



PlugLink HD AV Y-Cable Adapter

PL9665-12D

PlugLink[®]AV
by Asoka[®]

QUICKFIND LOCATOR

Contact

Information

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Installation

66-0362-00Rev.001

PlugLink HD AV Y-Cable Adapter

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Chapter 1

Introduction

Thank you for purchasing a PlugLink HD AV Y-Cable Adapter (PL9665-12D) from Asoka. This adapter lets you network your home or office by simply plugging directly into your wall outlet. Now, networking is as easy as plugging in a night light. With your PlugLink HD AV Y-Cable Adapter, you can easily share your high-speed Internet broadband, mp3s, video and gaming throughout the home or office without pulling any new cabling.

This User's Guide shows you how to connect your PlugLink HD AV Y-Cable Adapter to a provider approved device and begin using the electrical wiring as your home network. Setup is easy, just follow the instructions in this guide and your network will be up and running in a matter of minutes.

Chapter 2

Important Safety Instructions for the PlugLink HD AV Y-Cable Adapter

The following precautions should be taken when using this product:

- f* Read all instructions before installing and operating this product.
- f* Do not open the cover on this product and/or alter this product in any way.
- f* Follow common household electrical safety practices.

If you have any questions or concerns regarding these safety measures, please contact Technical Support at 1-408-550-8173 or email at support@asokausa.com Monday through Friday from 6:00 am to 6:00 pm PST, excluding holidays.

If you have purchased the products outside of United States and Canada, please contact our local distributor and reseller for support.

Chapter 3

Learning about your PlugLink HD AV Y-Cable Adapter

Package Contents

- f PlugLink HD AV Y-Cable Adapter (PL9665-12D)
- f Quick Installation Guide
- f Installation Resource CD
- f Warranty and Support Information Card

If any of the parts are incorrect, missing, or damaged, contact the retailer where you made your purchase. Keep the carton, including the original packing materials, in case you need to return the unit for repair.

The Front Panel

The front panel of the PL9665-12D Power Supply contains the status lights described below.

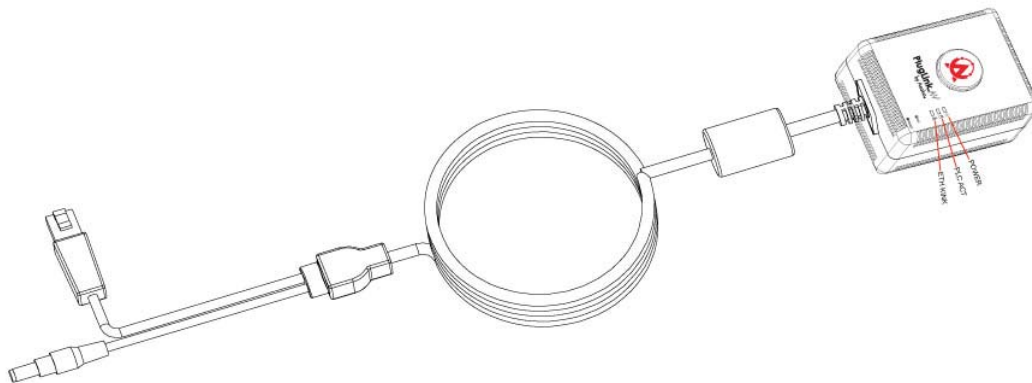


Figure 3-1: PL9665-12D Front Panel

You can use the status lights to verify connections. Viewed from top to bottom, left to right, the table describes the lights on the front panel of the unit.

Table 3-1: Status Light Descriptions

Power	On Off	Indicates Device Powered On Indicates No Power
PLC Activity	Blinking	Indicates Activity on Powerline

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	Off	Indicates No Activity on Powerline (Should blink Intermittently)
ETH Link	On Blinking Off	Indicates Ethernet Connectivity Indicates Ethernet Traffic Indicates No Ethernet Connectivity

The Cable

The cable of the PL9665-12D contains (two (2) connectors):

1. an Ethernet (RJ-45) connector, and
2. a Power connector as shown in figure 3-2.

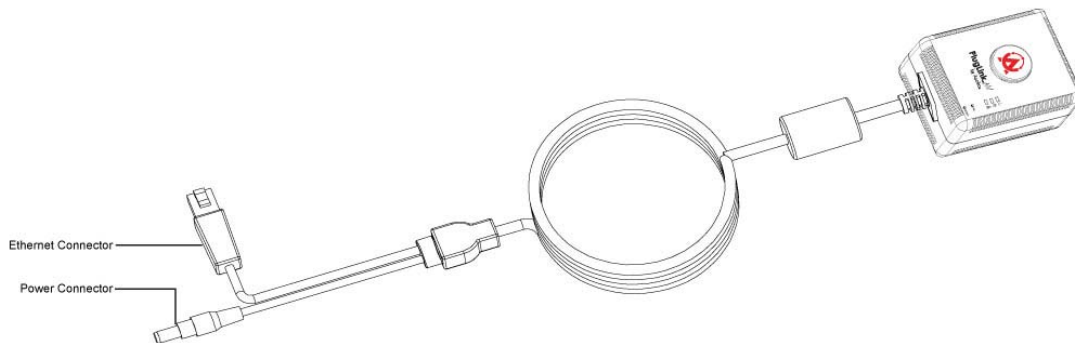


Figure 3-2: PL9665-12D Cable connectors


The Rear Panel

The label on the rear panel of the PL9665-12D Adapter contains the items listed below.

- f* MAC address
- f* Model number
- f* Serial number
- f* Unique device password (Password)

Note: For future convenience, please write this information down in your Warranty Support Information card.



Asoka USA Corporation
PlugLink HD AV Y-Cable Adapter
Model: PL9665-12D
FCC ID: T37PL9665-12D
Password: XXXX-XXXX-XXXX-XXXX
MAC Address: XXXXXXXXXXXXX




SN: XXXXXXXXXXXXX
Input: 100V-240V~ 1.0A 50/60Hz Output: 12V= 3A

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.

MADE IN CHINA XX-XXXX-XXX



Asoka USA Corporation
PlugLink HD AV Y-Cable Adapter
Model: PL9665-12D
FCC ID: T37PL9665-12D
Password: XXXX-XXXX-XXXX-XXXX
MAC Address: XXXXXXXXXXXXX



SN: XXXXXXXXXXXXX
Input: 100V-120V~ 1.0A 50/60Hz Output: 12V= 3A

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.

