APOLCO™ - 85Mbps High Speed HomePlug Power Line Ethernet Adapter

User's Manual

COMSOC Technology Pte., Ltd.
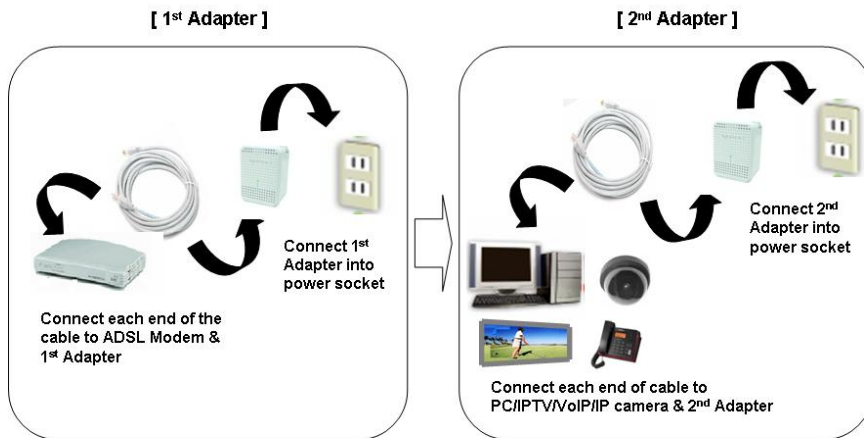
Safety Summary Message

WARNIING
HIGH VOLTAGE

is used in the equipment. Make sure equipment is properly grounded before opening. Failure to observe safety precautions may result in electric shock to user.

CAUTION!

Please check supplied voltage level before PLC adapter is connecting to power supplies. Out boundary of voltage level against PLC adapter electrical specification may cause in non-working and damage to equipment.

Important Safety Instructions

Please read and follow below instructions carefully for your safety

1. To cleaning HomePlug Power Line Ethernet Adapter, unplug adapter from the wall outlet before cleaning.
2. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
3. Do not use HomePlug Power Line Ethernet Adapter near water or any other liquid materials.
4. The HomePlug Power Line Ethernet Adapter should be operated from the type of power indicated on the making label or packing box. If you are not sure the type of power available, contact your dealer or local power company to get consultant.
5. The HomePlug Power Line Ethernet Adapter relies on the building's electrical installation for short circuit (over current) protection. Ensure that a fuse or circuit breaker no larger than 110 VAC or 230 VAC (depends on the power supply type in your country) is used on the phase conductors (al current-carrying conductors).
6. Plug the HomePlug Power Line Ethernet Adapter directly into a 120 VAC or 230 VAC wall outlet which is depends on the power supply type in your country. Do not use an extension cord between the adapter and the AC power source.
7. Do not open and remove the cover the HomePlug Power Line Ethernet Adapter to attempt service yourself. It may expose you to dangerous electric shocks or other risks as well as ruin the product warranty. Refer all servicing to qualified service personal only.
8. Do not block air ventilation hole and slots.
9. Please use HomePlug Power Line Ethernet Adapter away from water.
10. The HomePlug Power Line Ethernet Adapter should never be placed near or over a radiator or heat Register, or in a built-in installation unless proper ventilation provided.
11. Unplug the HomePlug Power Line Ethernet Adaptor from the wall outlet and refer the product to qualified service personnel for the following conditions:
    - If liquid has been spilled into the product.
    - If the product has been exposed to rain or water.

- If the product does not operate normally when the operating instructions are followed.
- If the product exhibits a distinct change in performance.

User Checks

Any person who uses device should look critically at the equipment they use.

- There is damage, apart from been light scuffed, to the cable sheath;
- The plug is damaged, *e.g.* the outlet casing is cracked or chipped or the two pins are been bent;
- There are inadequate joints, including joints in the cable;
- There is damage to casing of the equipment or there are some loose parts or screws,
- There is evidence of overheating (e.g. burned marks or discoloration).

These checks should be undertaken by the user when the equipment is taken into use and during use. Any faults should be reported to local management and the equipment taken out of use immediately.

Table of Contents

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1. Introductions

The *APOLCO™-85ETH* provides No new wires communications to any rooms, over any power line wires, at the speed of up to 85Mbps. The Ethernet port is to connect to Ethernet based device in the home or small office network.

