



# Powerline Networking Kit

**RF-GUV1124**

**User Guide**

# Rocketfish RF-GUV1124 Powerline Networking Kit

## Safety information

Take the following precautions when using this product:

- Read all instructions before installing and operating.
- Keep all instructions for later reference.
- Follow all warnings and instructions.
- This product should not be installed in any electrical socket so that the product's venting holes are pointing downward.
- Use a dry cloth for cleaning. Unplug the device from the power outlet before cleaning. Do not use liquid cleaners or aerosol cleaners.
- Do not operate this product near water.
- Do not place this product near or over a radiator or heat register.
- This product relies on the building's electrical installation for short-circuit (over-current) protection.
- Do not allow anything to rest on the product's power plug. Do not locate this product where the cords may be stepped on.
- Because this product sends data over power lines, we recommend that you plug it directly into a power outlet. Do not plug the device into a UPS (uninterruptible power supply) or power strip with surge protection. The product has its own power filter for protection against surges.
- Only a qualified technician should service this product. Opening or removing covers may result in exposure to dangerous voltage points or other risks.
- Unplug the product from the power outlet and refer the product to qualified service personnel for the following conditions:
  - When the power cords are damaged or frayed.
  - When liquid has been spilled into the product.
  - When the product has been exposed to rain or water.
  - When the product does not operate normally when the operating instructions are followed.
  - When the product exhibits a distinct change in performance.

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# Introduction

Congratulations on your purchase of the Rocketfish RF-GUV1124 powerline Ethernet kit. This easy-to-use system enables you to connect any Ethernet network device (such as computers and game consoles) to other devices on your home network and to the Internet. Your powerline kit also lets you connect your network without the hassle of setting up wireless networking and complex security measures.

The *powerline Ethernet bridge* converts Ethernet signals from a router or Internet modem to powerline signals that can travel along your home's electrical wiring. The *powerline Ethernet switch* then converts the powerline signals back to Ethernet signals, allowing you to connect up to four Ethernet-enabled devices to the switch for easy home networking.

## Features

### Package contents

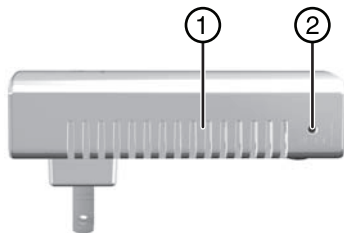
- Powerline Ethernet bridge (1)
- Powerline Ethernet switch (1)
- Ethernet cables (2)
- Quick Setup Guide*

## Powerline Ethernet bridge



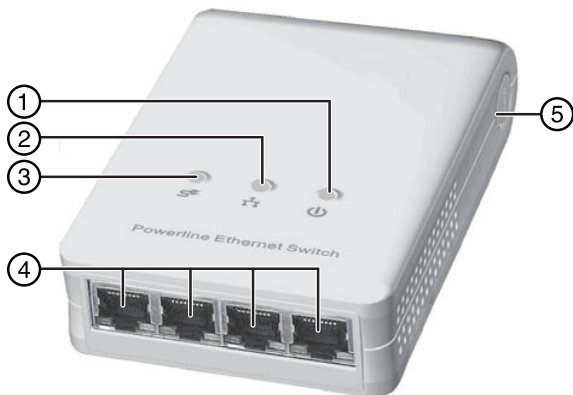
Item	Description
1	<p>Power indicator</p> <p>On—Power is on.</p> <p>Blinking—Device in standby mode or is in group joining mode.</p> <p>Off—Power is off.</p>
2	<p>Ethernet link/activity indicator</p> <p>On—Ethernet network link detected.</p> <p>Blinking—Network traffic detected.</p> <p>Off—No Ethernet network link detected.</p>
3	<p>Powerline link/activity indicator</p> <p>On—Powerline link detected, but no powerline network traffic is detected.</p> <p>Blinking—Powerline network traffic is detected.</p> <p>Off—Powerline link not detected.</p>

Item	Description
4	Ethernet port—Connect to your router (recommended) or Internet modem. For more information, see “Connecting your powerline devices” on page 10.
5	GROUP button—For custom network configuration, press this to create or join an additional powerline network. For more information, see “Creating additional networks” on page 12. Note: These devices are pre-configured at the factory and are ready to plug in and use. Do not press this button during first-time setup.



