

# **User Guide**

Shenzhen Tenda Technology Co.,Ltd.

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# Contents

I Get to Know the Adapter	1
1 Overview	1
2 Package Contents	1
3 LED/Interface/Button	2
II Access the Internet	
1 Install Your Adapters	
2 Secure Your Powerline Network	
3 Add Adapters to a Private Powerline Network	6
III Manage Your Adapters	7
1 UI Installation	7
2 Run the UI	
3 Change Device Name	
4 Change Network Name	
5 Reset	
6 Upgrade	
Appendix	
1 Configure Your Computer	
Windows 8	
Windows 7	
2 FAQs	
3 Technical Support	
4 Technical Specifications	
5 Safety and Emission Statement	

# I Get to Know the Adapter

Before you use the PLC product, take a moment to become familiar with the package contents and the front panel. Pay particular attention to the LEDs on the front panel.

### **1** Overview

PH3 AV1000 Gigabit Powerline Adapters are designed for online video/audio player, web camera, IPTV and other high bandwidth applications. It adopts electrical circuit to transmit Internet data with electrical power, which in a sense reduces the Ethernet cable cost and easily extends network coverage to where the electrical power can get within the valid range. The rate of these powerline adapters are up to 1000Mbps, giving a guarantee of a more fluent online playing experience.

### **2 Package Contents**

Unpack the package. Your box should contain the following items:

- AV1000 Gigabit Powerline Adapter \* 2
- Install Guide \* 1
- Ethernet Cable \* 2

\* If any item is incorrect, missing or damaged, please keep the original package and contact the vendor for replacement immediately.

# **3 LED/Interface/Button**



**Ethernet Port** Pair Button

LED	Color	Status	Description
Power	/	Off	The device is NOT receiving electrical power.
(b)	Green	Solid	The electrical power is on.
0	Green	Slow blinking	The device is in power saving mode.
	/	Off	The device doesn't pair with other powerline devices, or is powered off.
PLC	Green	Solid	The device is connected to a powerline network.
៨	Green	Fast blinking	The device is pairing with a powerline devices.
	Red	Solid	The powerline signal of the adapter is poor; try plugging the adapter closing to your router or modem until the PLC LED turns to green.
Ethernet	/	Off	No Ethernet cable is detected on the Ethernet port.
	Green	Solid	The Ethernet cable is connected properly.

Interface/Button	Description
Ethernet Port	For connecting to the Internet, a computer, or other network devices via an Ethernet cable.
	Press and hold it for about 1 second to start pairing.
Pair	Press and hold it for about 6 seconds (the Power LED will be off and then light up again) to restore the adapter to factory default.

# **II Access the Internet**

This section explains how to access the Internet via a pair of Powerline Adapters, including how to position and use your Powerline Adapters, how to connect them and access the Internet. Here's an example for you.

# **1 Install Your Adapters**

#### Attention

The adapter can only be used in vertical directions.



#### Plug and Play



Connect one adapter to one of the LAN ports of an ADSL modem/wireless router for Internet access, and plug it into a wall outlet nearby.

Connect the other adapter to a computer or other wired devices, and plug it to a wall outlet.

3 Wait until the PLC LEDs on the two adapters are lit.

Then you can try accessing the Internet via your computer. If you cannot access the Internet after the operation above, please refer to Q1 for solution.

### **2 Secure Your Powerline Network**

Two or more powerline adapters under the same electrical circuit will automatically interconnect to create an unencrypted public network (Named "**HomePlugAV**").



If you want to create a secure powerline network (Named "Private"), use the Pair button to pair the two adapters with each other.



#### **Procedure:**



- Plug in your adapters.
- 2 Wait until the PLC LEDs on the two adapters are lit.
- S Press the **Pair** button on one adapter for 1 second, and the PLC LED on the adapter starts blinking.
- **4** Then press the **Pair** button on the other adapter for 1 second.

Both buttons must be pressed within two minutes.

Observe the PLC LEDs on the two adapters until they are lit again. It indicates that a secure powerline network is established successfully between the two adapters.

# 3 Add Adapters to a Private Powerline Network

If you want to add more powerline adapters to a private powerline network, follow the steps below:



**1** Press the **Pair** button on any powerline adapter in the security powerline network for 1 second.

**2** Within two minutes, plug in the new powerline adapter, and press its **Pair** button for 1 second.

3 Observe the PLC LEDs on the two adapters until they are lit.

4 Done.

# **III Manage Your Adapters**

This section introduces how to manage your adapters using the UI, including changing your Powerline adapters' device name/network name, resetting your Powerline adapters, and etc.

