiFi to Ethernet, Wireless to Wired, Smart Cooling Fan, WiFi Hotspot Memory (up to 100), SSA Signal Strength Detection.

5. OPERATING MODES

The VAP11S-5G supports multiple operating modes to suit various networking needs:

Repeater/bridge application Application 1

Expand existing WiFi networks, easily expand your network

And the WiFi signal can be converted into a wired signal, and connected to the network port device through the RJ45 network cable, so that it is connected to the network, replacing the network cable, and solving the wiring troubles, and can be applied to a cash register, a printer, a surveillance video recorder, an attendance machine and so on.



AP Application Application 2

AP mode can achieve wireless access function of wired network

Suitable for the scene where the network cable is connected to the computer and can access the Internet without dialing.



Router Mode Application 3

Routing mode for wireless access with dial-up Internet access

Suitable for scenarios that require dial-up Internet access and wireless access to a higher-level network for cross-segment applications

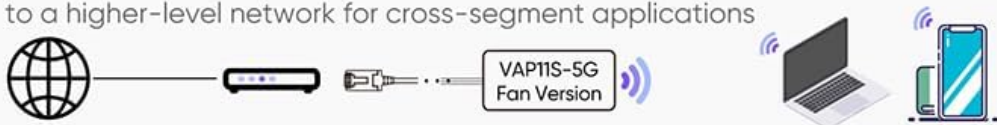


Image: Visual representation of the three primary operating modes: Repeater/Bridge mode for extending networks, AP mode for creating wireless access from a wired connection, and Router mode for internet access and network management.

5.1. Repeater/Bridge Mode

In this mode, the device expands existing WiFi networks. It converts a wireless signal into a wired signal, connecting to a network port device via an RJ45 cable. This effectively replaces a network cable, simplifying wiring and extending network access to devices like cash registers, printers, surveillance video recorders, and attendance machines.

5.2. AP (Access Point) Mode

AP mode enables wireless access functionality for a wired network. It is suitable for scenarios where a network cable is connected to a computer, allowing wireless devices to access the internet without requiring a dial-up connection.

5.3. Router Mode

Router mode provides wireless access with dial-up internet access. This mode is ideal for scenarios requiring dial-up internet access and higher-level network management for cross-segment applications.

5.4. MAC Layer Transparency

The device supports transparent transmission of the MAC layer (link layer) and all data above it, including IP layer data. This feature is beneficial for special applications requiring MAC layer encryption, such as GoPro cameras, Cisco APs, and Hikvision surveillance systems.