MADE IN CHINA XX-XXXX-XXX





Figure 3-3: Rear Label

Chapter 4

Preparing to Install the PlugLink HD AV Y-Cable Adapter

The PlugLink HD AV Y-Cable Adapter lets you set up a home or an office network using your existing electrical outlets. It can also easily compliment your existing network by connecting to your DSL/Cable Router or other IP-enabled device though it's RJ-45 Ethernet connection. The PlugLink 9665-12D also simplifies the network setup by providing power through it's 12 volt DC connection. You do not have to use multiple power outlets for both the Pluglink 9665-12D and your devices. You only need one power outlet.

In order to setup a network using the PlugLink 9665-12D, you will need the following:

- f One (1) PL9665-12D attached to a provider approved device.
- f Cable/DSL Router

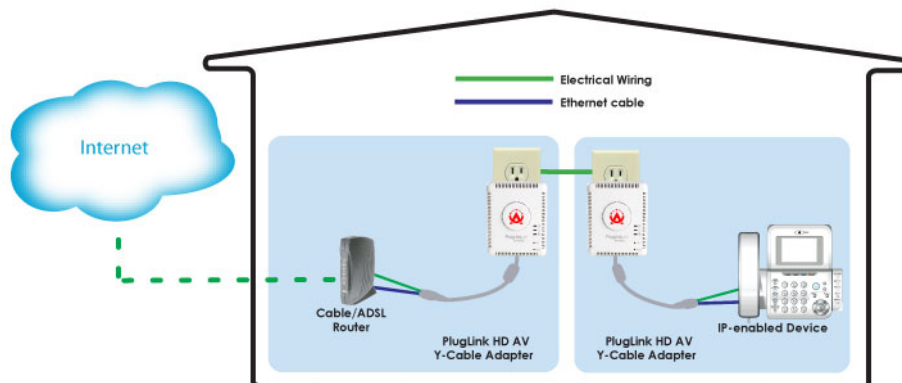


Figure 4-1: Connecting a router to the EYE phone using the home electrical wiring.

PlugLink HD AV Y-Cable Adapter

The PlugLink 9665-12D can also be used with existing Home Plug 1.0 and 1.1 (Turbo) Compliant Powerline devices. Simply connect the PL9665-12D to any existing power outlets and a PlugLink 9660 to any IP-enabled device with an available Ethernet port. You should instantly have connectivity to your existing network.

Note: You may have to change PL9665-12D's network password to match your existing devices. Please read the section about the PL9665-12D PowerManager for more information.

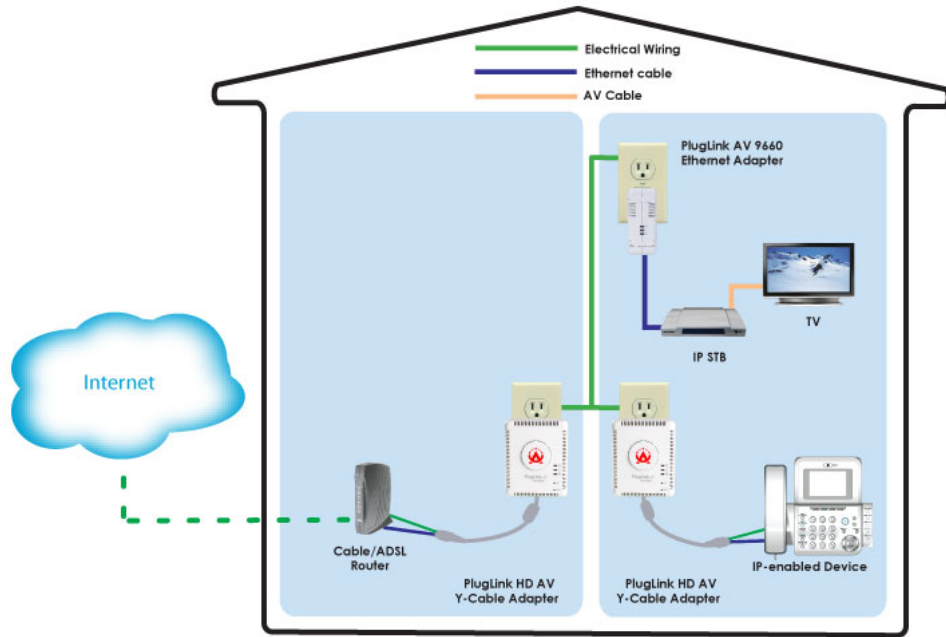


Figure 4-2: PL9665-12D with existing Powerline devices

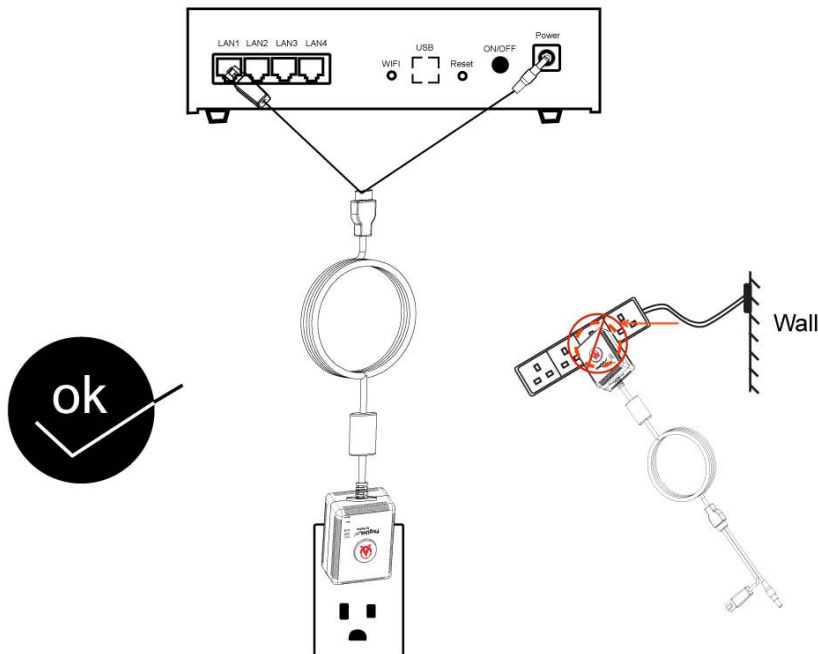
Chapter 5

Installing the PlugLink HD AV Y-Cable Adapter

Note: Do not connect the PlugLink HD AV Y-Cable Adapter into a power strip, extension cord, uninterruptible power supply (UPS), or surge protector. This may prevent the unit from working properly or degrade the network performance.

