

BiPAC 2071

HomePlug AV 200 Ethernet Adapter

BiPAC 2072

HomePlug AV 200 Ethernet Bridge with AC-Pass Through

User Manual

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Safety Warnings

- 1. Do not use the adapter in high humidity or high temperature environment.
- 2. Do not open or repair the case yourself.
- 3. Avoid using this product and all its accesories outdoor.
- 4. Place the adapter on a stable surface.
- 5. Only "HomePlug AV" compliant Powerline Communication (PLC) adapter for remote access is necessary.
- 6. Plug your BiPAC HomePlug AV device directly to the AC outlet on the wall. It is best to avoid using extension power cable as it may possess noise filter or surge protector functions that may cause interference that may impact the performance of the device.
- 7. Use only IT products (eg. fax machine, router) that are below 6Amp for the built-in AC outlet of BiPAC 2072.

Chapter 1

Introduction

BiPAC HomePlug AV is a networking device that utilizes the existing wiring system as a path to transmit data signal through the inter-conversion between digital and analog signal. With this functionality, BiPAC HomePlug AV devices can be plugged into an AC outlet to draw power and at the same time establishing a network connection between two or more Ethernet devices.

BiPAC HomePlug AV device can be used to bridge any Ethernet device to your Powerline network in your home or office. With this technology, Ethernet devices in your home or office can equally share high speed data transmission rate without the need to spend excessive time and money installing expensive Ethernet cable. It can be plugged into an Ethernet port on a router to equip a network with powerline capabilities and take advantage of the router features. BiPAC HomePlug AV device can also be plugged directly into a cable or DSL modem that allows instant internet access over home Powerlines to each computer equipped with a HomePlug AV certified Powerline network adapter. BiPAC HomePlug AV device makes high-speed modem sharing as fast and simple as plugging the devices in the wall.

Specifications

Protocol	TDMA, CSMA/CA		
Standard	Ethernet specification: IEEE 802.3, IEEE 802.3x, IEEE 802.3u, Auto MDI/MDIX		
Transmission Speed	200Mbps		
Optimal Coverage Range	200M		
Modulation	Supports OFDM - 1155 carriers,1024 / 256/64QAM, QPSK, BPSK and ROBO		
Frequency Band	2MHz ~ 30MHz		
Security	128-bit AES encryption over household power supplier grid		
Device Port	Ethernet RJ-45		
Operating System	Windows 98_SE / Me / 2000 /XP(32 and 64 bit)/ Vista (32 & 64 bit)		
RAM	128Mb		
Power Supplier	Input: 100~240V AC, 50~60Hz		
Physical Interface	Interface: Ethernet 10/100M (MDI/MDIX) switch		
	Sync button		
	Reset button		
	Power AC Plug (for BiPAC 2071 only)		
	Power AC socket (for BiPAC 2072 only)		
	LED display:		
	• 1.0 DET LED		
	POWER LED		
	PLC (Powerline Link/Act) LED		
	ETH (Ethernet Link/Act) LED		
Dimension	BiPAC 2071: 112.35 X 77.70 X44.50 mmBiPAC 2072: 165 X 73 X 38.50 mm		
Power Saving	Reduce power consumption by at least 60% during power saving mode.		
Operating Temperature /	Operating temperature: 0 ~ 400C		
numulty	Storage temperature: -20 ~ 700C		
	Humidity: 5~95% non-condensing		

Features

1. Physical layer data rate up to 200Mbps over existing Powerline.

2. Uses powerline technology that takes advantage of the unused bandwidth of the electrical wiring in the home.

3. Ideal for Triple Play applications such as IPTV, VoIP telephony and high-speed Internet access.

- 4. Support 10/100 (MDI/MDIX) Ethernet switching.
- 5. Compliant with the HomePlug Powerline Alliance Industry specification HomePlug AV.
- 6. Power supplier design inside.
- 7. Ideal for Residential Users.

8. Power Saving mode: When PC or other Ethenet devices are completely power off, Billion HomePlug device will automatically enter power saving mode which will help to reduce power consumption by at least 60%.

9. Noise Filter (only available in BiPAC 2072): Allow the filtering of noise which may be generated by some electrical appliances such as vacumn cleaner and hair dryer to prevent possible interference with HomePlug AV network.

Chapter 2 Device Overview



The Description of each labeled part is described in the table below.