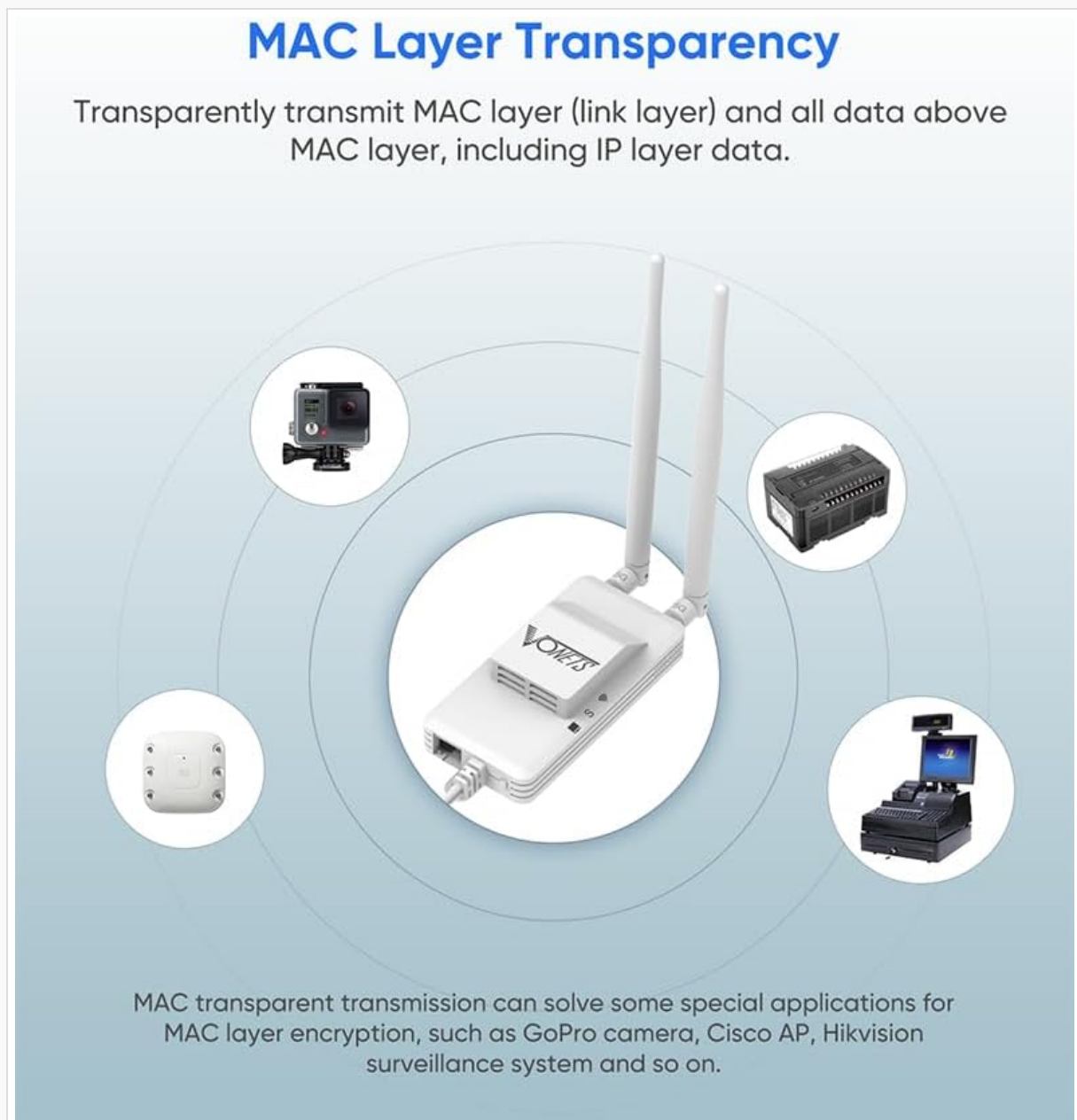


Image: An illustration demonstrating MAC Layer Transparency, where the VAP11S-5G facilitates seamless data transmission for devices like GoPro cameras, industrial PLCs, and point-of-sale systems.

6. SETUP GUIDE

This section provides a general overview of the setup process. For detailed configuration steps, please refer to the comprehensive user manual included in the package or contact support.

1. **Power Connection:** Connect the device to a power source using the provided USB/DC power cable. Ensure the power supply meets the DC5V-24V requirement (typical 5V/2A or 12V/1A).
2. **Initial Connection:** Connect your computer to the VAP11S-5G via an Ethernet cable or wirelessly to its default WiFi hotspot.
3. **Access Configuration Page:** Open a web browser and navigate to the device's default IP address (usually printed on the device or in the manual) to access the configuration interface.
4. **Select Operating Mode:** Choose the desired operating mode (Bridge, Repeater, AP, or Router) based on your network requirements.
5. **Configure Network Settings:** Follow the on-screen instructions to configure the necessary network parameters, such as connecting to an existing WiFi network (for Repeater/Bridge mode) or setting up a new WiFi hotspot (for AP/Router mode).
6. **Save and Reboot:** Save your settings and reboot the device for changes to take effect.

