

User's Guide

TRENDNET®



WiFi Everywhere™ Powerline 500 AV Access Point
WiFi Everywhere™ Powerline 500 AV Access Point Kit

TPL-410AP / TPL-410APK

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Product Overview



TPL-410AP



TPL-410APK

Package Contents

TPL-410AP package includes:

- TPL-410AP
- Quick Installation Guide
- Network cable (1.5 m / 5 ft.)

TPL-410APK package includes:

- TPL-410AP
- TPL-406E
- Quick Installation Guide
- 2 x network cables (1.5 m / 5 ft.)

If any package contents are missing or damaged, please contact the retail store, online retailer, or reseller/distributor from which the product was purchased.

Features

WiFi Everywhere™ Powerline 500 AV Access Point (**TPL-410AP**)

TRENDnet's WiFi Everywhere™ Powerline 500 AV Access Point, model TPL-410AP, uses an electrical outlet to create or expand a wireless network. Two Powerline adapters are needed to start a network. Connect one adapter to a router and plug in the TPL-410AP on your electrical system to create or expand a wireless network.

WiFi Everywhere™ Powerline 500 Kit (**TPL-410APK**)

TRENDnet's WiFi Everywhere™ Powerline 500 Kit, model TPL-410APK, uses electrical outlets to create a hybrid Powerline-Wireless network. Easily install the included TRENDnet Powerline adapters (TPL-406E + TPL-410AP) to create a high-speed powerline network. Network the TPL-406E to a router and plug the TPL-410AP into an outlet on the electrical system to extend a high performance wireless network. Hardwire a smart TV, gaming console, or media player to the two Ethernet ports on the TPL-410AP.

Powerline

Sync Button

Press the Sync button to change existing Powerline encryption keys

Powerline 500

High speed Powerline networking over existing electrical lines

Ethernet Ports

Two convenient Ethernet ports to hardwire computers, smart TVs, or other network enabled devices

Cross Compatible

TRENDnet Powerline Homeplug AV adapters work together

Wireless

Quick Setup

Get up and running in minutes with the intuitive guided setup

N300 Wireless

Proven 300 Mbps Wireless N

Wireless Coverage

Expanded wireless coverage with MIMO antenna technology

Pre-Encrypted

For your convenience the wireless is pre-encrypted with a unique password

Push Button Connection

Connect wireless devices at the touch of the Wi-Fi Protected Setup (WPS) button

Compatibility

Compatible with legacy 2.4 GHz Wireless devices

* Maximum wireless signal rates are referenced from IEEE 802.11 theoretical specifications. Actual data throughput and coverage will vary depending on interference, network traffic, building materials and other conditions

** 500 Mbps is the maximum physical Powerline data rate. Data throughput may vary by circuit wire condition overheads. Maximum of 8 adapters (nodes) recommended for streaming video across your network.

*** Powerline networking is limited to the same electrical system. Power strips, GFCI outlets, and AFCI circuit breakers may degrade Powerline signals.

Product Hardware Features

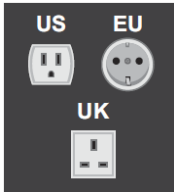
TPL-410AP

Hardware



Button	Action	Function
Sync	Sync Push then release	Initiate Sync/Connection and generate random network name/key (PL 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 on the first adapter in order to establish connectivity.
Reset	Reset Push/Hold for 10 seconds, then release	Reset device to factory defaults (WLAN LED will go red). Note: Will reset to the factory default private network name "HomePlug AV".
WPS	WPS Push/Hold for 3 seconds, then release	Activates WPS (Wi-Fi Protected Setup). The WPS LED will blink to indicate WPS has been successfully activated.