AC Outlet / AC Pass-thru (only	Allow the direct plug-in of another Ethernet device. The AC Pass-thru allows the filtering of noise to prevent HomePlug AV Network interference.		
2072 model)	<i>Note: The AC Outlet only support devices that use 6A (maximum) electric current.</i>		
1.0 DET LED	Blink when detect the presence of other HomePlug 1.0 devices that have the transmission rate of 14 or 85 Mbps.		
	Note: Due to the incompatibility of HomePlug AV 200 with HomePlug 1.0 devices, the presence of the HomePlug 1.0 devices within the powerline network will thus reduce the performance of your powerline network.		
Power LED	Lit when the device is power on. Lit off when power is off or when the device has entered power saving mode.		
PLC (Powerline Link/Act) LED	Lit when a network has been established. Blink when powerline data is transmitted or received.		
ETH (Ethernet Link/Act) LED	Lit when an Ethernet data signal is transmitted or received.		
Sync Button	Used to establish a LAN network with other Ethernet devices.		
Reset Button	Press this button to restore the device configuration to its default setting.		
Ethernet Port	Connect the HomePlug AV device with an Ethernet device (eg. PC or modem router) & the Ethernet cable included.		
Power Plug / AC Power Cord	Plug into an AC outlet for power supply and to build a powerline network with other HomePlug AV devices.		

Quick Start (Setup Powerline Network)

Push Button usage

There are 3 types of Sync Button trigger states:

- 1. Broadcast State: Enable BiPAC HomePlug AV device to provide information for another Bi-PAC HomePlug AV device to join its powerline network group (works even if it is the only device existing within the network group).
- 2. Join State: This allows an ungrouped BiPAC HomePlug AV device to join an existing powerline network group.
- 3. Ungroup State: Press the Sync Button for more than 10 seconds to detach the device from its network group.
- 4. Sync Button: This is used to add a HomePlug device to a Powerline network or enable it to join a network by pressing the Sync Button of the device to turn it into Broadcast state or Join state.

Application Scenarios:

Scenario 1: A BiPAC HomePlug AV device A wants to form a network group with another BiPAC HomePlug AV device B

You can assign whichever device (A or B) to be in the Broadcast State and the other in the Join State.

Example:

- 1. Press the Sync Button of device A for 1~3 seconds to turn it into Broadcast State, you should find the Power LED blinks signifying it is in Broadcast state.
- 2. Press the Sync Button of device B for 1~3 seconds to turn it into Join State, you should find the Power LED blinks signifying it is in Join state.
- 3. Wait for the devices to boot again (all LEDs will turn off and on) and when the PLC LEDs of both devices lit steadily, you will now have these devices being in the same network group.



- Once the device is plugged into the AC outlet, connect it with an Ethernet cable within 60 seconds to prevent the device from entering power saving mode.
- If you do not see the Power LED blink when pressing the Sync button, press the Sync button again to make sure that the your HomePlug device is in sync mode (Broadcast state / Join state). If it is not, your devices will not be able to sync with each other.

Scenario 2: A BiPAC HomePlug AV device wants to join an existing network group BC

Device A wants to join a network group "BC" currently consisting of device B and device C. Any devices within the "BC" group can become the "Broadcast State" and device A will be the "Join State".

Example:

1. Press the Sync Button of device A for more than 10 seconds to make sure that it is detached completely from any possible network group.

- 2. Press the Sync Button of device B or C of the BC network group for 1~3 seconds to turn it into Broadcast State, you should find the Power LED blinks signifying it is in Broadcast state.
- 3. Press the Sync Button of device A for 1~3 seconds to turn it into Join State, you should find the Power LED blinks signifying it is in Join state.
- 4. Wait for the devices to boot again and when the PLC LEDs of both devices lit steadily, you will now have device A joined with the BC network group.



Scenario 3: A BiPAC HomePlug AV device A of network group AD wants to join an existing network group BC

For a device which already belongs to a network group is to join with a different network group, that device has to be ungrouped from its current attached group first.

Example:

- 1. Press the Sync Button of device A for more than 10 seconds to ungroup it from network group AD.
- 2. Then press the Sync Button of device (B or C) of network group BC for 1~3 seconds to turn it to Broadcast State, you should find the Power LED blinks signifying it is in Broadcast state.
- 3. Press the Sync Button of device A again for 1~3 seconds to turn it to Join State, you should find the Power LED blinks signifying it is in Join state.
- 4. Wait for the Sync LED of both devices A and (B or C) to lit steadily. Now you will have device A join the network group BC.