6.1. Power Supply Options

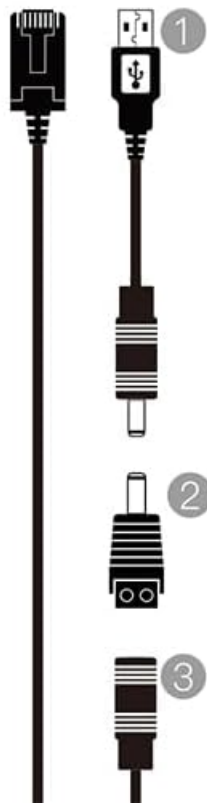
The VAP11S-5G supports a wide voltage range of DC5V-24V and offers flexible power input methods:

- **USB Power Supply:** Recommended 5V/2A.
- **Industrial Wiring Head:** For direct industrial power connections.
- **DC Power Supply:** Supports wide voltage DC5V-24V.

Support wide voltage DC5V-24V power supply

Two-stage automatic overvoltage protection
(Protection voltage upper limit 29V)

Users can use USB, DC5V-24V, Industrial wiring head power supply



USB Power supply

5V 2A power supply is recommended



Industrial wiring head

Support industrial wiring head



DC Power supply

Support wide voltage DC5V-24V

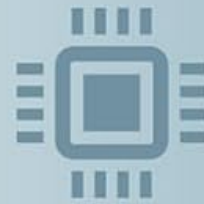
Image: An illustration detailing the flexible power input options for the VAP11S-5G, including standard USB (5V-2A recommended), an industrial wiring head, and a direct DC power input (5V-24V).

7. APPLICATIONS

The VAP11S-5G is designed for a variety of industrial and commercial applications due to its robust features and flexible operating modes.

**Adopt digital mode temperature
complementary frequency
stabilization technology**

WiFi signal is more stable and less likely to drop out



VAP11S-5G Fan Version is suitable for various applications

VAP11S-5G Fan Version is suitable for various applications scenarios



Robot



Electronic Scale



Printer



Doll Machine



PLC



Set-top box



Robot Arm



Medical equipment



Attendance machine

Image: A collage of nine images depicting diverse applications for the VAP11S-5G, including robots, electronic scales, printers, doll machines, PLCs, set-top boxes, robotic arms, medical equipment, and attendance machines.

7.1. Industrial Automation

- **PLC Connectivity:** Enables wireless communication for Programmable Logic Controllers (PLCs).
- **Robotics:** Facilitates data transfer for industrial robotic arms and AGVs.

7.2. Surveillance and Monitoring

- **IP Cameras & DVR/NVR:** Connects wired surveillance equipment to a wireless network.
- **Video Transmission:** Supports stable video transmission over distances, useful for remote monitoring.

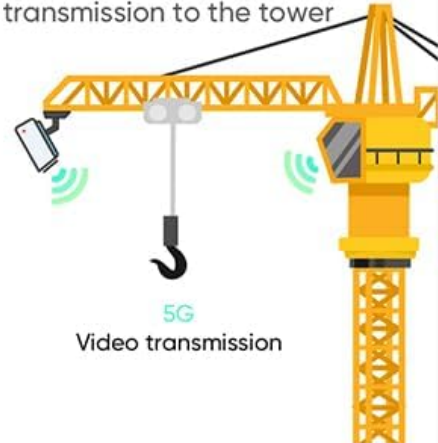
Industrial robotic arm application

Data transfer for industrial robotic arms can be applied using VAP11S-5G Fan Version