The *APOLCO™-85ETH User Guide* describes how to install, configure, and troubleshoot the product. The information in this manual is intended for readers with intermediate computer and Internet skills. To get the more information about product features specification, contact sales office and see the COMSOC website at *http:// www.comsoc.com.*

Conventions, Formats, and Purpose

✓ This manual uses the following typographical conventions.
- *Italics:* Emphasis, books, CDs, URL names
- *Bold:* User input

✓ This manual uses the following formats to highlight special messages.
- **Note:** This format is used to highlight information of importance or special interest.
- **Tip:** This format is used to highlight a procedure that will save time or resources.
- **Warning:** Ignoring this type of note may result in a malfunction or damage to the equipment.

✓ **Purpose**: This manual written for the APOLCO™-85ETH according to these specifications.

2. Package Contents

The product package should contain the following items:
- Depending on the package, one or two APOLCO™-85ETH Wall-Plugged Ethernet Adapter: QTY:1 for Single Pack ; QTY:2 for Twin Pack
- 1.83m Ethernet cable: QTY:1 for Single Pack ; QTY:2 for Twin Pack
- APOLCO™-85ETH *Installation Guide*. — Encryption utility; download from ComSOC website (http://www.comsoc.com)
- Printed Warranty Registration Card and Support Information Card.
- Printed this User Guide

If any of the parts are incorrect, missing, or damaged, contact your APOLCO™ dealer. Keep the carton, including the original packing materials, in case you need to return the Ethernet adapter for repair.

3. Label Information and LED Lights Information

The APOLCO™-85ETH has a label with important information and status light indicators. Familiarize yourself with these features of your product.
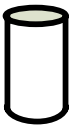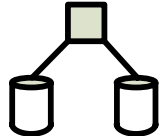
3.1 The Label Information

The label on the back of the APOLCO™-85ETH provides the following information:

- MAC address
- Model number
- Serial number
- Unique device password (PWD)
- Power
- Certification

3.2 Front Panel Status Lights

The front panel of the APOLCO™-85ETH contains status lights. You can use them to verify connections. The table below describes the lights on the front panel.

Table 1. Front Panel Status Light Descriptions

Front Panel	Status Light	Description
	Power	✓ **Keep on Green Light:** Power is supplied to the APOLCO™-85ETH. ✓ **Keep off green light:** Power is not supplied to the APLOCO™-85ETH.
	P-LNK	✓ **Keep on Green Light:** The Power Line Network is linked. The APOLCO™-85ETH has detected another Power Line device on the Power Line network ✓ **Keep off Green Light:** The Power Line Network is not linked. No other Power Line devices detected on the Power Line network.
	DATA	✓ **Keep on Blinking:** Data is being transmitted or received on the Ethernet port and power line network ✓ **Keep Off:** No data transmitting and receiving.

4. How APOLCO™-85ETH work together with your network? – *Explanation of hardware installation to fit in your network.*

You can use the APOLCO™-85ETH to extend an Ethernet local area network (LAN) anywhere in your house using your existing electrical power line. The following figure shows an example of a network that includes two APOLCO™-85ETH and several other network connections.
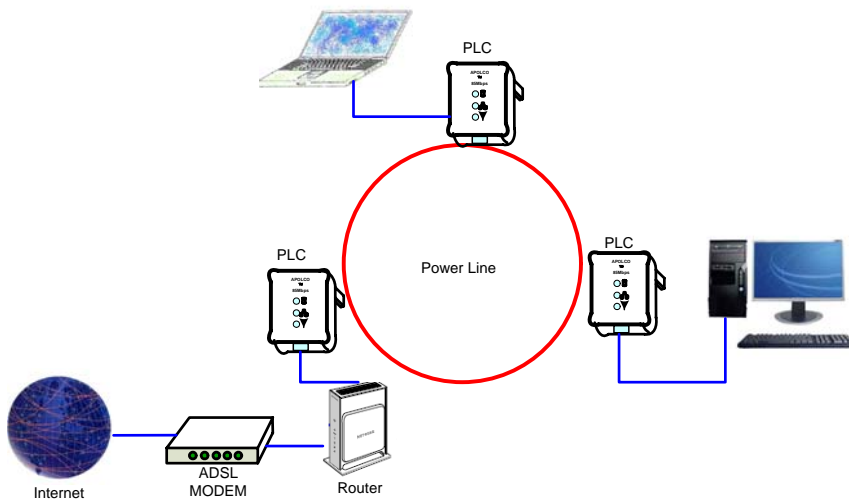
5. Installation and Connection

Before start hardware installation

Check that these minimum requirements are met.

- Your Ethernet network is set up and an Ethernet LAN port is available on your router.
- Each computer or device to be used on your network has an Ethernet port.