- Once the device is plugged into the AC outlet, connect it with an Ethernet cable within 60 seconds to prevent the device from entering power saving mode.
- If you do not see the Power LED blink when pressing the Sync button, press the Sync button again to make sure that the your HomePlug device is in sync mode (Broadcast state / Join state). If it is not, your devices will not be able to sync with each other.

Powerline Network Illustration

Home / Office Setting



Ethernet Cable Power Cable

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Chapter 3 Utility Installation

1. Place the BiPAC HomePlug AV Utility auto-installation CD into your CD-ROM/DVD-ROM drive and click on Utility for Easy Installation.



2. If you have not installed Microsoft .NET Framework 2.0, click on Install Microsoft .NET Framework 2.0 to install this program first before installing BiPAC HomePlug AV PLC Utility.

3. If you have already had Microsoft .NET Framework 2.0 installed, please click on Install the utility for Windows (32-bit / 64-bit) and proceed to the section on BiPAC HomePlug AV PLC Utility Installation.

4. If you are using Windows Vista operating system, do not have to install Microsoft .NET Framework 2.0. Simply click on Install the utility for Windows (32-bit / 64-bit) and proceed to the section on BiPAC HomePlug AV PLC Utility Installation.



Microsoft .NET Framework 2.0 Installation

- 1. After clicking on Install Microsoft .NET Framework 2.0, the Net Framework 2.0 installation wizard will be displayed.
- 2. Click Next to proceed with the installation.

Microsoft .NET Framework 2.0 Setup	
Welcome to Microsoft .NET Framework 2.0 Setup	
This wizard will guide you through the installation process.	Next > Cancel

3. Check the Agreement acceptance box then press Install to start the installation. When the installation is complete, click Finish to exit.

🕼 Microsoft .NET Framework 2.0 Setup			
End-User License Agreement			
End-User License Agreement			
MICROSOFT SOFTWARE SUPPLEMENTAL LICENSE TERMS MICROSOFT .NET FRAMEWORK 2.0			
Microsoft Corporation (or based on where you live, one of its affiliates) licenses this supplement to you. If you are licensed to use Microsoft Windows operating system software (the "software"), you may use this supplement. You may not use it if you do not have a license for the software. You may use a copy of this supplement with each validly licensed copy of the software.			
Print			
By clicking "I accept the terms of the License Agreement" and proceeding to use the product, I indicate that I have read, understood, and agreed to the terms of the End-User License Agreement.			
✓ I accept the terms of the License Agreement			
< Back Install > Cancel			



BiPAC HomePlug AV Utility Installation

1. After clicking on Install the utility for Windows (32-bit / 64-bit), the installation wizard will appear. Click Next.

🥵 BiPAC HomePlug AV PLC Utilit	у		
Welcome to the BiPAC H Setup Wizard	lomePlug A	✓ PLC Utility	
The installer will guide you through the sto your computer.	eps required to instal	I BiPAC HomePlug AV	PLC Utility on
WARNING: This computer program is pro Unauthorized duplication or distribution of or criminal penalties, and will be prosecut	otected by copyright i this program, or any ed to the maximum e	law and international tr portion of it, may resul xtent possible under th	eaties. t in severe civil e law.
	Cancel	< <u>B</u> ack	<u>N</u> ext>

2. You may define the location of the installation folder using the Browser, however it is highly recommended that you use the default location. In addition, you can also choose to install Bi-PAC HomePlug AV PLC Utility only for yourself or for all the users who share your PC. When all necessary items are properly selected, press Next to proceed.