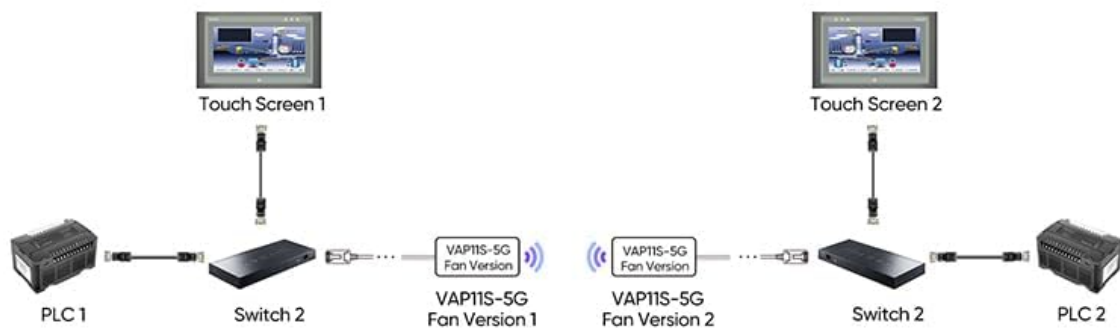


Video transmission application

Use VAP11S-5G Fan Version to apply HD video transmission to the tower



PLC Application



Remote video transmission application

Two VAP11S-5G Fan Version can realize long-distance point-to-point transmission Suitable for long-distance video wireless transmission scenarios



Image: Application diagrams illustrating the VAP11S-5G's use in industrial robotic arm data transfer, HD video transmission to a tower, PLC network integration, and long-distance point-to-point video transmission.

7.3. Other Applications

- **Medical Devices:** Provides wireless connectivity for medical equipment.
- **IoT Devices:** Integrates various Internet of Things devices into a network.
- **Network Printers:** Enables wireless printing for wired printers.

- **Point-of-Sale Systems:** Connects electronic scales and cash registers wirelessly.

8. MAINTENANCE

To ensure optimal performance and longevity of your VONETS VAP11S-5G, follow these maintenance guidelines:

- **Keep Clean:** Regularly clean the device with a soft, dry cloth. Avoid using liquid cleaners or solvents.
- **Ventilation:** Ensure the smart cooling fan and ventilation openings are not obstructed to prevent overheating. The fan will automatically activate when needed.
- **Power Supply:** Use only the recommended power supply (DC5V-24V, typical 5V/2A or 12V/1A) to prevent damage. The device has two-stage automatic overvoltage protection.
- **Environmental Conditions:** Operate the device within the specified temperature range of -20°C to 50°C. Avoid extreme humidity or direct exposure to water.
- **Firmware Updates:** Periodically check the official VONETS website for firmware updates to enhance performance and security.

9. TROUBLESHOOTING

If you encounter issues with your VAP11S-5G, consider the following troubleshooting steps:

- **No Power:**
 - Check if the power cable is securely connected.
 - Verify the power adapter is functioning and providing the correct voltage (DC5V-24V).
- **No WiFi Signal:**
 - Ensure the external antennas are properly attached.
 - Check the Green LED indicator for WiFi status.
 - Confirm the device is configured correctly in Repeater or AP mode.
- **No Internet Access:**
 - In Repeater/Bridge mode, ensure the upstream WiFi network has internet access.
 - In Router mode, verify WAN settings and internet service provider connection.
 - Check the Yellow LED indicator for Ethernet connection status.
- **Slow Connection Speed:**
 - Ensure the device is operating in 5GHz mode for higher speeds.
 - Reduce interference by repositioning the device or connected devices.
 - Check signal strength (SSA function) and adjust antenna direction.
- **Device Unresponsive:**
 - Perform a soft reboot by unplugging and replugging the power.
 - If issues persist, use the reset button to restore factory defaults (this will erase all configurations).

For further assistance, please contact technical support.

10. SUPPORT

If you have any questions regarding the setup, operation, or troubleshooting of your VONETS VAP11S-5G, please contact our technical support team:

Email: skyfoxcn@vip.163.com

Please provide your product model (VAP11S-5G) and a detailed description of the issue when contacting support.

11. WARRANTY INFORMATION

VONETS products are covered by a limited warranty. Please refer to the warranty card included with your product or visit the official VONETS website for detailed warranty terms and conditions. The warranty typically covers manufacturing defects under normal use conditions.