Power Prongs

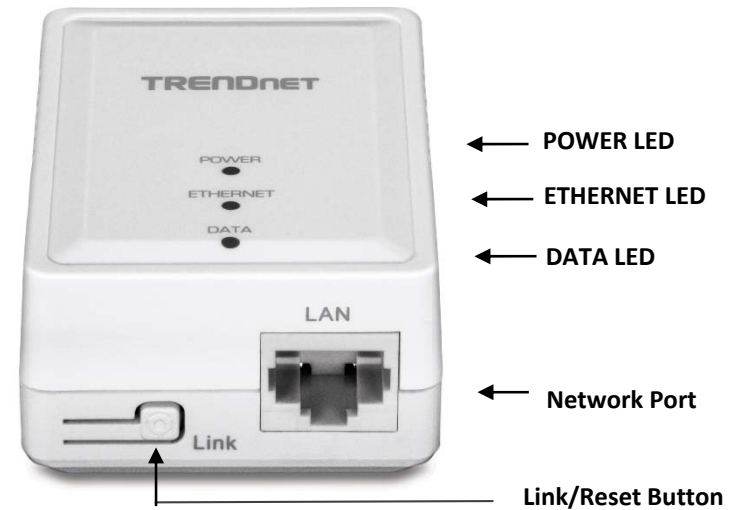


LED	Color	Sequence	Definition
Power	Green	Solid	Device powered on
	Green	Blinking	WPS is activated
	N/A	Off	Device powered off
WLAN	Green	Blinking	Wireless enabled, data transmitting/receiving
	N/A	Off	Wireless disabled
DATA (Powerline)	Green	Solid	Powerline connected (Connection quality is Best)
		Blinking	Syncing or Powerline data transmitting/receiving (Connection quality is Best)
	Amber	Solid	Powerline connected (Connection quality is Better)
		Blinking	Powerline data transmitting/receiving (Connection quality is Better)
	Red	Solid	Powerline connected (Connection quality is Good)
		Blinking	Powerline data transmitting/receiving (Connection quality is Good)
N/A	Off	Powerline is not synced or connected	
LAN Ports 1-2 (Ethernet Connection)	Green	Solid	10/20 Mbps , 100/200Mbps (Half/Full Duplex) connected
		Blinking	10/20 Mbps , 100/200Mbps (Half/Full Duplex) data transmitting/receiving
	N/A	Off	Port disconnected/no Ethernet link

TPL-406E

Important Note: Please note that the TPL-406E powerline adapter will only be included when purchasing the Powerline 500 Wireless Kit, model TPL-410APK.

Front View



Button	Action	Function
Link / Reset <small>(see the section Using the Sync Button for instructions)</small>	Link Push then release	Initiate Link/Connection and generate random network name/key (DATA LED will go off then return to solid after connection is made). Note: The secondary or additional Powerline adapter's Link button must also be pushed within 2 minutes (120 sec) of pushing the Link button on the first adapter in order to establish connectivity.
	Reset Push/Hold for 10 seconds, then release	Reset device to factory defaults (All LEDs will turn off and turn back on). Note: Will reset to the factory default private network name "HomePlug AV".

- **Power Prong** – Plugs into an available power outlet.
- **Diagnostic LEDs** – Indicates the device status and connectivity.

Note: The following factors may affect the Powerline network's connection quality:

- **Noise** – Generated by appliances which use your electrical system (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.

Power Saving: The device will automatically reduce power usage when the connected device via Ethernet is powered off, unplugged or inactive for more than 5 minutes. The device will return to active mode when the connected device via Ethernet is powered on and the link is active.

Note: This device offers EU compliant Standby mode functionality. To turn off the device, unplug it from the power outlet.

LED	Color	Sequence	Definition
POWER	Green	On	Device powered on
	N/A	Off	Device powered off
ETHERNET	Green	On	10/20 Mbps , 100/200Mbps (Half/Full Duplex) connected
	N/A	Off	Port disconnected/no Ethernet link
DATA (Powerline)	Green	On	Powerline connected
		Blinking	Syncing or Powerline data transmitting/receiving (Connection quality is Best)
	N/A	Off	Powerline is not synced or connected

Expanding a Powerline Network

What is a network?

A network is a group of computers or devices that can communicate with each other. A home network of more than one computer or device also typically includes Internet access, which requires a router.

