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You can read the recommendations in the user guide, the technical guide or the installation guide for TRENDNET TPL-402E. You'll find the answers to all your questions on the TRENDNET TPL-402E in the user manual (information, specifications, safety advice, size, accessories, etc.). Detailed instructions for use are in the User's Guide.

User manual TRENDNET TPL-402E
User guide TRENDNET TPL-402E
Operating instructions TRENDNET TPL-402E
Instructions for use TRENDNET TPL-402E
Instruction manual TRENDNET TPL-402E



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Manual abstract:

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.... 25 Chapter 1: Product Overview The TPL-402E / TPL-402E2K is an excellent solution that can be used to extend your network using your home or small office electrical wiring. In a home or small office building, use the 500Mbps Powerline AV Adapter with Bonus Outlet to link multiple locations without the need to run long Ethernet cables. Combined with a single broadband DSL/Cable Internet connection, every room with electrical power outlets can provide easy access to your high-speed Internet connection. With HomePlug® AV speeds of up to 500Mbps, this easy-to-setup solution can provide fast streaming HD movies, online multiplayer games, and other data intensive applications for today's HD Entertainment Center demand. Each TPL-402E 500Mbps Powerline AV Adapter with Bonus Outlet allows you to connect one network enabled device to a powerline network via Ethernet. In addition, the built-in electrical power socket provides an additional outlet with noise filter to ensure optimum connection speeds and performance when using devices that need to be plugged into the electrical outlet.

In operation, the 500Mbps Powerline AV Adapter with Bonus Outlet is completely transparent, and simply passes data between the Ethernet port and the powerline network. Any Ethernet-enabled device may be connected to the 10/100/1000Mbps Auto-MDIX Gigabit Ethernet port. 1.1 Powerline Network Solution Add high-speed Internet access to any room in your home with this 500Mbps Powerline AV Adapter with Bonus Outlet. You can stream HD movies and music, play online multiplayer games and much more.

Note: This TPL-402E 500Mbps Powerline AV Adapter with Bonus Outlet needs to pair with at least one other IEEE 1901 or HomePlug® AV compatible powerline device. (e.g. TRENDnet Powerline AV products TPL-305E, TPL-303E, TPL-304E, TPL-310AP, TPL-401E, or another TPL-402E). The TPL-402E2K 500Mbps Powerline AV Adapter Kit with Bonus Outlet already includes two TPL-402E adapters, therefore, there is no requirement for an additional powerline adapter.

1.2 Package Contents The product package should contain the following items: TPL-402E 500Mbps Powerline AV Adapter with Bonus Outlet TPL-402E Multi-Language Quick Installation Guide CD-ROM (Utility & User's Guide) Network Cable (1.5 m / 5 ft.) TPL-402E2K 500Mbps Powerline AV Adapter Kit with Bonus Outlet 2 x TPL-402E Multi-Language Quick Installation Guide CD-ROM (Utility & User's Guide) 2 x network cables (1.5 m / 5 ft.) If any of the parts are incorrect, missing, or damaged, contact your dealer. Keep the carton, including the original packaging materials, in case you need to return the Powerline adapter for repair. 1.3 System Requirements CD-ROM drive A Desktop or Laptop PC with Network Adapter Installed Existing 10/100/1000Mbps wired network when TPL-402E is used as a bridge device Additional HomePlug® AV or IEEE 1901 compliant powerline adapter Note: Requirement for TPL-402E only, (e.g.

TRENDnet TPL-303E, TPL-304E, TPL-310AP, TPL-305E, TPL-401E, or another TPL-402E) The TPL-402E2K already includes two TPL-402E adapters. Powerline Configuration Utility System Requirements Supported Operating Systems Windows 7 (32/64-bit) Windows Vista (32/64-bit) Windows XP (32/64-bit) CPU 1GHz or above 800MHz or above 300MHz or above Memory 1GB RAM or above 512MB RAM or above 256MB RAM or above 1.4 Device Label The device label can be located on the back of the device where the power prong is found. Product Model Device Serial Number Device MAC Address Device Password (DPW) Product Hardware Version Product Firmware Version 1.5 LEDs The LED panel located on the front of the device consists of the status LEDs: Power (PWR), Powerline (PL), and Ethernet Link/Act (ETH). Power (PWR) Powerline (PL) Ethernet (ETH) LED PWR (Power) PL (Powerline) Color Green N/A Green Sequence Solid Off Solid Blinking Solid Blinking Solid Blinking Off Solid Definition Device powered On Device powered Off