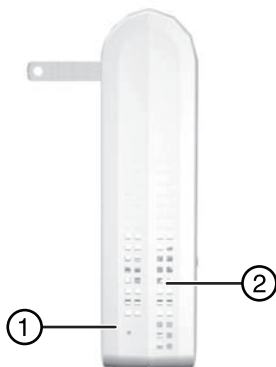
Item	Description
1	Vent holes—Do not block.
2	RESET button—Press to restore all factory default settings.

## Powerline Ethernet switch



Item	Description
1	<p>Power indicator</p> <p>On—Power is on.</p> <p>Blinking—Device in standby mode or is in group joining mode.</p> <p>Off—Power is off.</p>
2	<p>Ethernet link/activity indicator</p> <p>On—Ethernet network link detected.</p> <p>Blinking—Network traffic detected.</p> <p>Off—No Ethernet network link detected.</p>
3	<p>Powerline link/activity indicator</p> <p>On—Powerline link detected, but no powerline network traffic is detected.</p> <p>Blinking—Powerline network traffic is detected.</p> <p>Off—Powerline link not detected.</p>

Item	Description
4	Ethernet port—Connect to your router (recommended) or Internet modem. For more information, see “Connecting your powerline devices” on page 10.
5	GROUP button—For custom network configuration, press this to create or join an additional powerline network. For more information, see “Creating additional networks” on page 12. Note: These devices are pre-configured at the factory and are ready to plug in and use. Do not press this button during first-time setup.



Item	Description
1	RESET button—Press to restore all factory default settings.
2	Vent holes—Do not block.



# Setting up your powerline network

## Choosing a location

Before connecting your powerline devices, you need to determine where they need to be installed.

### Notes:

- *Make sure that the two powerline devices are in the same home power circuit.*
- *These devices should be installed only in a residential setting. Do not install in a business environment.*

## Powerline Ethernet bridge

To use this kit to set up Internet access for your home network, you should install the bridge near the router that's connected to your modem. For security, we recommend that you connect your bridge to the router, and not directly to the modem.

For more information on your network's modem or router, see the modem or router's documentation.



## Powerline Ethernet switch

Install the powerline Ethernet switch on the same home power circuit as your powerline Ethernet bridge, and near your gaming console or other device.



### Connecting your powerline devices

#### *To connect your powerline bridge:*

- 1 Plug your powerline bridge directly into a wall power socket. If other appliances are plugged into the same outlet, isolate them from the powerline bridge by using a noise-filtering power strip.
- 2 Plug an Ethernet cable into the Ethernet port on the powerline bridge and to an available Ethernet port on your network router.

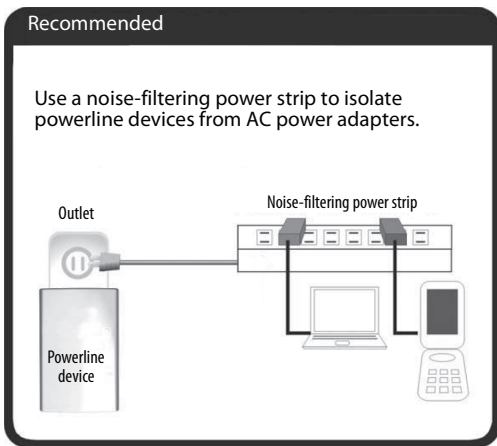
#### *To connect your powerline switch:*

- 1 Plug your powerline switch directly into a wall power socket. If other appliances are plugged into the same outlet, isolate them from the powerline bridge by using a noise-filtering power strip.
- 2 Plug an Ethernet cable into an available Ethernet port on the powerline switch and into an Ethernet port on a networkable device, such as a computer, Internet-connected TV, or game console. You can connect up to four network devices to your powerline switch.