A typical home network may include multiple computers, a media player/server, a printer, a modem, and a router. A large home network may also have a switch, additional routers, access points, and many Internet-capable media devices such as TVs, game consoles, and Internet cameras.

- **Modem** – Connects a computer or router to the Internet or ISP (Internet Service Provider).
- **Router** – Connects multiple devices to the Internet.
- **Switch** – Connect several wired network devices to your home network. Your router has a built-in network switch (the LAN port 1-4). If you have more wired network devices than available Ethernet ports on your router, you will need an additional switch to add more wired connections.

How to expand a home network

Wireless Access Points add or extend wireless connectivity to an existing network. Integrated Powerline technology allows you to further extend your network using your existing electrical system in your home using multiple powerline adapters.

Where to find more help

In addition to this User's Guide, you can find help below:

- <http://www.trendnet.com/support> (documents, downloads, and FAQs are available from this Web page)

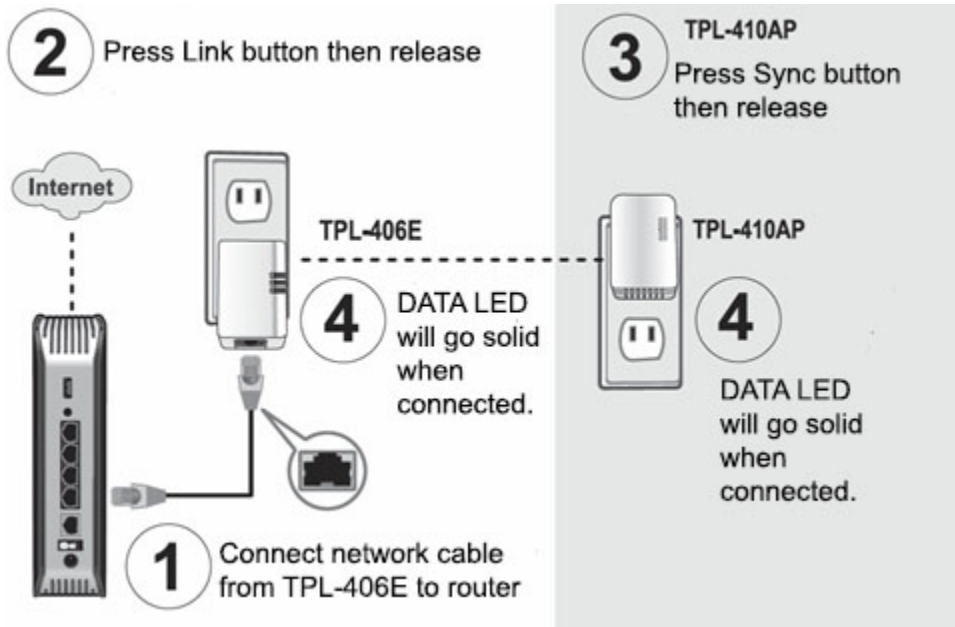
Basic Installation

Note: It is recommended to plug the adapters into nearby outlets before installing the devices to the desired locations.

Note: If you are connecting the adapters to a third party powerline device other than TRENDnet and encounter issues, please refer to the manufacturer's documentation for the appropriate sync button procedure.

Note: The sync button procedure steps below demonstrate using TRENDnet powerline model TPL-406E (included with the Powerline 500 Wireless Kit only) but the same procedure applies to TRENDnet powerline models TPL-407E/ 420E / 421E.