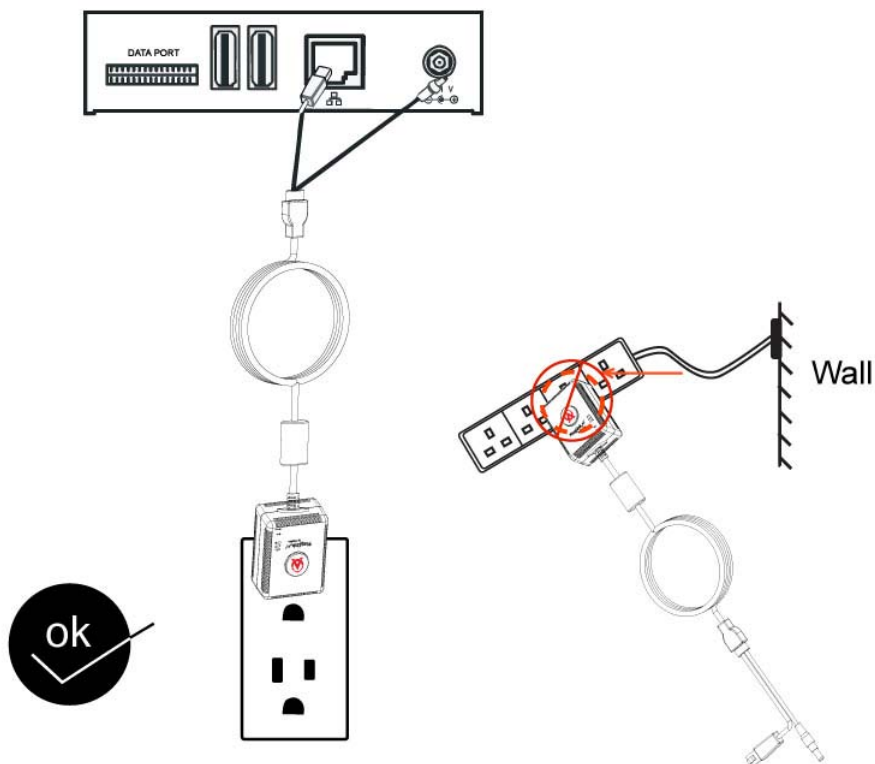
Follow the instructions below to install your PlugLink 9665-12D:

1. Connect each of your PlugLink HD AV Y-Cable Adapter units to wall outlets near your Cable/DSL Router and IP-enabled device.
2. Connect Ethernet connector of the PL9665-12D to one of the LAN ports of the Cable/DSLrouter.
3. Connect power connector of the PL9665-12D to the power port of the Cable/DSL router.



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4. Connect Ethernet connector of the PL9665-12D to the LAN port of your approved IP-enabled device.
5. Connect power connection of the PL9665-12D to the power port of your IP-enabled device.
6. This completes the hardware installation of your PL9665-12D.



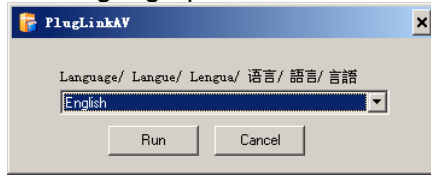
Installing the PlugLink 9665-12D Software

System Requirements: Windows® 98 SE, 2000, XP and Vista OS

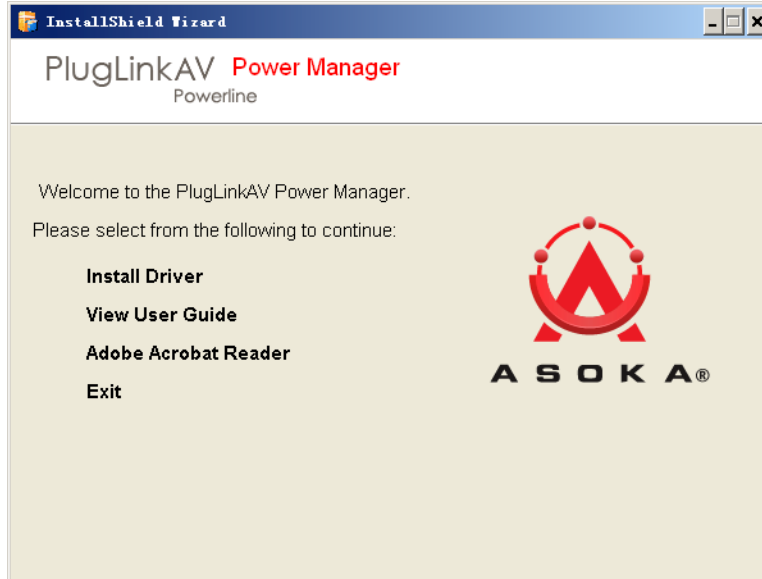
1. Insert the enclosed Installation Resource CD into your CD-ROM drive. If the PlugLink HD AV Y-Cable Adapter Installation Utility does not appear within 30 seconds, select your CD-ROM drive and double-click the **Setup.exe** icon to start the Installation Utility.

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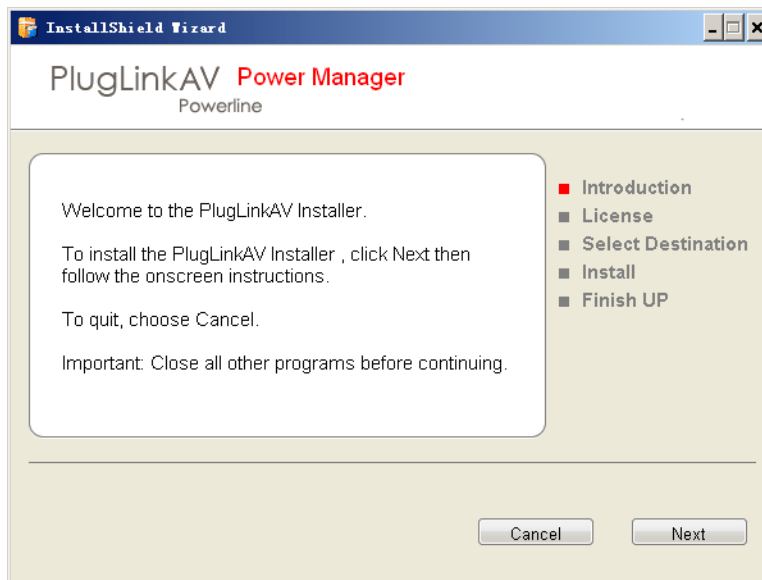
2. the language preference, and click the **Run** button.