⚠ **Warning:** Do not connect the Ethernet bridges to power strips, extension cords, or surge protectors as this may prevent them from working properly or degrade the network performance. Do not tie or twist the APOLCO™-85ETH power cord with the dual output cable, or any other Ethernet cable, as this may degrade the network performance.

System Requirements

APOLCO™-85ETH is Ethernet based HomePlug Power Line Adaptor is applicable with all TCP/IP operating systems with Ethernet port. Drivers are not required for this adapter. But the supplied software for network password setup to establish the secured own network operates only with Microsoft Windows™ operating systems.

Your computer must meet the below mentioned minimum requirements in order to use the HomePlug Power Line Ethernet Adaptor Configuration Utility:

- Windows™ Operating Systems:
  Windows 98SE, Windows Me, Windows 2000 Windows XP, or Windows Vista with Ethernet connection

- Pentium III 300 MHz MMX-Compatible PC or greater
- 128MB hard disk space and memory
- CD-ROM drive

➡ Note: Your computer or the device to which you want to connect the HomePlug Power Line Ethernet Adaptor must have an Ethernet port, i.e. a network card or a network adaptor.

5.1 Start Hardware Installation with Router

1) Disconnect your router from its power adapter.
2) Plug the APOLCO™-85ETH into a power outlet. Make sure that the power outlet is not controlled by a wall switch so as to avoid someone unknowingly turning off power. Check that the APOLCO™-85ETH power LED light comes on.
3) Use the provided Ethernet cable to connect the APOLCO™-85ETH Ethernet port to an available Ethernet LAN port on your router.
4) Apply power to your router. Wait for the router to indicate that the LAN port that is connected to the APOLCO™-85ETH is linked and active. Then, check that P-LINK and DATA LEDs are on and blinking if another APOLCO™-85ETH adapter plugged into power outlet. If another APOLCO™-85ETH adapter not plugged into power outlet, these two LEDs are not on and blinking. Only power LED keeps on.

5.2 Start Hardware Installation with Other device

Hint 1: Before connecting the HomePlug Power Line Ethernet Adaptor, please note its Security ID / Device Password and keep it available for configuration of the network.

Hint 2: Before plugging in your other HomePlug Ethernet Adaptor, write down the device password on the label. You will need it if you want to set up a secured HomePlug Power Line network with password. If you are working with several HomePlug Power Line devices, write down their MAC addresses.

Note: No drivers are required for installation of the HomePlug Power Line Ethernet Adaptor.

   1) Plug your other HomePlug Power Line devices into power outlets in your home near to the other computers and peripherals to be included in your HomePlug Power Line local area network.
   2) Use an Ethernet cable to connect an Ethernet port on each of the computers and peripherals to the nearest HomePlug Power Line device.
   3) When you plug in a second HomePlug Power Line Ethernet Adapter into a power outlet, check the Adapter LEDs. The P-LINK LED should turns on and DATA LED briefly blinks at the same time. If you are connected with PC, PC icon for network

status is enabled. If icon display with red color cross bar, between Adapter and PC connections are not established. See below picture.

(From Windows Task Bar)   (Network Disconnected)   (Network connected)

5.3 Install the HomePlug Power Line Encryption Utility to setup the secured network (Highly Recommended)

This utility gives you the option of setting a unique encryption HomePlug Power Line network password. This utility program can download from COMSOC technology web site, www.comsoc.com.

Understanding of HomePlug Network Password

- The encryption password is not case-sensitive.
- Each device must be set to exactly the same encryption password—if they are to communicate on the same network. HomePlug Power Line devices on different networks will not be able to communicate.
- A default button resets the encryption password to the default password (HomePlug).
- The encryption password can protect your network from unauthorized access through the HomePlug Power Line network.
- A device password is printed on each COMSOC HomePlug Power Line product.
- This is not the network password, but you must enter it if you are setting the network password with another Ethernet bridge device.

Install the HomePlug Encryption Utility

- Go to the COMSOC website and download Power Packet Utility program.
- Uncompress the downloaded file to prepare the installation. If you don't have data uncompress software, you can download from "ALTOOLS" web site, www.altools.com. For your personal purpose, you can enjoy free.