😸 BiPAC HomePlug AV PLC Utilit	у			
Select Installation Folde	ſ			
The installer will install BiPAC HomePlug /	AV PLC Utility to the following fold	Jer.		
To install in this folder, click "Next". To install to a different folder, enter it below or click "Browse".				
<u>Folder:</u> C:\BiPAC_HomePlug_AV_Utility\		B <u>r</u> owse		
		Disk Cost		
Install BiPAC HomePlug AV PLC Utility for yourself, or for anyone who uses this computer: <u>E</u>veryone Just <u>m</u>e 				
	Cancel < <u>B</u> ac	k <u>N</u> ext>		

3. Press Next to confirm and start the installation.

BiPAC HomePlug AV PLC Utilit	ty		
Confirm Installation			
The installer is ready to install BiPAC Hor Click "Next" to start the installation.	nePlug AV PLC Utility	y on your computer.	
	Cancel	< <u>B</u> ack	Next >
😸 BiPAC HomePlug AV PLC Utili	ty		
BIPAC HomePlug AV PLC Utili Installing BiPAC HomeF	ty Plug AV PLC	Utility	
BIPAC HomePlug AV PLC Utilit Installing BiPAC HomeF	ty Plug AV PLC	Utility	
BIPAC HomePlug AV PLC Utilit Installing BiPAC HomeF BIPAC HomePlug AV PLC Utility is being Please wait	ty Plug AV PLC	Utility	

- 4. While the utility installation is in progress, the system will automatically prompt you to install the WinPcap program in a separate window pop-up. Install this program in order for the utility to work well.
- 5. When the WinPcap installation window pops up, click Next to proceed with the installation.

🗑 WinPcap 4.0.2 Setup	
WinPcap 4.0.2 Installer Welcome to the WinPcap 4.0.2 Installation Wizard	
This product is brought to you by	
Packet Capturing and Network Analysis Solution	s
Nullsoft Install System v2.16	Cancel

6. Click on Next to proceed to the next step.



7. Read through the license agreement then click on I Agree button to accept the agreement term and to continue the installation.

🗑 WinPcap 4.0.2 Setup				
Win Pcap	License Agreement Please review the license terms before installing WinPcap 4.0.2.			
Press Page Down to see the	rest of the agreement.			
Copyright (c) 1999 - 2005 N Copyright (c) 2005 - 2007 C All rights reserved.	JetGroup, Politecnico di Torino (Italy). IACE Technologies, Davis (California).			
Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:				
 Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials 				
If you accept the terms of the agreement, click I Agree to continue. You must accept the agreement to install WinPcap 4.0.2.				
Nullsoft Install System v2,16 —				
	< Back I Agree Cancel			

8. When the WinPcap installation is done, click on Finish to close the window.

🗑 WinPcap 4.0.2 Setup		
WinPcap Installin Please v	ng wait while WinPcap 4.0.2 is being installed.	
Output folder: C:\Program Files\WinP	'cap	
		,
Nullsoft Install System v2.16		
	< Back Next >	Cancel



9. When the WinPcap installation is done, you will have also completed the BiPAC HomePlug PLC Utility installation as well. You may now click on the close button of the Utility installation window to finish the process.

BiPAC HomePlug AV PLC Utility	_ 🗆 🔀
Installation Complete	
BiPAC HomePlug AV PLC Utility has been successfully installed.	
Click "Close" to exit.	
Please use Windows Update to check for any critical updates to the .NET Framewo	rk.
Cancel < <u>B</u> ack	<u>C</u> lose

Chapter 4 Accessing BiPAC HomePlug AV Utility

Once the BiPAC HomePlug AV PLC Utility Setup Wizard is installed, a shortcut will appear on the desktop. You can start the BiPAC HomePlug AV Utility by double clicking on the shortcut, or go through "start" \rightarrow "All Program" \rightarrow "BiPAC HomePlug AV Utility" \rightarrow "BiPAC HomePlug AV Utility".



BiPAC HomePlug AV Utility

Billion BiPAC HomePlug AV Utility consists of 4 screens accessed through 4 panel tabs. The 4 panels are Main, Privacy, Diagnostics and About located on the top left corner of the program for configuration convenience.

Main Tab

BiPAC HomePlug AV PLC Utility		
Main Privacy Diagnostics QoS Firmware Do	ownload About	
Local Device(s) on your computer:		
Device Type MAC Address	Connected to HomePlug AV Device	
HomePlug AV Device 00:11:22:33:44:83	Connect	
1 Powerline Device detected: Network Type:	: Public Autoscan On	
Device Name Password	Quality Rate (Mbps) MAC Address	
Device 1	IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	
BILLION Rename	Enter Password Add Scan	
	Close	Cancel

The Main Tab screen lists all the powerline devices that are connected to the host computer when the utility is running.

