User’s Guide for Mini Powerline Adapter

Model: ZC-PLC200

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FCC Warning

This equipment has been tested and found to comply with the regulations for a digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment will generate and radiate radio frequency energy when operated and, if not installed and used in accordance with this user guide, may cause harmful interference to radio communications. If you suspect this product will cause interference, please open and close this equipment to check whether your radio or TV has been affected. If this happens when you open it and disappear when you close, it means this device has caused interference. You can try to avoid such interference by following ways:

1. Rearrange the receiving antenna.
2. Increase the distance between receiver and equipment.
3. Insert the equipment of receiver and equipment into two different outlets.
4. Consult the dealer or an experienced radio/TV technician for help.

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Chapter 1 Introduction

Thank you for purchasing ZC-PLC200 Mini Powerline Adapter. This manual provides information for adapter installation and user guide. The device is a Mini Powerline Adapter which can turn your home's wiring into a network for computers. Simply plug this Mini Powerline Adapter into an ordinary AC power outlet will easily extend your Cable/xDSL broadband connection or existing Ethernet (LAN) network to any other electrical outlet in any room of a house without the need of any new cabling.

ZC-PLC200 supports high speed data rate up to 200Mbps and coverage range up to 300 meters, which won't get any influence from obstacles. It will use the existing power lines installed in a home as a path to transmit digital data, voice, audio and video between devices. So it is applicable to a large area of housing and small Enterprises Office area etc, providing simple, convenient and scalable network solutions with no radiation.

1.1 Unpacking

Open the shipping carton and carefully remove all items, ascertain that you have:

1. Two Mini Powerline Adapters
2. Two CAT-5 Ethernet Cables
3. One Quick Installation Guide
4. One CD-ROM (User Manual)

If any item is found missing or damaged, please contact your local reseller for replacement immediately.

1.2 Features

- Complies with Home Plug AV, IEEE 802.3 and IEEE 802.3u standards.
- Supports 128-bit AES encryption.
- Built-in QoS prioritizes wireless resources.
- Easy plug-and-play, no configuration required.
- Provides up to 200Mbps high-speed transfer rate.
- Up to 300 meters range over the household power circuit for better performance through walls or across floors.
- Low power consumption and no radiation.
- Supports Windows 2000/XP/2003/Vista, Windows 7, Linux and Mac OS.

1.3 Specification

Hardware	
Interface	▪ 1*10/100Mbps Ethernet Port
Chipset	▪ BROADCOM 60321
Dimensions	▪ 93mm x 56mm x 30mm（L x W x H）
LED Indicators	▪ 1*PWR, 1*LAN
Power Supply	▪ AC 100V~240V
Environment	▪ Operating Temperature: 0℃~40℃(32℉~104℉) ▪ Storage Temperature: -40~70℃(-40℉~158℉) ▪ Operating Humidity: 10%~90% non-condensing ▪ Storage Humidity: 5%~95% non-condensing
Wireless	
Standards	▪ HomePlug AV, IEEE 802.3, IEEE 802.3u
Data Rate	▪ 200Mbps over Powerline
Modulation Type	▪ OFDM/CCK/16-QAM/64-QAM
Security	▪ 128-bit AES link encryption with key management
Power Consumption	▪ <4w

1.4 LED Indicators

The LED indicators display information about the device's status.

LED Indicator	Status	Indication
Power LED	On	The adapter is on.
	Blinking	The adapter is in power-saving mode.
	Off	The adapter is off.

LAN LED	On	The Ethernet port is connected, but there is no data being transferred.
	Blinking	The Ethernet port is transferring data.
	Off	The Ethernet port isn’t connected.

Note: 5 minutes after the device connected to the adapter is turned off, the adapter will switch to power-saving mode automatically.

Chapter 2 Connecting Mechanism

2.1 Introduction

The Powerline Adapter supports up to 200Mbps data rate. With this high speed connection rate, the Powerline Adapter allows you to setup a high speed home network by using your home existing electrical wiring. Generally, the Powerline Adapter works in pairs. You need to plug one Powerline Adapter into a power outlet and connect the Powerline Adapter to the computer's LAN card with an Ethernet cable; you will also need another Powerline Adapter connected to your Router so as to extend your broadband connection or Internet surfing. With clean power line, the distance between two Powerline Adapters can reach up to 300 meters, but the actual distance may vary due to the environment. Sections below describe the connection instructions and hardware connection mechanism.

2.2 Connection Instruction

To ensure the optimum performance of the Powerline Adapter and significantly improve the transmission capacity of the network, we recommend that your plug the Powerline Adapter directly into a wall socket but not the multiple sockets.

2.3 Connecting the Computer to Network

For those computers you wish to be networked by Powerline Adapter, each of the computers must be properly connected with a Powerline Adapter through an Ethernet (RJ-45) cable.

1. Connect the Provided Ethernet (RJ-45) cable to the Powerline Adapter's Ethernet port.
2. Connect the other end of the Ethernet (RJ-45) cable to your computer's LAN port.
3. Plug the Powerline Adapter into a wall socket next to the computer.
4. Connect the second Ethernet (RJ-45) cable to another Powerline Adapter's Ethernet port.
5. Connect the other end of the Ethernet (RJ-45) cable to an available Ethernet port of your Router.
6. Plug the Powerline Adapter into a wall socket next to the computer.
7. Turn on your computer.
8. Check and confirm that the Power LED and LAN LED on the Powerline Adapter are **ON**.

Chapter 3 How to use the Sec/Rst button

3.1 Sec/Rst button

The Sec/Rst button of PLC200 can be used as a pair button and a reset button. The HomePlug AV standard uses 128-bit AES (Advanced Encryption Standard) to safely transmit data between powerline adapters. For the powerline adapters to communicate with each other they all need to use the same Network Membership Key (NMK). Otherwise, they cannot unscramble the encrypted data sent in the powerline network.

If you press and hold Sec/Rst button for about 3 seconds, it works as a pair button; for about 10 seconds, the device will reboot.

3.2 Set up a secured Powerline AV Network

You can connect a number of devices on a powerline network, but you can only use the pair button on two devices at a time. We suppose that the Powerline adapter that connected with the Router is adapter A, and that connected with the computer is adapter B. Please follow the below steps to create a secured Powerline network using the pair button.

1. Press the pair button of Powerline adapter A for about 3 seconds, the Power LED will start flashing.
2. Press the pair button of Powerline adapter B for about 3 seconds, the Power LED will start flashing.
   (This must be done within 2 seconds after pressing the pair button of powerline adapter A.)
3. Wait for about 3 seconds while your Powerline adapter A and B are connecting. The Power LED on both adapters will stop flashing and become solid light when the connection is made.

Chapter 4 Troubleshooting

This section provides answers to common problems regarding the Powerline Adapter.

Q1: The Power LED does not light up.

A1: Please check the following:

a) Make sure the Powerline Adapter is properly plugged into a power outlet.
b) Make sure the power outlet is active (working) by plugging another electric device into it.
c) Re-plug the Powerline Adapter to the power outlet again. If the Power LED still failed to light up, contact with your local reseller for technical support.

Q2: The LAN LED does not light up.

A2: Please check the following:

a) Make sure that the Ethernet cable (RJ-45) is properly connected to the Powerline Adapter's Ethernet port.
b) Make sure that the other end of the Ethernet cable (RJ-45) is properly connected to the computer LAN card or to your Router Ethernet port.
c) Make sure your computer LAN card is properly installed and configured.
d) Make sure your Router access is working and configured correctly.
e) Contact with your local reseller for technical support if the LAN LED still failed to light up after the above check.