- Execute "Setup.exe" file from uncompressed data.
- The Install ShieldWizard Welcome screen opens.
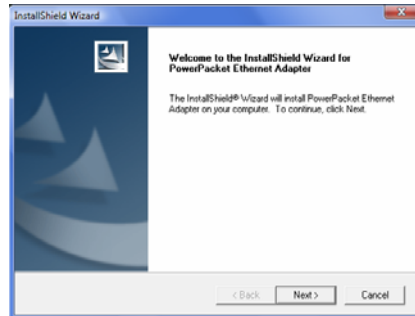
- Click "Next" and follow the wizard instructions. When the installation is complete, click Finish.
- After the installation, you can see the ICON with "Power Packet Utility" like below image.
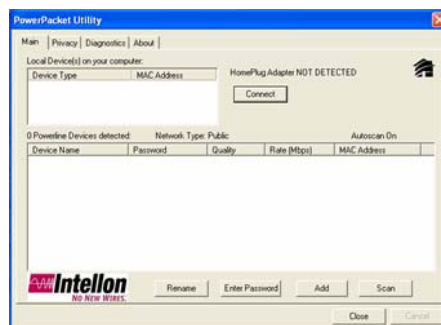

Setup the Device Password

Step 1. Make sure all HomePlug Power Line devices are plugged into 100V ~ 240V AC wall sockets.

Step 2. Click the Power Packet Utility icon to execute program.

Step 3. The Power Packet Utility screen opens to the Main tab.

The top panel shows all local HomePlug Power Line devices found connected to the

computer's NIC (Network Interface Card). In most cases, only one device will be seen. In situations where there are more than one device connected, such as a USB and also an Ethernet device, the user may click to select the one to manage through and then click the Connect button to it's right. The status area above the button indicates that your PC is connected to that same device.

The lower panel displays all the HomePlug Power Line devices, discovered on the current logical network (remote devices). Displayed immediately above this panel is the number of remote devices found, the type of logical network (Public or Private), and a message area that reports connectivity and scan status. The following information is displayed for each of the devices discovered that appear in the lower panel.

The Device Name column shows the default device name, which may be user re-defined. A user may change the name by clicking on the name and editing in-place, or by using the Rename button.

An icon is optionally shown with the name. A distinction in icons is made between low-speed and high-speed devices (HomePlug 1.0 and Turbo). By default, the icon is displayed with the name.

The MAC Address column shows the device's MAC address.

The Password column shows the user-supplied Device Password (initially left blank). The Device Password can be found on the label at the back of the unit. A user may enter the password by using the Enter Password button (explained below).

This application program does not display the INTELLON 200Mbps solution.

Step 4. Select a HomePlug Power Line device.
To set the Password of the device (required when creating a private network), first select the device by clicking on it's name in the lower panel and then click on the Enter Password button. A dialog box will appear as shown as below Step 5 image. The selected device name is shown above the field for entering the password.

➡ **Note:** If more than one remote device is listed, you can identify each one from its MAC address.

Step 5. Click and Enter Password.

Step 6. Enter the password from the label on the back of the selected HomePlug Power
Line device, and click OK.

Step 7. Repeat this step for all devices that you want attached to your network.

The Add button is used to add a remote device to your network that is not on the
displayed list in the lower panel, for example, a device currently on another logical
network. Users are advised to locate the Device Passwords for all devices they wish to
manage and add them to the local logical network by clicking on the Add button. A
dialog box will appear as below image. The dialog box allows the user to enter both a
Device Name and the Device Password.

A confirmation box will appear if the password was entered correctly and if the device
was found. If a device is not found, the user will be notified and suggestions to resolve
common problems will be presented.

Note: The device must be present on the HomePlug (plugged in) in order for the
password to be confirmed and added to the network. If the device could not be located,

15

a warning message will be shown.

Note: The Scan button is used to perform an immediate search of the HomePlug Power Line devices connected to the computer. By default the utility automatically scans every few seconds and updates the display.

Setting the Privacy Screen

The Privacy dialog screen provides a means for managing the local network and providing additional security. All HomePlug Power Line devices are shipped using a default logical network (network name), which is normally "HomePlug". The Privacy dialog screen allows user to make the network private by changing the network name (network password) of devices. The user can always reset a HomePlug Power Line network to the universal one (public) by entering "HomePlug" as the network name or by clicking on the Use Default button. See the below image.

Note: Changing the network name to any other name other than HomePlug will show the network type on the main screen as Private. The Network Name is between 4 to 24 characters.