The top left window panel shows all the local HomePlug devices that are connected to the computer's NIC (Network Interface Card). Normally, only one device will be seen on the list. If there is more than one local device being connected, user can select the local device by clicking on it and then click the Connect button to its right to use it to connect to the internet. Once connected to the local device, the utility will automatically scan the power line periodically for other newly connected HomePlug devices. If no local HomePlug devices are discovered, the status area above the connect button will indicate with a message 'NO HOMEPLUG ADAPTERS DETECTED'.

The bottom window panel displays all the HomePlug remote devices that are detected on the current network. The total number of remote devices connected on the same network can be found on top of the Remote device panel. Within this panel, you can also find some useful informations of each remote device such as its password, the connection quality, transfer rate & MAC address.

The Network type (Public or Private) is also displayed based on the network status of the local device. The scan status option is displayed on the top right corner above the Remote devices panel showing whether the Autoscan function is turned ON or OFF.

The following information is displayed for all devices that appear in the lower panel:

Device Name:

Show the default device name. User can change the name by either clicking on the rename button or by clicking on the name and editing in-place. An icon is usually shown with the device name.

Password (*required when one needs to change the Private Network Name of the devices)

This column is left blank by default. The password will be displayed only after it has been entered. For detail information on password setup, please refer to section on Password Setup Procedure. Each device comes with a unique password and it can be found at the back of the device itself.

Rate (Mbps):

Display the data transmission rate of each device.

MAC Address:

Show the Remote device MAC address.

Quality:

Display the overall quality of the data transmission rate. When the transmission rate is good, the number of line appear will increase.

Password Setup Instructions:

This feature grants users the access level to change the Private Network Name of both the local & the remote HomePlug devices. Password is required if one is to change the Private Network Name of each devices within the powerline network in order for all devices to be able to communicate & synchronize with each other within the network.

1. To enter a password for a specific device, select the device and click on the Enter Password button at the bottom of the lower panel to call up the Set Device Password dialog box.

BiPAC HomePlug AV PLC Uti	ility				
Main Privacy Diagnostics 0	QoS Firmware Dow	nload About			
Local Device(s) on your compute	er:		d to HomeDiug A	V Deurice	
Device Type	MAC Address	Connected		v Device	
HomePlug AV Device	00:11:22:33:44:83	Conn	ect		
, 1 Powerline Device detected:	Network Type: F	Public		Autoscan On	
Device Name F	Password	Quality	Rate (Mbps)	MAC Address	
Device 1			189.00	00:11:22:33:44:74	
_					
BILLION	Rename	Enter Passw	vord A	dd Scan	
				Close	Cancel

2. Then type in the password in the blank provided and then press OK.

Set Device Passv	vord
Device: De	evice 4 (00:11:22:33:44:65)
Password:	
BILLION	The Password typically appears as a number and letter code, in groups of four, separated by dashes. (ie XK8Y-GH26-BR1K-LZSA) It is found on the device or
	DK Cancel

Note: The password of each HomePlug device can be found at the back of the device.

3. If the password entered is not recognized or unacceptable, an error message box will pop up



prompting user to change the password. Click OK then re-enter the password again.



4. If the password entered is correct, you will see that the password will be displayed next to the device.

Bil	AC HomePlug AV PLC U	tility				
M	ain Privacy Diagnostics	QoS Firmware Do	wnload About			
	Local Device(s) on your comp Device Type	uter: MAC Address	Connected	d to HomePlug.	AV Device	
	HomePlug AV Device	00:11:22:33:44:83	Conn	ect		
	1 Powerline Device detected:	Network Type:	Public		Autoscan On	
	Device Name	Password	Quality	Rate (Mbps)	MAC Address	
	Device Name Device 1	Password	Quality	Rate (Mbps) 189.00	MAC Address 00:11:22:33:44:74	
	Device Name Device 1	Password	Quality	Rate (Mbps) 189.00	MAC Address 00:11:22:33:44:74	
	Device Name Device 1	Password	Quality	Rate (Mbps) 189.00	MAC Address 00:11:22:33:44:74	
	Device Name Device 1	Password	Quality	Rate (Mbps) 189.00	MAC Address 00:11:22:33:44:74	
	Device Name	Password	Quality	Rate (Mbps)	MAC Address 00:11:22:33:44:74	
	Device Name	Password	Quality	Rate (Mbps)	MAC Address 00:11:22:33:44:74	