## **1 UI Installation**

This section instructs you to install the adapter s' UI on your computer.

If you are a Windows 8 user, simply follow steps below. If you are using other operation systems, instructions herein are also good for references.

#### To install the UI:

Go to Tenda official website http://www.tendacn.com to download the management software. Save it to your local host, and unzip it.

Double click the setup icon B<sup>setup</sup> to run the management software, and click **Next** when you see the screen below.



2 After you read the license agreement shown as below, select "I accept the agreement" and click Next.

ß	Setup - PLC-Config – 🗆 🗙
	License Agreement Please read the following important information before continuing.
	Please read the following License Agreement. You must accept the terms of this agreement before continuing with the installation.
	Tenda Powerline Utility for Windows XP/Vista/Win7/Win8 Copyright (C) Tenda TECHNOLOGY, CORP. All Rights Reserved.
	Thank you for purchasing Tenda Powerline product!
	<ul> <li>I accept the agreement</li> <li>I do not accept the agreement</li> </ul>
	< Back Next > Cancel

3 Click **Browse...** on below screen to locate where to install the UI and click **Next** to go forward.

ß	Setup - PLC-Config 🛛 🗕 🗆 🗙
Se	lect Destination Location Where should PLC-Config be installed?
	Setup will install PLC-Config into the following folder.
	To continue, click Next. If you would like to select a different folder, click Browse.
	C:\Program Files\PLC-Config Browse
	At least 41.8 MB of free disk space is required.
	< Back Next > Cancel

4 Keep clicking **Next** until the screen below displays. Then check the **Create a desktop icon** option and click **Next**.

ß	Setup - PLC-Config 🛛 🗕 🔍 🗙
	Select Additional Tasks Which additional tasks should be performed?
	Select the additional tasks you would like Setup to perform while installing PLC-Config, then click Next.
	Additional icons:
	✓ Create a desktop icon
	< Back Next > Cancel

**5** Click **Install** to install the UI.

₿	Setup - PLC-Config -	×
1	Ready to Install Setup is now ready to begin installing PLC-Config on your computer.	
	Click Install to continue with the installation, or click Back if you want to review or change any settings.	
	Destination location: C:\Program Files\PLC-Config Start Menu folder: PLC-Config Additional tasks: Additional icons: Create a desktop icon	^
	<	
	< Back Install (	Cancel

**6** WinPcaP Setup Wizard will be displayed as below. Click Next to go forward.



**7** Click **I Agree**.

<b>;</b>	WinPcap 4.1.3 Setup –	×	
WinPcap	License Agreement Please review the license terms before installing WinPcap 4	. 1.3.	
Press Page Down to see the	e rest of the agreement.		
Copyright (c) 1999 - 2005 NetGroup, Politecnico di Torino (Italy).         Copyright (c) 2005 - 2010 CACE Technologies, Davis (California).         Copyright (c) 2010 - 2013 Riverbed Technology, San Francisco (California).         All rights reserved.         Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:         1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following conditions			
If you accept the terms of the agreement, click I Agree to continue. You must accept the agreement to install WinPcap 4 1 3			
Nullsoft Install System v2.46 -			
	< Back I Agree Car	ncel	

10

#### 8 Click Install.



#### 9 Click Finish.



0 Click **Finish** to complete the installation.



After you finish the installation, a UI shortcut **PLC-Config** will appear on your desktop.

### 2 Run the UI

After the UI is installed, double-click Reconfig icon on your desktop to run the UI. The main interface is shown as below:



In the Device List, you can view the adapters in a same powerline network which have negotiated with each other.

ССО	This adapter will be regarded as a station, to which other adapters will attempt to connect. When attempting to connect to each other, adapters automatically negotiate with each other to select an adapter as CCO.
Local	This adapter is connected to the computer with the UI installed.
Device Info	The Device Info of a currently selected adapter.
Network name /HomePlugAV	HomePlugAV is the local Powerline network name if you do not customize a Powerline network name, or use pair button to pair the adapters with each other. To establish a same powerline network, powerline adapters MUST share an identical network name. Based on the network name, the powerline network is classified into 2 types: a powerline network named "HomePlugAV" is considered a public network; a powerline network named "Private" is considered an encrypted network.
MAC Address	The MAC address of a currently selected adapter.
?	Click to see the User Guide.