3. In the Start screen, click **Install Driver** to start the installation.



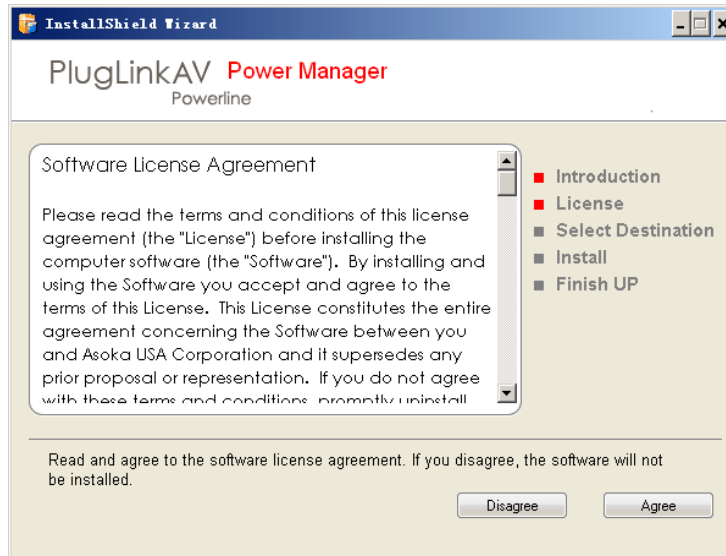
4. In the **Welcome** screen of the screen of the wizard, click **Next** to begin the installation.



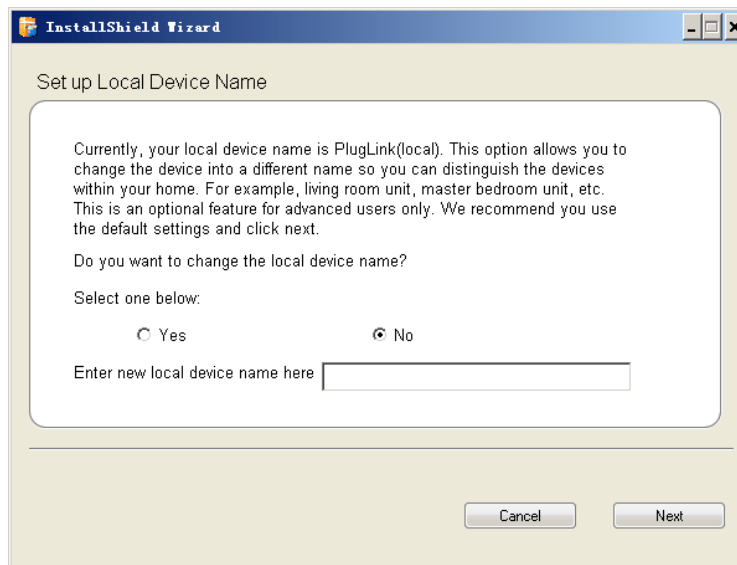
5. Read the End User Software License Agreement, and if you agree, click the

PlugLink HD AV Y-Cable Adapter

Agree button to continue the installation.

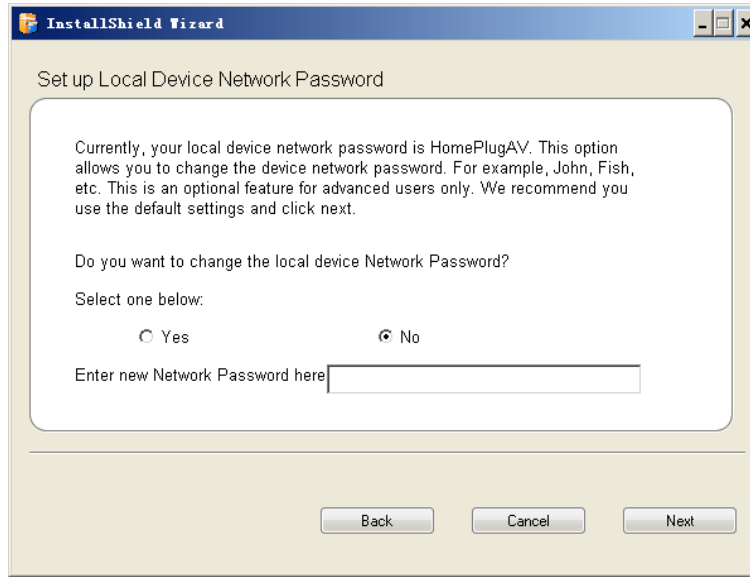


6. To change the name of the PlugLink AV unit, select **Yes**, and enter a name in the text field. Otherwise, select **No**. Click **Next** to advance to the next screen.



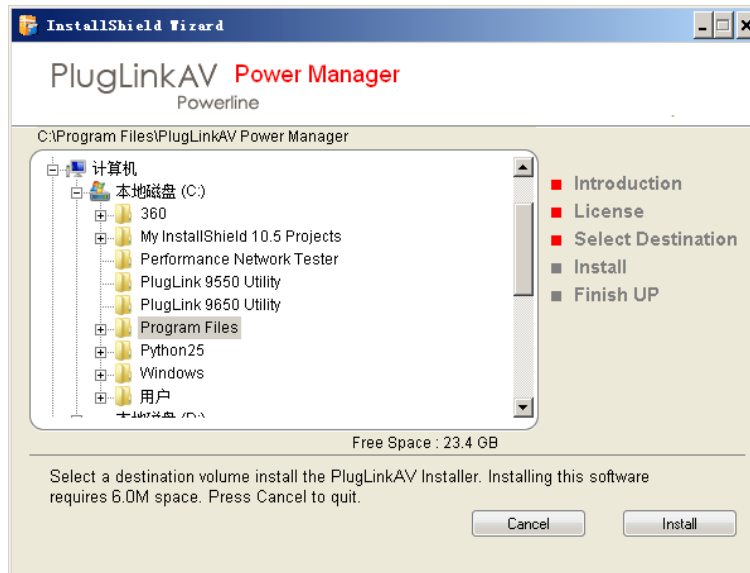
7. This following screen allows you to change the network password for your PlugLink AV 9665-12D units. To change the network password, select **Yes** and then enter the new password in the text field. Or, select **No** and click the **Next** button to continue.