Privacy Tab

BiPAC HomePlug AV PLC Utility				
Main Privacy Diagnostics QoS	Firmware Dov	wnload About		
Use this screen to create a Private Net Private Network Name HomePlugAv Do not share the network name with After setting the name abo	etwork that pro OR ith others you o ive, choose ho	ovides you with extra security Use Default (Public Netw do not want to be part of this ow it will be applied below:	y. vork] s network.	
Place On This Network				- I
Only the device attache	d to this comp (Isolates this	uter (the Local Device). s computer from others):	Set Local Device Only	
ALL devices (They communicate toget	s whose Passw her but are iso a c	word has been entered. Iated from devices with different network name)	OR Set All Devices	
			Close	Cancel

Privacy Tab allows user the convenience to manage the security of the private powerline network. In addition, user can also uitlize this feature to add a new HomePlug device to the private network instead of manually adding the device using its sync button. In order to add devices to the network through the utility GUI, Private Network Name of each device is required to be the same with the local device.

All HomePlug devices are shipped using a default logical network name "HomePlugAv". The Privacy tab screen allows user to change its default public network type to a private network by changing the network name (network password) of the device.

The user can always reset the network type to HomePlug network (Public) by entering "HomePlugAv" as the network name or by clicking on the Use Default button.

Note: Changing the network name to anything other than HomePlugAv will show the network type on the main screen as Private.

Set Local Device Only button can be used to change the Private Network Name of the local device. If a new Private Network Name is entered, all associated devices seen on the Main Tab previously will no longer be present in the new network, thus causing the local device unable to communicate with other devices which were in the network previously.

Set All Devices button is used to change the Private Network Name of all devices that appear on the Main tab screen whose Device Password had been entered correctly. For devices whose device passwords were not entered, this operation will fail and will report a failure message.

Diagnostic Tab

liPAC HomePlug AV PLC Utility
Main Privacy Diagnostics QoS Firmware Download About
System Information Image: Constraint of the system of
Remote Device History (Log)
Device MAC Address Password Rate (Mbps) Network Last Seen
Device 1 00:11:22:33:44:74 not entered 189 HomePlug Dec 30 09:57
Delete Save Report Print Report
Close Cancel

The Diagnostics Tab screen shows System information and a history of all remote devices seen over a period of time. This screen is available for OEM/ODM Customization.

The Upper panel shows technical data concerning software and hardware present on the host computer which were used for communication via HomePlug device on the Powerline network. The data includes the following:

- Operating System Platform/Version
- Host Network Name
- MAC Address of all NICs (Network interface card) connected to the host
- Identify versions of all Driver DLLs and Libraries used (NDIS) and optionally
- MAC Firmware Version
- MAC addresses of all devices connected locally to the host
- Version of the Configuration Utility
- Microprocessor

The Lower panel contains a history of all remote devices seen on the computer over a certain period of time. All devices that were on the powerline network are listed here along with a few other parameters. Devices that are active on the current logical network will show a transfer rate in the Rate column; devices on other networks, or devices that may no longer exist are shown with a "?" in the Rate column. The following remote device information is available from the diagnostics screen:

- Device Alias Name
- Device MAC Address
- Device Password
- Transfer rate
- Device Last Known Network name
- Vendor name
- Date device last seen on the network
- MAC Firmware version

The diagnostics information displayed may be saved as a text file for later use, or it can be printed for reference. Devices, which are not part of the network anymore, can be deleted using the delete button. A warning window will pop up requesting for a confirmation when we try to delete a device which password has been entered.

QoS Tab

This function allows user the flexibility to manage the bandwidth usage for each HomePlug device. The higher the QoS priority the more bandwidth usage is allocated to that particular device.

BiPAC HomeP	lug AV PLC Utility			🛛
Main Privac	y Diagnostics QoS F	irmware Download Abou	t]	
Local ho	ost MAC Address: 00:18:F3	:8A:B2:CA		
	Power Line Device Netwo	ek.		
	Device Type	MAC Address	Priority	
	🖳 (Local)	00:11:22:33:44:83	Medium	
	(Remote)	00:11:22:33:44:74	Medium	
	Device QoS Priority	Medium High		
			Refresh	Apply
			Clo	se Cancel

To set the QoS priority of each device:

- 1. Click to select the device that you want to set its QoS priority.
- 2. Then, drag the Device QoS Priority slider to either Low, Normal, Medium or High position.
- 3. When the position of the slider is set, click Apply to apply the setting.