### **3 Change Device Name**

For easy recognition and convenient management, you can change the adapter's name if there are multiple adapters managed by the UI.

#### To change device name:



Click to start configuration.

**2** Select Change Device Name.

<b>Tend</b> a			?—×
Device list (2)	- 100	Device info	
Name:PLC Adapte MAC:00:1f:84:00:0	Change device name		Terncla
MAC:c8:3a:35:a1:5	Reset		8
Rate(Tx/Rx):827 M	Upgrade	Device name	PLC Adapter
		Network name	HomePlugAV
		MAC address	00:1f:84:00:00:10
		Up time	00:01:18
		Software version	3.2.2_EU

3 Select the adapter whose name you want to change, and specify a new name in the **Device** 

name	edit	box,	and	click	OK.	

Tenda		?—×
Device list (2)	3 <b>Q</b> t =	Device info
Name:PLC Adapter (CCO) MAC:00:1f:84:00:00:10		Terricla
Name:PLC Adapter (Local) MAC:c8:3a:35:a1:56:90 Rate(Tx/Rx):721 Mbps / 796 Mbps		
		Device name PLC Adapter
		Network name HomePlugAV
		MAC address 00:1f:84:00:00:10
		Up time 00:02:31
		Software version 3.2.2_EU
Selected 1 device		
Select all Device name: PLC Ada	apter 1	OK Cancel

After it saved successfully, you'll find that the **Device name** displays the new name.

Tenda			?—×
Device list (2)	:0:	Ŧ	Device info
Name:PLC Adapter 1 (CCO) MAC:00:1f:84:00:00:10			Ternela
Name:PLC Adapter (Local) MAC:c8:3a:35:a1:56:90			8
Rate(Tx/Rx):859 Mbps / 804 Mbps			Device name PLC Adapter 1
			Network name HomePlugAV
			MAC address 00:1f:84:00:00:10
			Up time 00:03:01
			Software version 3.2.2_EU

### **4 Change Network Name**

To establish a same powerline network, powerline adapters MUST share an identical network name. Therefore, if you change one adapter's network name in a powerline network, you MUST change the other adapters' as well. If not, the adapter will exit from the current powerline network. Also, if you change the default network name **HomePlugAV** into another one, this powerline network will become an encrypted private powerline network. You need to use the pair button to add more adapters into this powerline network.

#### To change the network name:

- Click Or to start configuration.
- **2** Then select **Change Network Name**.

<b>Tend</b> a			?—X
Device list (2)	3 <u>0</u> : -	Device info	
Name:PLC Adapte	Change device name	(	
MAC:00:1f:84:00:0	Change network name 💦		76/2716363
Mame:PLC Adapte	Reset		1
Rate(Tx/Rx):861 N 🖆	Upgrade	Device name	PLC Adapter 1
		Network name	HomePlugAV
		MAC address	00:1f:84:00:00:10
		Up time	00:03:50
		Software version	3.2.2_EU

**3** Select all adapters whose name you want to change.

Tenda		?—>
Device list (2)	301 -	Device info
Name:PLC Adapter 1 (CCO)           MAC:00:1f:84:00:00:10		Terrela
MAC:c8:3a:35:a1:56:90		3
Rate(Tx/Rx):850 Mbps / 345 Mbps		Device name PLC Adapter 1
		Network name HomePlugAV
		MAC address 00:1f:84:00:00:10
		Up time 00:05:15
		Software version 3.2.2_EU
Selected 2 device		
Select all Network name: Ho	mePlugAV	OK Cancel
Γι	Jse the defaul	t(HomePlugAV)

**4** Type a new network name in **Network Name** edit box.

#### **5** Click **OK** to activate the settings.

Tenda		?—×	
Device list (2)	301 -	Device info	
Name:PLC Adapter 1 (CCO)           MAC:00:1f:84:00:00:10		Terrecto	
MAC:c8:3a:35:a1:56:90		3	
Rate(Tx/Rx):856 Mbps / 654 Mbps		Device name PLC Adapter 1	
		Network name HomePlugAV	
		MAC address 00:1f:84:00:00:10	
		Up time 00:07:04	
		Software version 3.2.2_EU	
Selected 2 device			
Select all Network name:		OK	
Use	the defau	t(HomePlugAV)	

After successful network name configuration, the Network Name will be changed from "HomPlugAV" into "Private", which means it is a private and encrypted network.