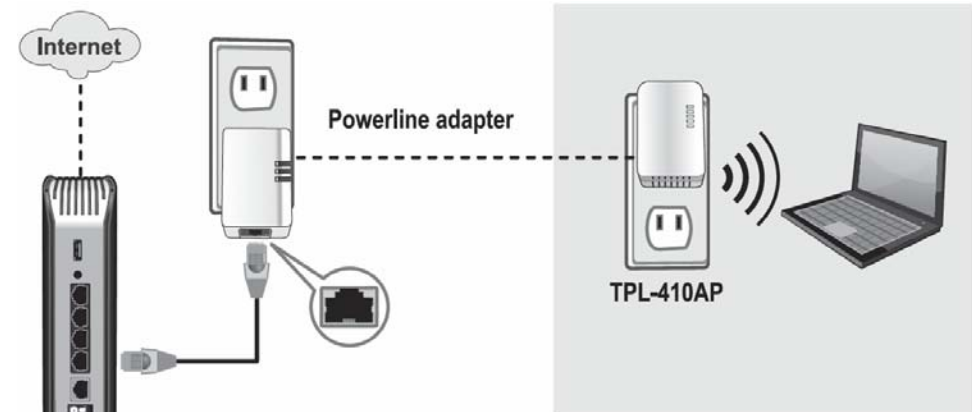
Connecting the adapters using Powerline



5. Once you have successfully connected the powerline adapters through the electrical system, you can move the TPL-410AP to the desired location to create or extend wireless connectivity to your existing network.

6. For added security the TPL-410AP has been pre-configured with a unique wireless network name (SSID) and wireless key which can be found on the Preset Wireless Settings sticker or device label. Use these settings to connect your wireless laptops, mobile devices, and other wireless network devices to your network.

Move TPL-410AP to the desired location and connect your wireless network devices



Preset Wireless Settings	
Wi-Fi Name/SSID	XXXXXXXXXXXX
Wi-Fi Key	XXXXXXXXXXXX
Management Login	http://192.168.10.100
username:	admin
password:	admin

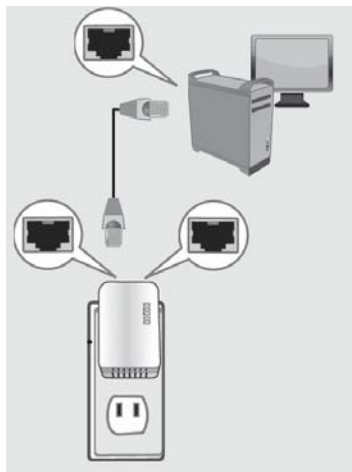
Configure your Powerline Access Point

Access your access point management page

Note: Your access point management page default IP address <http://192.168.10.100> or <http://wlan.powerline> (when the computer is connected directly to TPL-410AP's LAN port) is accessed through the use of your Internet web browser (e.g. Internet Explorer®, Firefox®, Chrome™, Safari®, Opera™) and will be referenced frequently in this User's Guide.

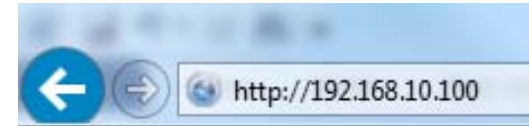
If you have changed the default IP address, you will need to ensure that your computer is configured with IP address settings in the same subnet as the as the access point in order to access the access point management page. (Ex. Access Point IP address changed to 192.168.0.100 / 255.255.255.0, example computer address 192.168.0.25 / 255.255.255.0).

1. Plug the device into an available wall power outlet within reach of your computer's network cable.
2. Connect a network cable from your wireless access point network port into your computer's network port.



3. Assign a static IP address to your computer's network adapter in the subnet of 192.168.10.x (ex. 192.168.10.25) and a subnet mask of 255.255.255.0. (Please refer to the [Appendix](#) on page 55 on how to assign static IP address to your computer)

4. Open your web browser and go to IP address <http://192.168.10.100> or <http://wlan.powerline> (when the computer is connected directly to TPL-410AP's LAN port). Your access point will prompt you for a user name and password.



5. By default, the user name is *admin* and password is *admin*. You can also find the **Password** on a sticker on the side of the access point and on the label on the back of the access point. Enter your **Username** and **Password**, select your preferred language, then click **Login**.

Note: If you have changed the password already such as in the Setup Wizard, you will need to login using the new password.

Default User Name: **admin**

Default Password: **admin**

Note: User Name and Password are case sensitive.