Firmware Download Tab

This function gives users the convenience to download the free bundled Firmware Upgrade tool from Billion website. Thus, with this feature, users can always keep their PLC Utility updated with the latest firmware.

BiPAC HomePlug AV PLC Utility	
Main Privacy Diagnostics QoS Firmware Download About	
	1
Please click Download button and visit our firmware download page.	
Download Page	
Close	Cancel

To Download the Free Bundled Firmware Upgrade Tool

- 1. Click on the Download Page button, you will automatically link to the Firmware Upgrade Tool webpage on Billion website.
- 2. Browse to the bottom of the page, then look for the firmware that corresponds to your Home-Plug model. Then click on the firmware icon to download the tool.
- 3. Once you have saved your download, you may run the firmware upgrade tool. For firmware upgrade, please refer to the Firmware Upgrade section for more detail.

About Tab

BiPAC HomePlug AV PLC Utility	
Main Privacy Diagnostics QoS Firmware Download About	
BIPAC HomePlug AV PLC Utility Version: 1.00c Copyright 2005 - 2008, Billion Corp. All Rights Reserved. http://www.billion.com	
Preferences:	
Close	Cancel

The About screen shows the software version and provides the HTML link to the Billion official website. Clicking on the web address field will open a web browser that link directly to the web site.

Under the Preferences panel, user can check the AutoScan box to turn on the Auto Scan function or check off the box to turn off the Auto Scan function.

Firmware Upgrade

Firmware upgrade allows users to keep their HomePlug Utility application to the most updated feature. This firmware upgrade tool is designed to provide user the most user friendly application that makes firmware upgrade process easy and fast.

Firmware Upgrade Instructions:

1. Locate the Firmware upgrade icon then double click on it to initiate the upgrade process. Then click on the Install button.



📅 BiPAC_2071_	2072_2073_Firmware_Upgrade_Tool 📃 🗖 🔀
	 Press Install button to start extraction. Use Browse button to select the destination folder from the folders tree. It can be also entered manually. If the destination folder does not exist, it will be created automatically before extraction.
	Destination folder
	Install Cancel

- 2. When the upgrade application initiates, it will prompt you to install Framework 2.0 if you have not had one installed to your computer.
- 3. But if you already have Framework 2.0 in your computer. You can directly click on the YES, I Already Have the Framework 2.0 button.

🚆 BiPAC 2071, 2072 , 2073 Firmware Upgrate Tool	
This program should has Microsoft(R) .NET Fra Microsoft(R) Vista already includes this compo	amework 2.0 or Higher Version. hent.
YES, I Already Have the Framework 2.0	NO, I Want to Download the Framework 2.0
	EXIT

4. When the firmware upgrade application starts, it will automatically scan for available Home-Plug devices in the powerline network. Once detected, a list of both local and remote Home-Plug devices found within a powerline network will be displayed.

🖶 Firmware Update to v3.3.6-0-8-B-FINAL	
🔂 D-Link DL10050-based Ethernet Adapter (Generic) #3 🔹	
Selected Device:	~
Firmware Upgrade	
Current Firmware :	
Progress Stauts :	
Firmware ver.3368 is included in this program, Just click the Firmware Upgrade button to upgrade firmware	
Scanning	
Firmware Update to v3.3.6-0-8-B-FINAL	
Image: Coordinating and the second	
Firmware Update to v3.3.6-0-8-B-FINAL Firmware Update to v3.3.6-0-8-B-FINAL Firmware Upgrade Selected Device: 00:04:ed:42:be:b6 - Local	
Firmware Update to v3.3.6-0-8-B-FINAL The selected Device: 00:04:ed:42:be:b6 - Local Firmware Upgrade	
Firmware Update to v3.3.6-0-8-B-FINAL The selected Device: 00:04:ed:42:be:b6 - Local Firmware Upgrade Firmware Upgrade Current Firmware : INT6300-MAC-3-3-3305-00-1988-20080209-8	
Firmware Update to v3.3.6-0-8-B-FINAL D-Link DL10050-based Ethernet Adapter (Generic) Firmware Upgrade Firmware Upgrade Current Firmware : INT6300-MAC-3-3-3305-00-1988-20080209-B	
 Firmware Update to v3. 3. 6-0-8-B-FINAL Firmware Update to v3. 3. 6-0-8-B-FINAL D-Link DL10050-based Ethernet Adapter (Generic) Firmware Upgrade Firmware Upgrade Current Firmware : INT6300-MAC-3-3-3305-00-1988-20080209-B Progress Stauts : 	
Image: Coccarring in the second se	
Firmware Update to v3. 3. 6-0-8-B-FINAL Image: D-Link DL10050-based Ethernet Adapter (Generic) Firmware Upgrade Firmware Upgrade Current Firmware : INT6300-MAC-3-3-3305-00-1988-20080209-8 Progress Stauts : Firmware ver,3368 is included in this program, Just click the Firmware Upgrade button to upgrade firmware Close	