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NOTE: All devices on your network must share the same password to communicate. Use care when changing the network password. The default password is HomePlugAV.

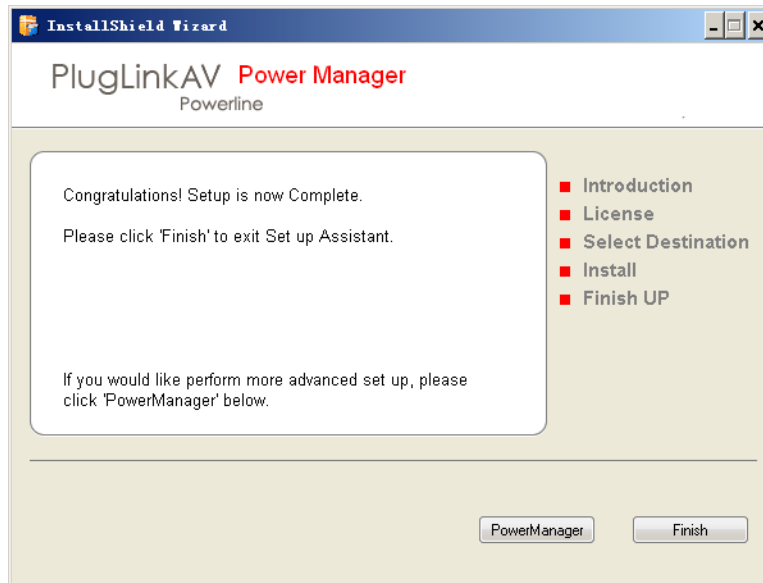
8. Select the location where you want to install the drivers and software and click the **Install** button.



9. When the installation of the PlugLink AV drivers and software is complete, you can use Power Manager Utility for advanced configuration of your

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PlugLink AV 9665-12D unit. Click **Finish** to finish the installation wizard.



Chapter 6 Network Management

The Power Manager Utility allows you to manually configure a PlugLink HD AV Y-Cable Adapter that is directly connected to your Personal Computer or to any PlugLink HD AV Y-Cable Adapter s that are remotely residing on your PlugLink AV Mealybug network.



NOTE: The Power Manager Utility is for all Asoka PLC devices.

Viewing Device Information

Use the Profile screen to view information on all Mealybug devices attached directly to your PC and other Mealybug devices on your network.

The Profile screen displays the following information:

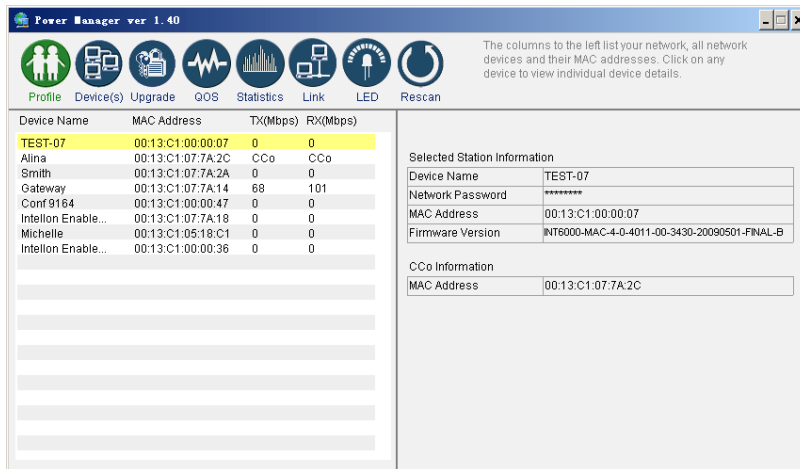
- Device Name
- MAC Address
- Firmware version of your devices
- Estimated device transmission rate

To refresh the list of Mealybug devices, Click the **Rescan** button.



NOTE: Devices set up with a different network password will NOT show up on this list.

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Changing Names and Encryption Keys

Use the Device Screen to change your local and remote device names and change local and remote device Network Encryption Keys (NEK). Always change the remote devices before changing the one you are connected to.

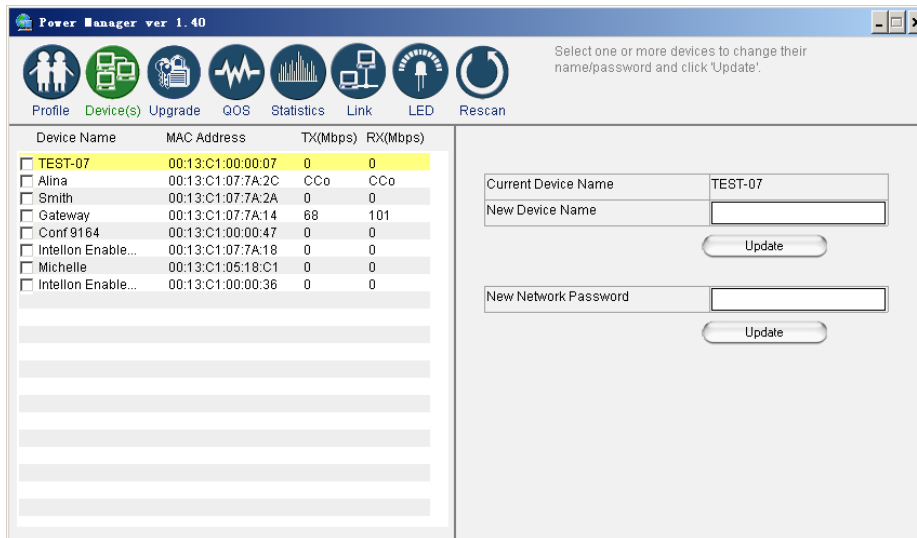
To change a remote device's NEK:

1. Check the box next to the device that you want to change the NEK.
2. Enter the password of the remote device. The password is printed on the device label. The default password is "HomePlugAV."
3. Enter a new password.
4. Click the Update button



NOTE: The device will not appear again until the device you are connected to is changed to the same password. All devices must have the same password.