Login to the TPL-410AP	
Username :	<input type="text"/>
Password :	<input type="password"/>
Language :	English ▾
<input type="button" value="Login"/>	

Preset Wireless Settings	
Wi-Fi Name/SSID	XXXXXXXXXXXX
Wi-Fi Key	XXXXXXXXXXXX
Management Login	
http://192.168.10.100	
username: admin	
password: admin	

Setup Wizard

Setup > Wizard

1. Log into your access point management page

Login to the TPL-410AP

Username :

Password :

Language : English ▼

Login

2. Go to Setup and click on **Setup Wizard** then click **Next** to start the configuration

SETUP ADVANCED MAINTENANCE STATUS LOGOUT

Wizard

Wireless Setup

PLC Setting

LAN Setup

SETTING UP YOUR DEVICE

There are two ways to set up your device. You can use the Web-based device Setup Wizard or you can manually configure your device.

DEVICE WIZARD

Setup Wizard

Note: Please refer to the Quick Install Guide, and configure the device gradually.

WELCOME TO DEVICE SETUP WIZARD

This wizard will guide you through a step-by-step process to configure your new device. Please follow these steps as bellow:

- Step 1 : Change Device Login Password
- Step 2 : Setup Wireless Connection
- Step 3 : Setup Wireless Security
- Step 4 : Save and Complete

Next Cancel

3. Enter a new password and verify the password by entering a second in in the "Confirmed Password" field. Click **Next**.

STEP 1: CHANGE DEVICE LOGIN PASSWORD

The factory default password of this device is admin. To secure your network, It is recommended that you should choose a new password. If you do not wish to choose a new password now, just click Skip to continue. Click Next to proceed to next step.

New Password :

Confirm Password :

Back Next Skip Cancel

4. TPL-410AP has pre-configured wireless settings, you can keep default settings or change it to your own settings, after that click **Next**.

Wizard

Wireless Setup

PLC Setting

LAN Setup

STEP 2: SETUP WIRELESS CONNECTION

Through this page, you can configure the SSID, bandwidth etc.

WIRELESS NETWORK SETTINGS

Enable Wireless Interface

Wireless Network Name (SSID) : TRENDnet410_2.4GHz_1

Visibility Status : Visible Invisible

Region : USA ▼

802.11 Mode : Mixed 802.11b/g/n ▼

Bandwidth : 20/40(AUTO) ▼

Wireless Channel : Auto Scan(recommended) ▼

Back Next Cancel

5. Configure wireless encryption/key settings here.

STEP 3: SETUP WIRELESS SECURITY

To protect your privacy you can configure wireless security features. This device supports three wireless security modes including: WEP, WPA, WPA2, WPA and WPA2 Mixed. WEP is the original wireless encryption standard. WPA provides a higher level of security.

WIRELESS SECURITY MODE

Wireless Security Mode :

WPA/WP2 MIXED

Use **WPA** or **WPA2** mode to achieve a balance of strong security and best compatibility. This mode uses WPA for legacy clients while maintaining higher security with stations that are WPA2 capable. Also the strongest cipher that the client supports will be used. For best security, use **WPA2 Only** mode. This mode uses AES(CCMP) cipher and legacy stations are not allowed access with WPA security. For maximum compatibility, use **WPA Only**. This mode use TKIP cipher. Some gaming and legacy devices work only in this mode.

To achieve better wireless performance use **WPA2 Only** security mode (or in other words AES cipher).

WPA Mode :

Encryption Mode : TKIP AES Both

PRE-SHARED KEY

Pre-Shared Key :

The pre-shared key should be 8 to 63 ASCII, or 64 hexadecimal numbers.

Back
Next
Cancel

6. Configuration is completed, click Complete to start using the TPL-410AP.

STEP 4: SAVE AND COMPLETE

Setup complete. Click "Back" to review or modify settings.

SETUP SUMMARY

Wireless Network Name (SSID) :	TRENDnet410_2.4GHz_1234
Wireless Channel :	Auto Scan(recommended)
802.11 Mode :	Mixed 802.11b/g/n
Wireless Security Mode :	WAP2 Mixed

Back
Complete
Cancel

*Dependent on the maximum 802.11n data rate supported by the device (150Mbps, 300Mbps)

Connect wireless devices to your powerline access point

A variety of wireless network devices can connect to your wireless network such as:

- Gaming Consoles
- Internet enabled TVs
- Network media players
- Smart Phones
- Wireless Laptop computers
- Wireless IP cameras

Each device may have its own software utility for searching and connecting to available wireless networks, therefore, you must refer to the User's Manual/Guide of your wireless client device to determine how to search and connect to this access point's wireless network.