Step 1. Click the Privacy tab on the main menu.
Step 2. Type your Private Network Name.
Step 3. Click Set Local Device Only or Set All Devices.
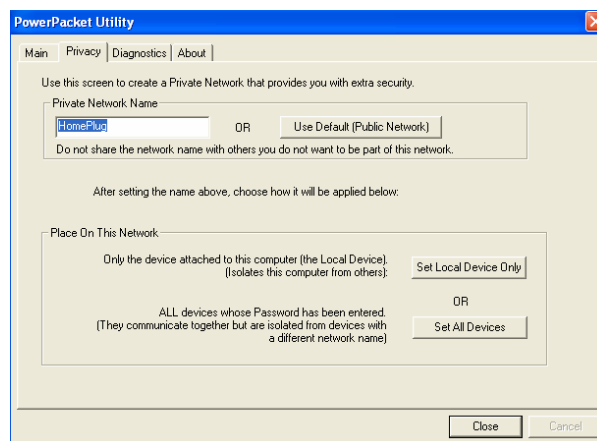
(Privacy Screen)

The Set Local Device Only button is used to change the network name (network

password) for the local device only. After doing this, all the devices seen on the Main panel prior to this will no longer be able to communicate or respond to the computer, as they will be on a different logical network. Devices previously set up with the same logical network (same network name) will appear in the device list afterward selecting this option.

The Set All Devices button is used to change the logical network of all devices that appear on the Main panel. The user must have entered the Device Password in order to set it to the new logical network. A notification message will appear to report the success of this operation.

Understanding of the Diagnostics Screen

The Diagnostics screen shows system information and a history of all devices seen. See below image.

The upper panel shows technical data concerning software and hardware on the host computer used to communicate over HomePlug Power Line. It shall include the following:

- Operating System Type/Version
- Host Network Name
- User Name
- MAC Address of all NICs (network interface card)
- Identify versions of all Driver DLLs and Libraries used (NDIS) and optionally
- HomePlug Power Line chipset manufacturer name (Turbo Only devices)
- MAC Firmware Version (Turbo Only devices)
- Vendor name
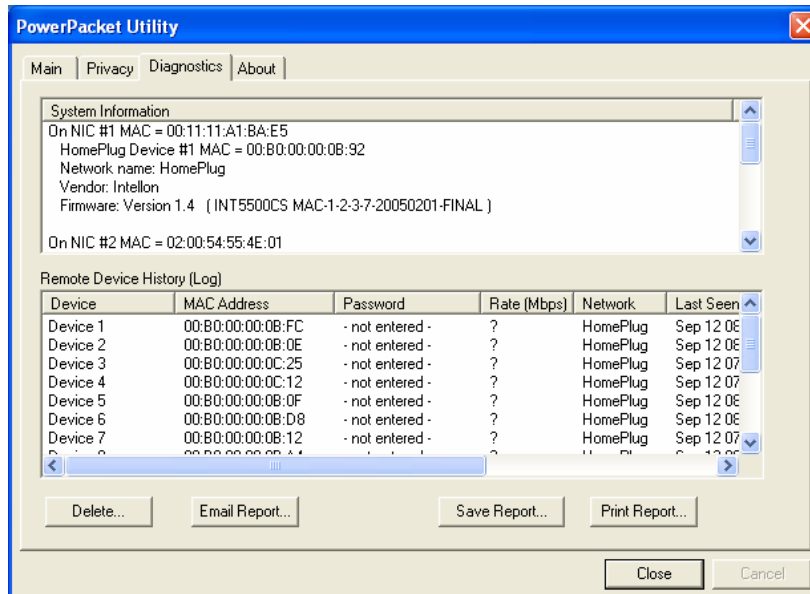
(Diagnostics Screen)

The lower panel contains a history of all remote devices seen on the computer, over time. Devices are shown here regardless of whether or not they are on the same logical network.

- Adapter Alias Name
- Adapter MAC Address
- Adapter Password
- Adapter Last known rate
- Adapter Last Known Network
- Date device last scanned.
- Vendor

For About Screen

The About screen shows the software version and Released date. Users can enable or disable the "AutoScan" for network search function from the below preferences box. To enable the"AutoScan", just click the check box to make checking mark. To disable the "AutoScan", just make blank the check box. If check box has checking mark, just click on check box to make blank check box.

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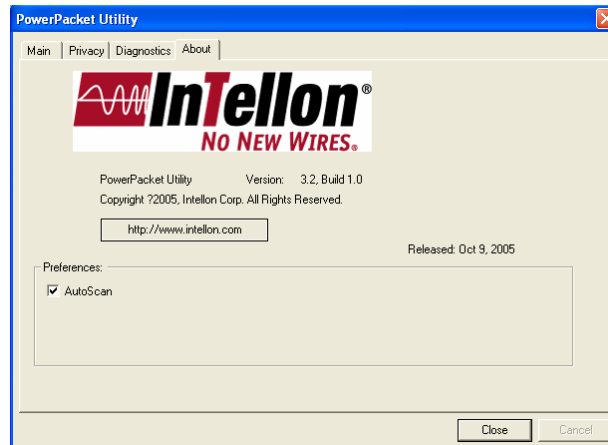
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