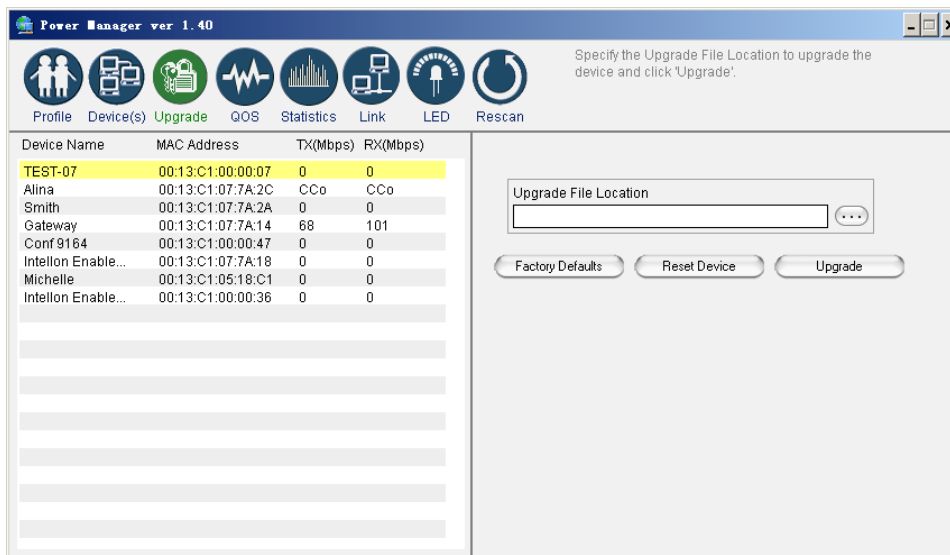
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Resetting and Upgrading the PlugLink AV

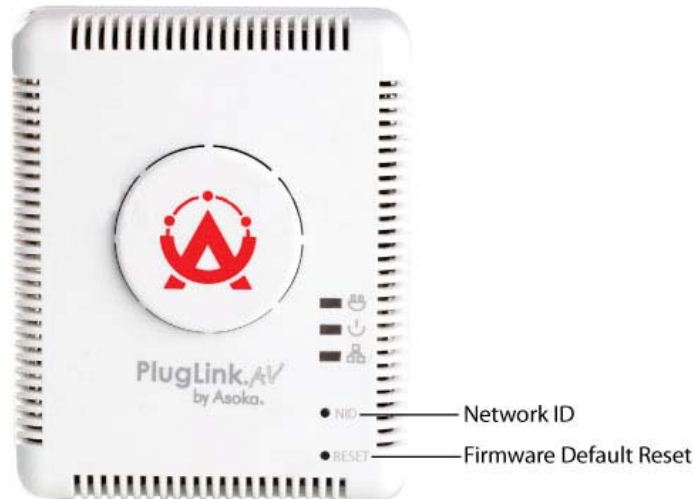
Use the Upgrade Screen to perform the following functions:


1. Reset the PlugLink AV 9665-12D to factory default settings.
2. Reboot the PlugLink AV 9665-12D device. You can also reboot the device by unplugging and replugging the unit into the electrical outlet.
3. Upgrade the firmware for the PlugLink AV 9665-12D device. Visit www.asokausa.com to upgrade the firmware.



Manually Resetting Firmware and NID

You can use the buttons on the PlugLink device to reset the firmware to its default, or NID to associate a network.



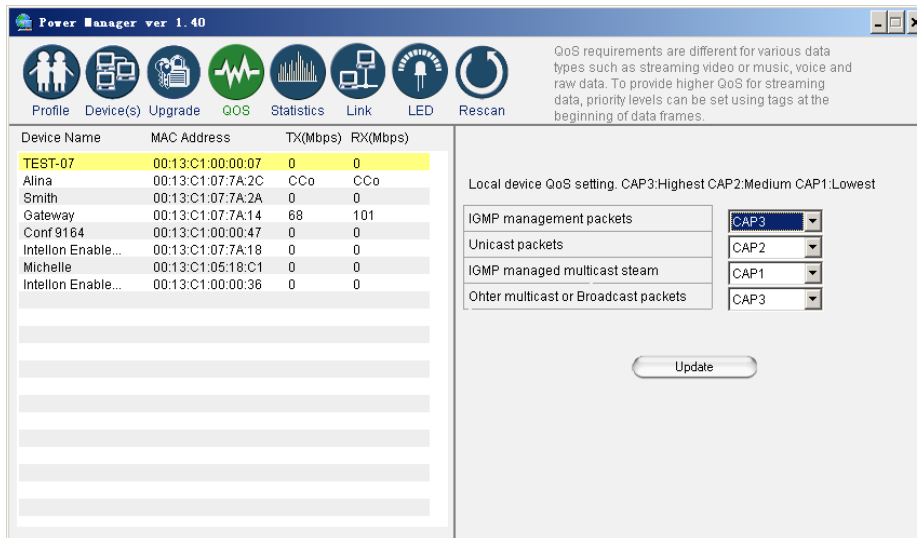
 **NOTE:** The PlugLink device must be plugged into an electrical outlet when using these buttons. If you have questions, please contact Asoka USA Technical Support at (408) 550-8173

Prioritizing Network Traffic

Use the QoS screen to prioritize your traffic through the device.