## Connecting tips

Powerline networking sends data along the electrical wiring of your home, so the data can be corrupted by electrical interference (sometimes called "noise") and the length of wiring it must pass through. Although your powerline devices can overcome most interference, it's best to avoid creating interference so ensure the highest reliability. To reduce electrical interference, follow these tips:

- **Connect powerline devices directly to the wall power outlet**



### Notes:

- Do **not** connect your powerline device to an uninterruptible power supply (UPS), backup power supply, or a noise-filtering power strip.
- Do **not** connect other high power-consuming devices to the same wall power outlet that your powerline device uses.
- Do **not** connect electrical noise-emitting appliances to the same wall power outlet that your powerline device uses, such as:

- *Battery chargers (including cell phone chargers)*
  - *Hair dryers*
  - *Power drills and other power tools*
  - *Halogen lights*
  - *Vacuum cleaners*
- **Connect powerline devices to a power strip without noise filters**  
If you must connect your powerline devices to a power strip, use the following guidelines:
    - Make sure that the power strip does **not** have a noise filter or a surge protector, because the powerline network signals may become corrupted.
    - Use a power strip with an AC cord that is as short as possible.
    - Do not connect the adapter to a power strip that receives power from another power strip (daisy-chained).
  - **Keep distances short**  
If two powerline devices are separated by a great distance of electrical wiring, they may not communicate well with each other.
  - **Reduce electrical interference**  
Electrical interference ("noise") from other electrical appliances can interfere with the performance, speed, and reliability of your powerline devices. For best results, unplug or isolate the following devices with a noise-filtering power strip:
    - Air conditioners
    - Fluorescent lights (especially industrial-grade lights)
    - Blowers
    - Large electrical motors

**Note:** *Powerline devices can interfere with appliances, such as lamps, that have a touch-sensitive power switch.*

## Creating additional networks

Your Rocketfish powerline devices are all pre-configured to see each other as part of the same network. Each has the default network name of **HomePlugAV**, and any other Rocketfish powerline devices with the same network name recognize these as part of the same network. For a standard home network, you'll keep these settings as they are.

If, however, you want to set up multiple powerline networks in your home or change your powerline network's name (for added security), you can configure the powerline devices to do so.

**To create an additional network and join devices to it:**

- 1 Make sure that your powerline devices are plugged into a powered wall outlet and are not in standby mode.
- 2 Determine which powerline devices will be part of your new network, then choose one to be the first device to reconfigure. This device will be the first to get the new network name.

*Tip: Gather all powerline devices for your new network into the same room to make this procedure easier. After you're done configuring them, install them in any room you want.*

- 3 On that first device, press and hold the **GROUP** button for more than 10 seconds until all indicator lights turn off and on again at the same time. A random network name (different than "HomePlugAV") is generated for the device and all original settings are erased.
- 4 Press and hold the **GROUP** button again for two seconds, then release it. The power indicator starts blinking. Your device is now in "Broadcasting new network" mode.

*Note: The power indicator will not start blinking if you press and hold the **GROUP** button for longer than two seconds.*

*Tip: To cancel the "Broadcasting new network" mode, press and hold the **GROUP** button again for three seconds.*

- 5 On each additional device you want to connect to the new network:
  - a Press and hold the **GROUP** button for more than 10 seconds until all indicator lights turn off then on again at the same time. This erases the original network name of the device and frees it to join a new network group.
  - b Press and hold the **GROUP** button again for two seconds, then release it. The power indicator starts blinking. Your device is now in "Broadcasting new network" mode.

*Note: The power indicator will not start blinking if you press and hold the **GROUP** button for longer than two seconds.*

*Tip: To cancel the "Finding new network" mode, press and hold the **GROUP** button again for three seconds.*

After your first and additional devices' power indicators stop blinking, your additional device has successfully joined your first device's network.

### **Resetting a powerline device to factory defaults**

You can easily restore factory default settings for any of your powerline devices.

#### **To reset a powerline device to its factory default settings:**

- 1 Make sure that your powerline devices are plugged into a powered wall outlet and are not in standby mode.
- 2 On the powerline device, insert a small, stiff wire (such as a straightened paper clip) into the **RESET** hole. All factory defaults, including the network name, are restored.