Tenda			?—×
Device list (2)	3Ōt	Ŧ	Device info
Name:PLC Adapter 1 (CCO)           MAC:00:1f:84:00:00:10			Ternda
Name:PLC Adapter (Local) MAC:c8:3a:35:a1:56:90			
Rate(Tx/Rx):682 Mbps / 632 Mbps			Device name PLC Adapter 1
			Network name Private
			MAC address 00:1f:84:00:00:10
			Up time 00:00:20
			Software version 3.2.2_EU

### **5 Reset**

Device name will be PLC Adapter, and network name will be HomeplugAV once the device resets to factory default. You can reset the adapters here, or use the hardware button **Pair** button on the device.

#### To reset the adapters:

**Olick** to start configuration.

**2** Select **Reset**.

Tenda			[?  -  ×]
Device list (2)	1 <u>0</u> 1 -	Device info	
Name:PLC Adapte MAC:00:1f:84:00:0	Change device name Change network name		Ternela
MAC:c8:3a:35:a1:5 Rate(Tx/Rx):785 M	Reset		8
		Device name	PLC Adapter 1
		Network name	Private
		MAC address	00:1f:84:00:00:10
		Up time	00:01:39
		Software version	3.2.2_EU

**3** Select the adapter you want to reset or you can click **Select All**.

4 Click **OK** to activate the settings.

Tenda		?—>
Device list (2)	<b>i</b> ¢: -	Device info
Name:PLC Adapter 1 (CCO)           MAC:00:1f:84:00:00:10		Teencla
Image: Name:PLC Adapter (Local)         Image: MAC:c8:3a:35:a1:56:90         Rate(Tx/Rx):780 Mbps / 678 Mbps		Device name PLC Adapter 1
		Network name Private
		MAC address 00:1f:84:00:00:10
		Up time 00:02:58
		Software version 3.2.2_EU
Selected 2 device           Select all         Do you want to restore the device	e to its f	factory state? OK Cancel

#### Tips

If it is a private network before, the adapter you select to restore to factory default won't display in Device list any more. But if the adapter you reset is connected to the configuration PC via an Ethernet cable, other adapters with different network name will disappear from the list. If you want to add the adapter which you reset to the Powerline network again, you need to use the pair button, or reset all of other adapters to factory default.

# **6 Upgrade**

Upgrading the adapters' software may get more stable performance. Please go to Tenda website (http://www.tendacn.com) to download upgrade file.

#### To upgrade the adapters:



Click to start configuration.

**2** Select **Upgrade**.

<b>Tend</b> a			?—X
Device list (2)	3 <u>0</u> 1	Device info	
	Change device name		
MAC:00:1f:84:00:0	Change network name		Tenda
Name:PLC Adapte	🛞 Reset		3
Rate(Tx/Rx):772 N	📤 Upgrade	Device name	PLC Adapter
		Network name	HomePlugAV
		MAC address	00:1f:84:00:00:10
		Up time	00:02:21
		Software version	3.2.2_EU

**3** Click **Browse** to locate and upload the upgrade file you have downloaded.

### **4** Click **OK** to start upgrading.

Tenda			?—×
Device list (2)	3Ō:	Ŧ	Device info
Name:PLC Adapter MAC:00:1f:84:00:00:10			Teerncky
Name:PLC Adapter (CCO) (Local) MAC:c8:3a:35:a1:56:90			
Rate(Tx/Rx):655 Mbps / 750 Mbps			Device name PLC Adapter
			Network name HomePlugAV
			MAC address 00:1f:84:00:00:10
			Up time 00:05:11
			Software version 3.2.2_EU
Upgrade file:	_	Br	owse OK Cancel

# **Appendix**

This Chapter provides you with more information about how to configure your computer, common questions and answers, and etc.

## **1 Configure Your Computer**

We take <u>Windows 8</u>, <u>Windows 7</u>, and <u>Windows XP</u> as examples here.

#### Windows 8

1 Right click the icon 🕅 on the bottom right corner of your desktop. Click Open Network and

#### Sharing Center.



**T**ips

If you cannot find the icon 🗟, please move your cursor to the top right corner of your desktop,

select Settings > Control Panel > Network and Internet > Network and Sharing.

**2** Click **Ethernet** > **Properties**.



**(3)** Find and double click **Internet Protocol Version 4(TCP/IPv4)**. Select **Obtain an IP address automatically** and **Obtain DNS server address automatically** and click **OK**.