Powerline Connected (Connection Quality is Best) Syncing or Powerline Data Transmitting/Receiving (Connection Quality is Best) Powerline Connected (Connection Quality is Better) Powerline Data Transmitting/Receiving (Connection Quality is Better) Powerline Connected (Connection Quality is Good) Powerline Data Transmitting/Receiving (Connection Quality is Good) Powerline is not synced or connected 10/20 Mbps, 100/200Mbps, or 1000/2000Mbps (Half/Full Duplex) Connected 10/20Mbps, 100/200Mbps, or 1000/2000Mbps (Half/Full Duplex) Data Transmitting/Receiving Port Disconnected/No Ethernet Link Note: LED color indicates Amber the strength and quality of the powerline connection Red through the electrical system N/A ETH (Ethernet Port) Green Blinking N/A Off *Note: The following factors may affect the powerline network's connection quality: Noise Generated by appliances that are connected to your electrical system through power outlets that have high power consumption requirements. (e.g. Microwaves, ovens, blow dryer, iron, dishwasher, etc.) The quality of your household electrical wiring may also cause additional noise on your electrical system.

Distance Long lengths of electrical wiring through your electrical system between connected powerline adapters. 1.6 Ethernet Port/Buttons There is one RJ-45 10/100/1000Mbps Auto-MDIX Gigabit Ethernet port, Reset Button, and Sync Button located at the bottom of the device. Ethernet Port Sync Button Reset Button Button Action Function Initiate Sync/Connection and generate random network name/key on first adapter (PWR LED will start blinking) Push/Hold for 2 sec Sync Match network name/key on secondary or additional adapter and connect to first adapter. (PWR LED will start blinking) Note: The secondary or additional powerline adapter's Sync button must also be pushed within 2 minutes (120 sec) of pushing the Sync button of the first adapter in

order to establish connectivity.

Push/Hold for 10 sec Push/Hold for 1 sec Erases the network name/key (All LEDs will turn off and turn back on) Reset device to factory defaults (All LEDs will turn off and turn back on) Note: Will reset to the factory default private network name "HomePlugAV" Reset Chapter 2: Product Installation At factory default settings, a pair of TPL-402E 500Mbps Powerline AV adapters with Bonus Outlet (or TPL-402E2K) can be installed into any room in your home or small office with a wall power outlet, without the need for additional software or configuration.



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To create a simple powerline network using a pair TPL-402E powerline adapters, simply plug one of your TPL-402E adapters into a wall power outlet in one room and plug the other TPL-402E adapter into an available wall power outlet in another room to establish connectivity between the two rooms. In order to share Internet connectivity through your powerline adapters, it is ideal to install at least one powerline adapter in the room where your modem and router are located and connect the powerline adapter to one of your router's LAN ports via Ethernet. Any additional powerline adapters that are installed and connected in other rooms will then share Internet connectivity through your router. Once the powerline adapters are connected to each other through the electrical system, any additional devices such as computers or network appliances (e.

g. Game Console, Blu-ray player, IP Set Top Box, network enabled TV, etc.) connected to any of your powerline adapters via Ethernet can then communicate to each other as well as share Internet connectivity through your router. The example diagram shows a typical powerline network configuration in a home environment with 3 powerline adapters installed in different rooms. The orange line represents the powerline connectivity established through your home's electrical system and the blue lines represent Cat. 5, 5e, 6 Ethernet connectivity to your network enabled appliances such as a computer, router, or IP set top box connected to your television. 2.1 Initial Installation The procedure describes how to create a basic powerline network between a pair of TPL-402E powerline adapters and share Internet connection through a router to a computer or network appliance in another room. Assuming your router is already installed and configured for Internet connectivity and the TPL-402E powerline adapters are at factory default settings. 1.

Plug one of the TPL-402E powerline adapters into an available wall power outlet in the room where your router is located. Warning: Do not plug the powerline adapter into a power strip that has surge protection. Doing so will degrade power line performance. For best performance, plug all powerline adapters directly into a wall power outlet. 2. Connect one end of the Ethernet Cable into the Ethernet port located at the bottom of the TPL-402E and connect the other end of the Ethernet cable into one of the router's LAN ports. 3. Plug the second TPL-402E powerline adapter into an available wall power outlet in another room where your computer or network appliance (e.g. Game Console, Blu-ray player, IP Set Top Box, network enabled TV, etc.

) is located. 4. Connect one end of the Ethernet Cable into the Ethernet port located at the bottom of the second TPL-402E and the other end of the Ethernet cable into the Ethernet port on your computer or network appliance (e.g. Game Console, Blu-ray player, IP Set Top Box, network enabled TV, etc.). 5. To verify connectivity between the TPL-402E powerline adapters, make sure that the PL LED on each TPL-402E is on solid (Green, Amber, Red). Please refer to the LED section 1.5 for details on the LED indicator.