5. If there is no device detected, a warning will pop up to signify for possible disconnection of your device or its cable. Click OK and then reconnect your devices and its cables. You may choose to restart the firmware upgrade application again for auto device detect or you may choose the LAN card that is connected to your HomePlug device manually.

Warning!	arning!		
1	No device detected Please confirm that the Ethernet cable is connected to the HomePlug device.		
	ОК		

6. To manually select the device to be upgraded, select the LAN card of the powerline network first. Then, select your device from the Selected Device drop down menu.

🖶 Firmware Update to v3.3.6-0-8-B-FINAL				
🞯 D-Link DL10050-based Ethernet Adapter (Generic) 🔹				
D-Link DL10050-based Ethernet Adapter (Generic) #3 D-Link DL10050-based Ethernet Adapter (Generic) #4 D-Link DL10050-based Ethernet Adapter (Generic) #2 D-Link DL10050-based Ethernet Adapter (Generic) #2 Attansic L1 Gigabit Ethernet 10/100/1000Base-T Adapter				
Progress Stauts : Firmware ver.3368 is included in this program, Just click the Firmware Upgrade button to upgrade firmware				
Close				
Connected INT6300 MAC Address: 00:04:ed:42:be:b7 SDRAM: 16MB				

🔜 Firmware Update to v3.3.6-0-8-B-FINAL

📴 D-Link DL10050-based Ethernet Adapter (Generic)							
Firmware Upgrade		Selected Device:	00:04:ed:42:be:b6 - Local				
	Firmware Upgrade		00:04:ed:42:be:b7 - Remote				
	Current Firmware : INT6300-MAC-3-3-3368-00-3000-20081104-FINAL-B						
Progress Stauts : Firmware Upgrade Successful Firmware ver.3368 is included in this program, Just click the Firmware Upgrade button to upgrade firmware							
				Close			
Connected INT6300 MAC Address: 00:04:ed:42:be:b6 SDRAM: 16MB							

- 7. When the device has been selected, press the Firmware Upgrade button to start the upgrading process.
- 8. When upgrading is finished, the new firmware version will be displayed in the Current Firmware column.

🖳 Firmware Update to v3.3.6-0-8-B-FINAL							
📴 D-Link DL10050-based Ethernet Adapter (Generic) 🔹							
	Fi	irmware Upgrade	Selected Device: 00:04:ed:42:be:b6 - Local 💟				
Firmware Upgrade							
	Current Firmware : INT6300-MAC-3-3-3305-00-1988-20080209-B						
	Progress Stauts : Downloading Firmware						
		Firmware ver.33 click the Firmwa	68 is included in this program, Just are Upgrade button to upgrade firmware				
			Close				
INT6300 MAC Address: 00:04:ed:42:be:b6 SDRAM: 16MB							



Chapter 5: Troubleshooting

If your router is not functioning properly, please refer to the suggested solutions provided in this chapter. If your problems persist or the suggested solutions do not meet your needs, please kindly contact your service provider or Billion for support.

Problems with the device

Problem	Suggested Solution
My Homeplug device is unable to detect my other HomePlug device.	This may due to the accidental change of the de- vice password. Access the HomePlug AV Utility and select the Privacy Tab. Enter the password "Home- PlugAV" (Case Sensitive) in the blank provided. Then press the "Set to Local Device Only" button. Repeat the same procedure to the other HomePlug device.

Appendix: Product Support & Contact

If you come across any problems please contact the dealer from where you purchased your product.

Contact Billion

Worldwide:

http://www.billion.com

MAC OS is a registered Trademark of Apple Computer, Inc.

Windows 98, Windows NT, Windows 2000, Windows Me, Windows XP and Windows Vista are registered Trademarks of Microsoft Corporation.