Ethernet Properties	
Networking	
Connect using:	Internet Protocol Version 4 (TCP/IPv4) Properties
Intel(R) 82574L Gigabit Network Connection	General Alternate Configuration
Configure This connection uses the following items:	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
File and Printer Sharing for Microsoft Networks     Microsoft Network Adapter Multiplexor Protocol	Obtain an IP address automatically     Use the following IP address:
Microsoft LLDP Protocol Driver     Link-Layer Topology Discovery Mapper I/O Driver	IP address:
✓	Subnet mask:
Internet Protocol Version 4 (TCP/IPv4)	
Install Uninstall Properties	Use the following DNS server addresses:
Description	Preferred DNS server:
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication	Alternate DNS server:
across diverse interconnected networks.	Validate settings upon exit Advanced
OK Cancel	OK Cancel

4 Click **OK** on the **Ethernet Properties** window (see 3 for the screenshot).

#### Windows 7

1 Click the icon 🖾 on the bottom right corner of your desktop. Click Open Network and

Sharing Center.



### Tips

If you cannot find the icon **u** on the bottom right corner of your desktop, follow steps below:

Click Start > Control Panel > Network and Internet > Network and Sharing Center.

Netwo	rk and Internet 🕨 Network and S	haring Center 👻 🍫	Search Control Panel	× 🗆 –
Control Panel Home Change adapter setti Change advanced sh	Local Area Connection Status     General     Connection	X	set up connections	See full map
settings	IPv4 Connectivity: IPv6 Connectivity: Media State: Duration: Speed: Details	No Internet access No Internet access Enabled 03:40:31 1.0 Gbps	Connect ss type: No Interne lections:	or disconnect et access Connection
	Activity ————————————————————————————————————	- Received	or VPN connection; or	set up a
See also	Bytes: 758,61	8 8,236,680	I-up, or VPN network of	onnection. nge sharing
Internet Options		Close		

**2** Click Local Area Connection > Properties.

**3** Find and double click Internet Protocol Version 4(TCP/IPv4). Select Obtain an IP address

automatically and Obtain DNS server address automatically and click OK.

Local Area Connection Properties	Internet Protocol Version 4 (TCP/IPv4) Properties
Connect using:	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Configure This connection uses the following items:	<ul> <li>Obtain an IP address automatically</li> <li>Use the following IP address:</li> </ul>
Image: Clerit for Microsoft Networks         Image: Clerit for Microsoft Networks         Image: Clerit for Microsoft Networks         Image: Clerit for Microsoft Networks	IP address:
	Default gateway:
Link-Layer Topology Discovery Responder	<ul> <li>Obtain DNS server address automatically</li> <li>Use the following DNS server addresses:</li> </ul>
Install     Uninstall     Properties      Description      Transmission Control Protocol/Internet Protocol. The default	Preferred DNS server:        Alternate DNS server:
wide area network protocol that provides communication across diverse interconnected networks.	Validate settings upon exit Advanced
OK Cancel	OK Cancel

**4** Click **OK** on the **Local Area Connection Properties** window (see **3** for the screenshot).

Windows XP

1 Right click My Network Places on your desktop and select Properties. Right click Local Area

**Connection** and select **Properties**.

Network	and the second second	Disable
Places	Open Explore Search for Computers	Status Repair
Recycle Bir	Map Network Drive Disconnect Network Drive	Create Shortcut
	Create Shortcut Delete Rename	Rename
	Properties	roperaes

2 Scroll down to find and double click Internet Protocol (TCP/IP). Select Obtain an IP address

automatically and Obtain DNS server address automatically and click OK.

Local Area Connection Properties	Internet Protocol (TCP/IP) Properties
eneral Advanced	General Alternate Configuration
Connect using: Marvell Yukon 88E8057 PCI-E Gigabi Configure	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
This connection uses the following items:	Obtain an IP address automatically
Client for Microsoft Networks	Use the following IP address:
Read Printer Sharing for Microsoft Networks	IP address;
✓	Subnet mask.
Install Uninstall Properties	Default gateway
Description	Obtain DNS server address automatically
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.	O Use the following DNS server addresses: Preferred DNS server:
Show icon in notification area when connected	Alternate DNS server:
	Advanced
OK Cancel	OK Cance

**3** Click **OK** on the **Local Area Connection Properties** window (see **2** for the screenshot).

### 2 FAQs

Here some questions come with solutions. If your problem is still unsolved, please go to our website (www.tendacn.com) for help or mail your questions to our support (support@tenda.com.cn).