6. You have successfully created a basic powerline network between a pair of TPL-402E powerline adapters. The computer or network appliance connected to the second powerline adapter via Ethernet can now access the Internet. 2.2 Securing your Powerline Network The TPL-402E 500Mbps Powerline AV Adapter with Bonus Outlet has a default network name/security key assignment of "HomePlugAV". When connecting a pair of TPL-402E powerline adapters, both powerline adapters will be assigned the default network/security key which allows the TPL-402E powerline adapters to establish connectivity through your home or small office's electrical system without the need for additional software or configuration. For added security, the default network name/security key can be modified using the TPL-402E Sync button covered in the following section or through the use of the Powerline Configuration Utility in Chapter 4. Note: The default network name/security key assigned to the TPL-402E is "HomePlugAV". All powerline adapters in the same powerline network must have the same network name/security key in order to establish connectivity. .

If the network name/security keys are not the same for all powerline adapters on the same powerline net Adapters A,B, and C together on one powerline network and group Adapters D and E on a different powerline network. @@All LEDs will turn off and turn back on. @@2. @@The PWR LED will start blinking. 3. @@The PWR LED will start blinking. @@4. @@This is located on the Device Label, please refer to Section 1.4.

2. @@3. @@4. The utility is only compatible with Windows operating systems. @@Insert the included CD-ROM into your computer's CD-ROM drive.

2. At the CD Autorun Prompt window, click Run Autorun.exe 3. At the CD-ROM menu window, click Install Utility. 4.

@@@@If so, please skip over to Step 9. 5. In the Setup Wizard window, click Next. 6. In the License Agreement window, click I Agree. 7. In the Install Options window, click Install. 8. At the Setup Wizard Completion window, click Finish. 9.

@@@@Remote Devices Powerline adapters that are connected to the selected Local Device across the electrical system. Rename the selected Remote Device Enter the Device Password (DPW) for the selected Remote Device Closes the utility application. Scans for Add a Remote Remote Device that Devices that were not was not detected detected to apply changes to Remote Devices through the Powerline Configuration Utility, you must enter the Device Password (DPW) for each Remote Device located on the Device Label. If you have not already done so, please write down the 16-digit Device Password (DPW) and corresponding MAC Address of each TPL-402E powerline adapter as this will be used to input into the utility. This is located on the Device Label, please refer to Section 1.4. Enter the 16-digit Device Password (DPW) for each Remote Device in the utility 1. Click one of the Remote Devices in the list. 2. Click Enter Password.

3. Type in the Device Password according to the corresponding MAC address. Then click OK. 4. If successful, the Remote Device will have the Device Password listed next to the device under Password.

Note: If the incorrect Device Password is entered, you will receive an error message. Click Enter Password and try entering the password again. 5. Repeat steps 1-4 for any remaining Remote Devices. 6.

Once all of the Device Passwords (DPW) are entered into the utility, changes can be applied to the Remote Devices using the utility. Change the Network Name/Security Key for multiple adapters using the utility 1. Click the Privacy tab. 2. Under Private Network Name, enter the desired network name/security key and click Set All Devices. 3. At the Network Name Setting prompt window, click OK. The current network name/security key assignment of the powerline adapter(s).



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*Note: If you had previously used the Sync button procedure in generating a random network name/security key. This will display "Unknown Networkname"
Applies changes to Local Device only.*

Note: If you choose this option, you will disconnect the Local Device from the Remote Devices. Applies changes to Local Device and Remote devices. Note: If you have not entered the DPW for all remote devices, you will receive an error and the changes will not be applied to remote devices without a DPW. Chapter 5: Troubleshooting Please reference the items below if you continue to experience difficulty with installing and using your TPL-402E 500Mbps Powerline AV Adapter with Bonus Outlet. Try power cycling the unit by unplugging it from the wall power outlet for 15 seconds and plugging it back in. If the PL LED is red indicating good quality only, try plugging the TPL-402E into another available wall power outlet to check if you can obtain better connection quality. Use a pin or paperclip and push and hold the Reset button for 1 second on each TPL402E powerline adapter. All LEDs will turn off and turn back on. This will reset the TPL402E powerline adapters to the default settings, network name/security key assignment "HomePlugAV". The TPL-402E can provide better connectivity and performance when plugged directly into the wall power outlet instead of a power strip or surge protector.