### **Standby mode**

When your powerline device is not connected to any network device (such as a computer) that's turned on and active, it enters standby mode two minutes after the last activity.

Standby mode saves power. During standby, the power indicator light blinks slowly. To exit standby mode, turn on or awaken the connected network device.

***Caution:** Some computers support wake-on-LAN, which may prevent the powerline device from entering standby mode.*

## **Frequently asked questions**

### **How far can these devices send a network signal?**

Your network coverage may vary, depending on the number of electrical appliances in use. The theoretical maximum distance of wiring you can expect network signals to travel through is about 984 feet (300 m).

### **Do I have to rewire my home electrical outlets or install special filters for these devices?**

No. Powerline devices use your home's existing electrical wiring to network computers in different rooms so that they can share files, printers, and Internet connections.

### **Can these devices work with circuit breakers?**

Yes, if the powerline devices are used within the United States or Canada.

### **Is it secure to send private data over these devices?**

Yes. Data encryption is used to secure your data from prying eyes. For details, see "Specifications" on page 17.

### **How many devices can be assigned to a single group?**

Because several powerline devices share the same electrical wiring (physical bandwidth), we recommend that a maximum of 10 powerline devices be connected on a single group. Data transfer speed slows as more powerline devices are connected.

### **Can these devices communicate with other brands of powerline devices?**

Powerline devices using different powerline communication protocols may have difficulty communicating with each other, although they all can co-exist on same electrical wiring.

Your Rocketfish powerline devices are HomePlug AV compliant. They can communicate with any other HomePlug AV-compliant powerline device, regardless of brand.

## **Troubleshooting**

### ***Problem: The power indicator is off***

*Solution*—Make sure that the device is plugged in to a powered outlet, not an extension cord, power strip, or surge protector.

### ***Problem: The powerline link/activity indicator is off***

*Cause*—The powerline devices can't find each other.

*Solution*—Make sure that all powerline devices are plugged into powered outlets and that all are connected to the same powerline network group. If the problem occurred after you reconnected a device, reset the devices to the default settings and try again. For more information, see "Resetting a powerline device to factory defaults" on page 14.

### ***Problem: The Ethernet link/activity indicator is off***

*Cause*—The network contains no data traffic.

*Solution*—Make sure that:

- Your router is on.
- The Ethernet cable is connected between a powerline device's Ethernet port and your router's LAN port.

- The computer can access the Internet if you connect it directly to the router. If there is no Internet connection, troubleshoot the router or contact your ISP (Internet service provider).

### **Troubleshooting tips**

- Powerline products work better when plugged directly into the wall power outlet, not power strips, extension cords, surge protectors, or uninterruptible power supplies.
- If you've moved a powerline device or disconnected the cables, other network devices may need about five minutes to refresh their information about the powerline network's current status.
- To test whether your home's electrical wiring is contributing to powerline problems, plug units into power outlets in the same room.

Examples of wiring problems are:

- Old fuse boxes
- Old wiring that does not meet modern wiring building codes
- Swap powerline devices to determine whether one particular powerline device is causing the problem.
- Reset the powerline adapters to the factory default settings.
- For best performance, use the same brands and models of powerline devices throughout your network. Remember that one model's software may not work for another model, especially remote and advanced features.
- We do not recommend that you use powerline networking in a businesses environment.



## Specifications

Items	Description	
	Powerline bridge	Powerline switch
PHY rate	200 Mbps	
Effective data rate	TCP: Up to 91 Mbps UDP: Up to 94 Mbps	TCP: Up to 91 Mbps UDP: Up to 93 Mbps
Frequency band	2~28 MHz (with mask)	
Access methods	CSMA/CA channel-access schemes	
QoS	Four-level priority-based contention access, and multi-segment bursting 8-level VLAN priority field, TOS field QoS classification by destination MAC address and IP port	
Modulation	OFDM (QAM 8/16/64/256/1024, QPSK, BPSK, ROBO)	
10/100 RJ-45 ports	1 port	4 ports
Distance	AC wire: up to 300 meters	
LAN standards	IEEE 802.3, IEEE 802.3U	
PLC standard	HomePlug AV	
Operating system	OS independent	
Maximum devices in a network group	Up to 63 slaves with 1 master (64 total)	
IGMP	Support for IPv4/IGMP v1, v2, v3 snooping Support for IPv6 and MLD v1, v2 snooping Maximum 16 source addresses and group members	
Encryption	128-bit AES Link Encryption with key management	
LED indicators	Power, powerline activity, Ethernet link/activity	Power, powerline activity, AV/1.0 detect
Temperature	Operating: 32~104°F (0~40°C) Storage: -4~140°F (-20~60°C)	