Q1: I cannot access the Internet after finishing the installation in **<u>Plug and Play</u>**, what should I do?

A1: Please follow the instructions below step by step to troubleshoot.

a. Verify that your wireless router and the adapters are well-connected.

b. Verify that you can access the Internet normally by connecting your computer directly to the router or modem.

c. Verify that your computer has been set to obtain an IP address automatically. Please refer to <u>Configure Your Computer</u> for details.

d. Verify that the PLC LEDs on the adapters are solid green. If they are not, reset all adapters and then observe the PLC LEDs again.

e. Verify that all powerline adapters are on the same electrical circuit.

**Q2**: I cannot access the Internet after finishing the operations in **Secure Your Powerline Network**, what should I do?

A2: Please follow the instructions below step by step to troubleshoot.

a. Check if you can access the Internet before use the **Pair** button to secure your powerline network.

b. Verify that the PLC LEDs on the adapters are solid green. If they are not, reset all adapters and then use the **Pair** button to pair the adapters again.

c. Verify that all powerline adapters are on the same electrical circuit.

Q3: The adapter failed to connect to the powerline network after I moved it to a new location, what should I do?

A3: Please follow the instructions below step by step to troubleshoot.

a. Verify that all powerline adapters are on the same electrical circuit.

b. Verify that the PLC LED on the adapter is solid green before you move it to a new location.

c. Use the **Pair** button to pair it with one of the adapters in the powerline network again.

d. Observe the PLC LED on the adapter, if it is solid red, move it to another location until the PLC LED turns to solid green again.

#### Q4: Can I just plug one powerline adapter into a wall outlet to access the Internet?

A4: Sorry, you cannot. You must connect one more such adapter to an Internet-enabled ADSL Modem or Router, and another one to a computer. When the two adapters interconnect successfully, you can access the Internet.

#### **Q5**: Do I need to install a utility to use the device?

**A5**: No. PH3 are plug-and-play powerline adapters. Two such devices connected to the same electricity meter are able to interconnect automatically, no configuration required. Yet, there is still an included utility for advanced features such as Upgrade, private network, etc. See <u>Manage Your</u> <u>Adapters</u> for details.

#### Q6: How many powerline adapters at most can be included under a single electricity meter?

**A6**: Up to 8 adapters. However, you can create numerous private networks under the same electrical circuit.

#### Q7: Can powerline devices of different brands communicate with each other?

**A7**: Yes. PH3 complies with HomePlugAV standard and thus can communicate with other manufacturers' HomePlugAV- compliant powerline devices.

### **3 Technical Support**

If you still have some problems, please contact our technical support.

Country	Hotline
Global Hotline	(86) 755-27657180
United States	1-800-570-5892
HongKong	00852-81931998
Canada Hotline	1-888-998-8966

Туре	Details
Skype	Tendasz
Website	http:// www.tendacn.com
E-mail	support@tenda.com.cn

# **4 Technical Specifications**

Hardware Specifications			
Standards		RJ45: IEEE 802.3, IEEE 802.3u; IEEE 802.3ab PLC: HomePlugAV2	
Button		1*Pair Button	
LEDs		<ul><li>1*Power LED: Green Indicator</li><li>1*PLC LED: Green Indicator (PLC is in good condition);</li><li>Red Indicator (PLC is in poor condition)</li><li>1*LAN LED: Green Indicator</li></ul>	
Input Power		AC 100V-240V 50/60Hz	
	L ( mm )	82	
Dimensions	W ( mm )	60	
	H ( mm )	32	
Electrical Security		128-bit AES encryption	



<b>Operating Temperature</b>	0°C~40°C
Storage Temperature	-40°C~70°C
Operating Humidity	10%~90%RH Non-condensing
Storage Humidity	10% - 90%RH (non-condensing)

# **5 Safety and Emission Statement**

# CE

#### **CE Mark Warning**

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

#### -For PLUGGABLE EQUIPMENT,

the socket-outlet shall be installed near the equipment and shall be easily accessible.

**NOTE:** (1) The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. (2) To avoid unnecessary radiation interference, it is recommended to use a shielded RJ45 cable.



#### FCC Statement

This device complies with Part 15 of the FCC Rules. Operation 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.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.

- Increase the separation between the equipment and receiver.

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

- Consult the dealer or an experienced radio/TV technician for help.

Caution!

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**NOTE:** (1) The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. (2) To avoid unnecessary radiation interference, it is recommended to use a shielded RJ45 cable.