Connecting the TPL-402E to a power strip or surge protector may degrade network performance or completely stop network signals. The TPL-402E should not be used on GFI protected outlets and electrical systems with AFCI circuit breakers as these items will filter out powerline signals. The TPL-402E should not be used in areas with excessive heat. Certain florescent or incandescent lights are noise sources on the electrical and can degrade powerline performance. If your building has more than one circuit breaker box, the TPL-402E may not be able to establish connectivity between different circuit breaker boxes.

In this case, connect a TPL-402E powerline adapter to a power outlet located on each of the circuit breaker boxes, and then connect an Ethernet cable between the TPL-402E powerline adapters to bridge the two circuits together. This will allow the TPL-402E powerline adapters from different circuit breaker boxes connect to each other. Power Saving: The device will automatically reduce power usage when the connected devices via Ethernet are powered off, unplugged or inactive for more than 3 minutes. Erp (EuP) Operation: Standby Mode Disconnect the Ethernet cables from the device Ethernet ports, and after 3 minutes, the device will enter standby mode. The Power (PWR) LED will flash every 15 seconds to indicate that the device is currently in standby mode.

*To return to active mode, reconnect the Ethernet cables to the device Ethernet ports, and the device will re-enter active mode. Chapter 6: Specifications Hardware Standards Interface (A: Type B plug) (EU: Type C Europlug) (FR: Type E French plug) Frequency Band Modulation Protocols Speed Utility OS Compatibility Nodes IEEE 1901, HomePlug® AV, IEEE 802.3, IEEE 802.3x, IEEE 802.3u, IEEE 802.3ab 1 x 10/100/1000Mbps Auto-MDIX RJ-45 Port 1 x electrical power socket with noise filtering (12A max. load) Power prong 2 ~ 50 MHz OFDM Symbol modulation on link synchronization, 1024/256/64/8 QAM, QPSK, BPSK, ROBO carrier TDMA and CSMA/CA Powerline: up to 500Mbps** Ethernet: up to 2 Gbps with Full Duplex mode Windows 7 (32/64-bit), Vista (32/64-bit), XP(32/64-bit) Up to 64 (max.) Recommended: Up to 16* per powerline network Overlapping Powerline Up to 4 (per electrical system) Networks Supported Coverage Security LED Up to 300m (984ft.) 128-Bit AES (Advanced Encryption Standard) Power (PWR) Powerline (PL) with Connection Quality Indication Best (Green) Better (Amber) Good (Red) No connection (Off) Gigabit Ethernet Connection Buttons Dimension (L x W X H) Weight Solid Blinking Off Sync, Reset A: 122 x 55 x 60 mm (4.8 x 2.*

*2 x 2.4 in.) per unit EU/FR: 122 x 55 x 78 mm (4.8 x 2.2 x 3.1 in.) per unit A: Total Weight: 318 g (11.2 oz) / Per Unit Weight: 159 g (5.6 oz) EU: Total Weight: 368 g (13 oz) / Per Unit Weight: 184 g (6.5 oz) FR: Total Weight: 374 g (13.2 oz) / Per Unit Weight: 187 g (6.6 oz) A: 100~230V AC, 50~60Hz EU: 220~240V AC, 50Hz Active mode: 5 Watts (max.) Standby mode: 0.72 Watts (max.) Power Source Consumption Temperature Humidity Certifications Operating: 0° ~ 40°C (32° ~ 104°F) Storage: -20° ~ 70°C (-4° ~ 158°F) Max. 90% (non-condensing) CE, FCC * Maximum of 16 adapters (nodes) recommended for streaming video across your network. Additional adapters may decrease performance. ** 500Mbps is the maximum theoretical Powerline data rate. Actual throughput will vary depending on environment. *** Networked Powerline devices need to be plugged into power outlets that are on the same electrical system.*

*****It is not recommended to use this product on electrical systems that use AFCI circuit breakers or plugged into GFI protected outlets as this may cause performance degradation or loss of connectivity. Limited Warranty TRENDnet warrants its products against defects in material and workmanship, under normal use and service, for the following lengths of time from the date of purchase. @@@@All products that are replaced become the property of TRENDnet. Replacement products may be new or reconditioned. TRENDnet does not issue refunds or credit. Please contact the point-of-purchase for their return policies. @@There are no user serviceable parts inside the product. Do not remove or attempt to service the product by any unauthorized service center. This warranty is voided if (i) the product has been modified or repaired by any unauthorized service center, (ii) the product was subject to accident, abuse, or improper use (iii) the product was subject to conditions more severe than those specified in the manual. Warranty service may be obtained by contacting TRENDnet within the applicable warranty period and providing a copy of the dated proof of the purchase.*

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