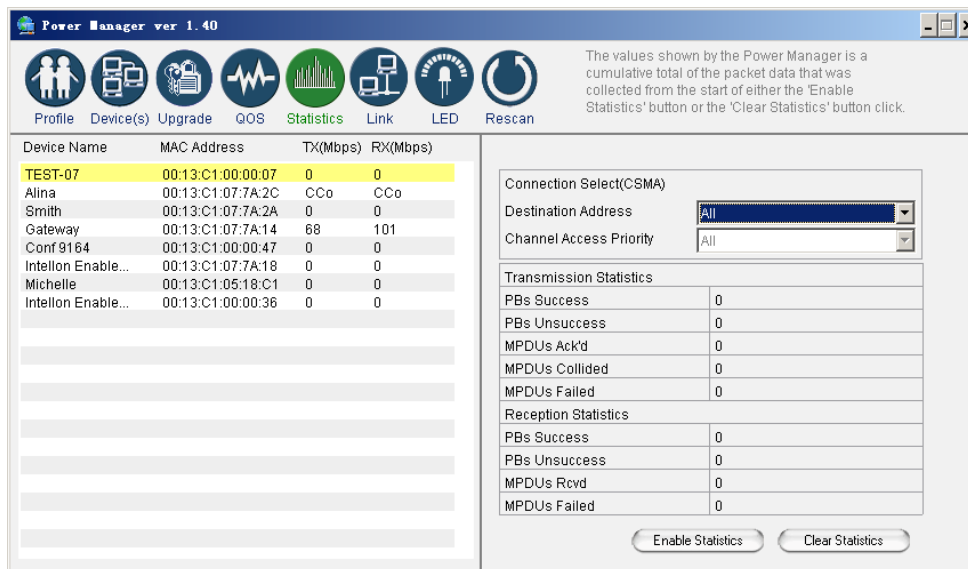
- IGMP - (default CAP 3) - sets the channel access priority for IGMP group management frames
- Unicast - (default CAP 1) - sets the default channel access priority for Unicast frames not matching any other classification or mapping.
- IGMP managed Multicast Stream (It is better set it fixed to CAP 2) -sets the default channel access priority for stream data belonging to a snooped IGMP multicast group.
- Multicast/Broadcast - sets the default CAP for multicast frames not in a snooped group and for broadcast frames

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Viewing Network Statistics

The Statistics screen shows information on HomePlug packets that are transmitted and received by the devices in your network. To enable this function, click **Enable Statistics**.



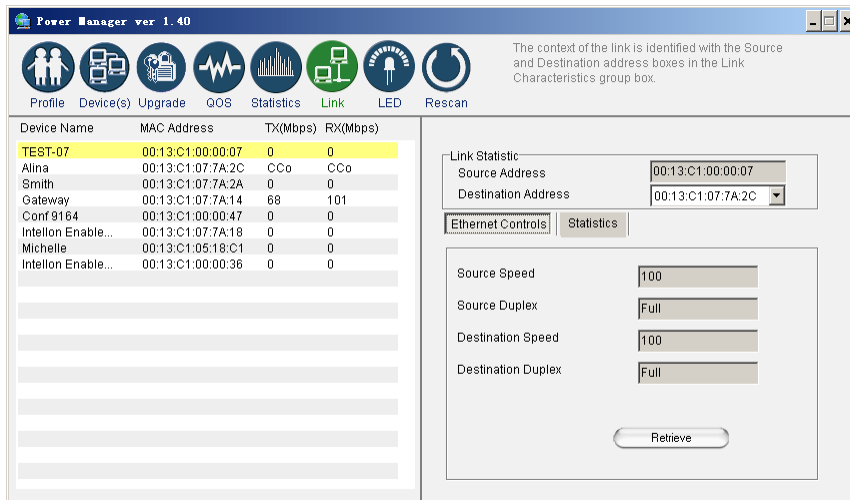
Viewing Ethernet and HomePlug Connection

The Link screen has two sub-screens that provide information about your Ethernet and HomePlug connection.

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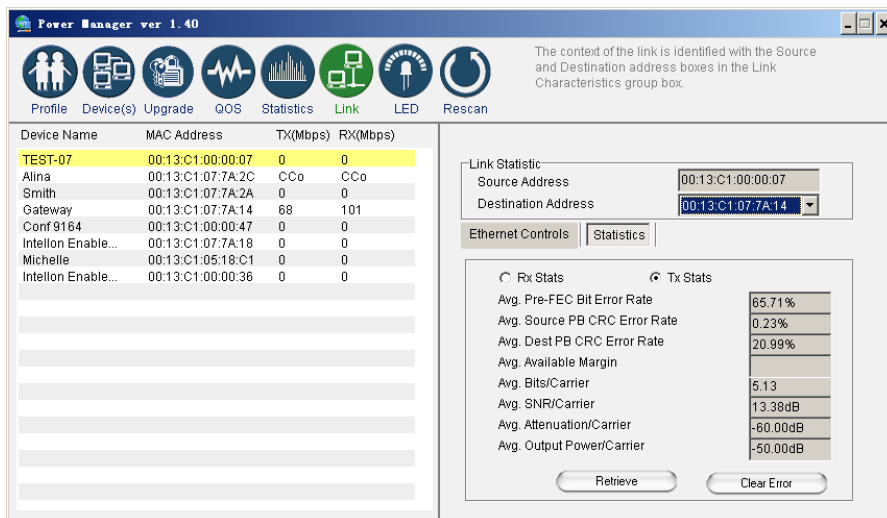
Viewing Connection Speed

The Ethernet subscreen shows the Ethernet connection speed of the local and destination devices in your network. You can select the destination device in the **Destination Address** drop down menu. Click the Retrieve button to get the information.



Statistics Subscreen

Use the Statistics subscreen to view statistical information about your connection between a source device and a specific destination device in your network. Click the **Retrieve** button to start accumulating the statistical information.



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Scanning Devices



Use the **Rescan** button to rescan the devices on the HomePlug network. This refreshes the information on all devices using the same password.

Chapter 7 Troubleshooting

Following are solutions to a few situations you might encounter. If you do not find a solution in this chapter, contact Asoka USA Technical Support by phone at (408) 550-8173 or through email at support@asokausa.com.

Symptom: I can't connect to anything and there are no lights activated on my PL9665-12D.

Solution:

1. Unplug the device from the electrical outlet in question.
2. Locate another available outlet in your home.
3. Test the outlet by plugging in another electrical device such as a lamp or radio.
4. Plug the PL9665-12D into the working electrical outlet.
5. Check to see if the lights work
6. If the above does not work, the device might be defective.
7. Please contact Technical Support for instructions on returning the device for repair or replacement.

Symptom: Some of my devices cannot connect to the Internet or other computers in my network. The lights seem to be functionally normally.