Items	Description	
	Powerline bridge	Powerline switch
Relative humidity	Operating: 10~85% non-condensing Storage: 5~90% non-condensing	
Power source	100 ~ 240 VAC 50/60 Hz	
Power consumption	Full load: 110 VAC=3.3 W 220 VAC=3.8 W 240 VAC = 4.2 W  Standby mode <1.6 W	Full load: 110 VAC=4.2 W 220 VAC=5.3 W 240 VAC=5.8 W  Standby mode <1.8 W
Certification	CE, FCC Class B, Rohs, cTUVus, ICES-005	

## Legal notices

### FCC Part 15

This device complies with Part 15 of the FCC Rules. Operation of this product is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

### FCC warning

Changes or modifications not expressly approved by the party responsible for compliance with the FCC Rules could void the user's authority to operate this equipment.

### Canada ICES-006 statement

Complies with IC: ICES-006; En conformité avec IC: NMB-006.

## 90-day limited warranty

Rocketfish Products ("Rocketfish") warrants to you, the original purchaser of this new **RF-GUV1124** ("Product"), that the Product shall be free of defects in the original manufacture of the material or workmanship for 90 days from the purchase of the Product ("Warranty Period"). This Product must be purchased from an authorized dealer of Rocketfish brand products and packaged with this warranty statement. This warranty does not cover refurbished Product. If you notify Rocketfish during the Warranty Period of a defect covered by this warranty that requires service, terms of this warranty apply.

### How long does the coverage last?

The Warranty Period lasts for 90 days, beginning on the date you purchased the Product. The purchase date is printed on the receipt you received with the product.

### What does this warranty cover?

During the Warranty Period, if the original manufacture of the material or workmanship of the Product is determined to be defective by an authorized Rocketfish repair center or store personnel, Rocketfish will (at its sole option): (1) repair the Product with new or rebuilt parts; or (2) replace the Product at no charge with new or rebuilt comparable products or parts. Products and parts replaced under this warranty become the property of Rocketfish and are not returned to you. If service of Products and parts are required after the Warranty Period expires, you must pay all labor and parts charges. This warranty lasts as long as you own your Rocketfish Product during the Warranty Period. Warranty coverage terminates if you sell or otherwise transfer the Product.

### How to obtain warranty service?

If you purchased the Product at a retail store location, take your original receipt and the Product to the store you purchased it from. Make sure that you place the Product in its original packaging or packaging that provides the same amount of protection as the original packaging. If you purchased the Product from an online web site, mail your original receipt and the Product to the address listed on the web site. Make sure that you put the Product in its original packaging or packaging that provides the same amount of protection as the original packaging.

### Where is the warranty valid?

This warranty is valid only to the original purchaser of the Product in the United States, Canada, and Mexico.

### What does the warranty not cover?

This warranty does not cover:

- Customer instruction
- Installation
- Set up adjustments
- Cosmetic damage
- Damage due to acts of God, such as lightning strikes
- Accident
- Misuse
- Abuse
- Negligence
- Commercial use
- Modification of any part of the Product, including the antenna

This warranty also does not cover:

- Damage due to incorrect operation or maintenance
- Connection to an incorrect voltage supply
- Attempted repair by anyone other than a facility authorized by Rocketfish to service the Product
- Products sold as is or with all faults
- Consumables, such as fuses or batteries
- Products where the factory applied serial number has been altered or removed

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For customer service please call 1-800-620-2790

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

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