Solution #1:

1. Re-Initialize the PL9665-12D device.
2. Unplug the PL9665-12D from the electrical outlet.
3. Disconnect the Ethernet cable from the device
4. Plug the PL9665-12D back into the electrical outlet.
5. Reconnect the Ethernet cable.

Solution #2:

The Network Encryption Key (NEK) may not be correct on your devices.

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1. Reset the Network Encryption Key using the Factory Reset button located on the bottom of your PL9665-12D AV device. This will reset the NEK back to the default of HomePlug.
2. Test your connection again. If this still does not work, perform the factory reset on all of your other PL9665-12D AV devices in your network.

Solution #3:

It is possible some outlets in your home are not connected together.

1. Unplug the PL9665-12D AV from the current electrical outlet.
2. Locate another outlet in the home.
3. Plug the PL9665-12D AV into that outlet.
4. Attach a computer to the PL9665 AV.
5. Open the Power Manager Utility (located on the enclosed CD).
6. Under the Profile button, check if your PL9665 AV is displayed (it will be the first) and see if your other PL9665-12D AV devices can be seen. If you can see other devices under the Profile screen, your PL9665-12D AV device is functioning properly.

Solution #4:

Your broadband connection may have stopped working.

1. Power down your broadband router and/or DSL/cable modem (if applicable) for about 30 seconds and then power them back on.
2. If this step fails, please contact your ISP for assistance.



Specifications

This appendix lists the specifications for your PlugLink HD AV Y-Cable Adapter

Standards Compliance:	•HomePlug® AV • IEEE 802.3, IEEE 802.3x, IEEE 802.3u
Software Utility System Requirements:	Microsoft Windows® 98 SE, 2000, ME, XP, and Vista operating systems
Network Protocol:	TCP/IP, CSMA/CA, TDMA (supported in the future)
Network Interface:	One-port 10/100 Ethernet (RJ-45) switch
Bandwidth:	Up to 200 Mbps
Distance:	Up to 1074 feet (300 meters)
Operating Frequency:	2 to 30MHz
Modulation Schemes:	• Orthogonal Frequency Division Multiplexing (OFDM) • QAM 1024/256/64/16 •QPSK •BPSK
EMI and Safety:	• FCC Part 15 Class B •UL (US and Canada) •CE
Additional Protocols:	• Forward Error Correction (FEC) • Automatic Channel Adaptation
Power Supply:	• US Version: 100-120VAC • UK/EU Version: 220-240VAC
Surge Energy Rating:	4KV
Power Rating:	• US Version: 100-120VAC 1.0A max, 60Hz • UK/EU Version: 220-240VAC 1.0A max, 50Hz
Security:	128-bit AES
DC Output	12V / 3A

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Environmental Specifications:	<ul style="list-style-type: none">• Operating temperature: 32°F to 113°F (0°C to 40°C)• Operating humidity: 10% to 85% Non-condensing• Storage temperature: -4°F to 158°F (-20°C to 70°C)• Storage humidity: 5% to 90% Non-condensing
Quality of Service:	•ToS • 802.1q • TDMA (supported in the future)
Warranty:	1-year limited



Warranty

Asoka warrants that (a) the hardware components of the product will be free from defects in materials and workmanship under normal use for one (1) year from the date of purchase when used within the limits set forth in the Specifications section of the User Guide, and (b) the software components will perform substantially in accordance with Asoka's published specifications for ninety (90) days from the date of purchase, but does not warrant that the software will be error-free or free of all defects.

Should a product fail to perform as described in the User Guide within the warranted period, it will be repaired or replaced with the same or functionally equivalent product by Asoka, at its discretion, free of charge provided that you: (a) return the failed product to an Asoka designated repair facility with shipping charge prepaid, and (b) provide Asoka with proof of the original date of purchase. Repaired or replacement products will be returned to you with shipping charges prepaid. Asoka warrants any replaced or repaired product or component for the remainder of the initial warranty period whichever is longer. Replacement products may be refurbished or contain refurbished materials or components. If Asoka, by its sole determination, is unable to restore the product to proper operating condition, it will refund the depreciated purchase price of the product.

This warranty extends only to you, the original purchaser and is not transferable to any subsequent purchasers.

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This warranty does not apply if, in the judgment of Asoka, the product fails due to damage from shipment, handling, storage, accident, abuse, misapplication or misuse, or if it has been used or maintained in a manner not conforming to product manual instructions, has been modified in any way, or has had any serial number removed or defaced. Repair by anyone other than Asoka or an approved agent will void this warranty. The maximum liability of Asoka under this warranty is limited to the purchase price of the product covered by the warranty. Prior to returning any defective product, the purchaser or the authorized merchant from whom the purchaser originally bought the product must obtain a Return Material Authorization (RMA) number from Asoka. All defective products should be returned to Asoka with shipping charges prepaid. Asoka will not accept collect shipments.

WHILE ASOKA HAS MADE EVERY EFFORT TO PROVIDE CLEAR AND ACCURATE TECHNICAL INFORMATION ABOUT ITS PRODUCTS, ASOKA ASSUMES NO LIABILITY FOR ANY EVENTS ARISING OUT OF THE USE OF THE TECHNICAL INFORMATION OR THE PRODUCT, EXCEPT AS SPECIFICALLY PROVIDED IN THIS AGREEMENT OR AS REQUIRED BY LAW. THE WARRANTIES AND REMEDIES STATED ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHERS, ORAL OR WRITTEN, EXPRESS OR IMPLIED. ANY AND ALL OTHER WARRANTIES, INCLUDING IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NON-INFRINGEMENT OF THIRD PARTY RIGHTS ARE EXPRESSLY EXCLUDED. ASOKA SHALL NOT BE LIABLE, UNDER ANY CIRCUMSTANCES, TO ANY PERSON OR ENTITY FOR ANY SPECIAL, INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION, DAMAGES RESULTING FROM THE USE OR MALFUNCTION OF THE PRODUCTS, LOSS OF PROFITS OR REVENUES, BUSINESS INTERRUPTION, OR COSTS OF REPLACEMENT GOODS, EVEN IF ASOKA IS INFORMED IN ADVANCE OF THE POSSIBILITY OF SUCH DAMAGES.



FCC Notice

FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates 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 or more 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 This device complies with Part 15 of 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.

The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

FCC RF Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

PlugLink HD AV Y-Cable Adapter

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