Connect wireless devices using WPS

WPS (Wi-Fi Protected Setup) is a feature that makes it easy to connect devices to your wireless network. If your wireless devices support WPS, you can use this feature to easily add wireless devices to your network.

Note: You will not be able to use WPS if you set the SSID Broadcast setting to Disabled or if you are using WEP or WPA security. Please note that WPS functionality will only be available when using WPA2 security.

There are two methods the WPS feature can easily connect your wireless devices to your network.

- Push Button Configuration (PBC) method
 - (RECOMMENDED) Hardware Push Button method—with an external button located physically on your access point and on your client device
 - WPS Software/Virtual Push Button - located in access point management page
 - PIN (Personal Identification Number) Method - located in access point management page

Note: Refer to your wireless device documentation for details on the operation of WPS.

Recommended Hardware Push Button (PBC) Method

- **Note:** It is recommended that a wireless key (passphrase or password) is created before connecting clients using the PBC method. By default your access point is preconfigured with a wireless encryption key. If no wireless key is defined when connecting via PBC, the access point will automatically create an encryption key that is 64 characters long. This 64 character key will then have to be used if one has to connect computers to the access point using the traditional connection method.

To add a wireless device to your network, simply push the WPS button on the wireless device you are connecting (consult client device User's Guide for length of time), then push and hold the WPS button located on your access point for 3 seconds and release it. The PWR LED will blink to indicate WPS has been activated on your access point.

For connecting additional WPS supported devices, repeat this process for each additional device.

PBC (Software/Virtual Push Button)

Setup > Wireless Setup > WPS

In addition to the hardware push button located physically on your access point, the access point management page also has push button which is a software or virtual push button you can click to activate WPS on your access point.

1. Log into your powerline access point management page.
2. Click on **Wireless Setup**, and click on **WPS**.
3. Select **PBC** under WPS mode, click on the PBC button on the right to start pairing.

The screenshot shows the 'WPS CONFIG' interface. It has a dark grey background with white text. At the top, 'WPS CONFIG' is written in bold. Below it, there are three rows of settings: 'Enabled WPS' with a checked checkbox, 'WPS Mode:' with a dropdown menu set to 'PBC' and a blue 'PBC' button to its right, and 'WPS Session Status :'. The status text is red and reads 'WPS session in progress ==> Inprogress'. At the bottom, there are two blue buttons: 'Apply' and 'Cancel'.

4. Within 2 minutes, push the WPS button on the wireless device (consult wireless device's User's Guide for length of time) you are connecting. The wireless connection between the wireless client device and your access point will automatically be established.

PIN (Personal Identification Number)

Setup > Wireless Setup > WPS

If your wireless device has WPS PIN (typically an 8-digit code printed on the wireless device product label or located in the wireless device wireless software utility), you can use this method.

1. Log into your access point management page.
2. Click on **Wireless**, and click on **WPS**.
3. Select **PIN** under WPS mode, type in the PIN you want to use then click **Apply**.

Note: You may need to initiate the WPS PIN on your wireless device first when using this method. Refer to your wireless device documentation for details on the operation of WPS.

The screenshot shows the 'WPS CONFIG' interface. At the top, 'WPS' is written in bold, followed by a note: 'Enable the wireless function, the WPS condition must be WPA2-PSK or WPA/WPA2-PSK security mode, and the SSID should be broadcasted.' Below this, there are two rows: 'Wireless SSID : TRENDnet410_2.4GHz_1234' and 'WPS Config State :'. Below that, 'WPS CONFIG' is written in bold. The settings are: 'Enabled WPS' with a checked checkbox, 'WPS Mode:' with a dropdown menu set to 'PIN' and a blue 'PIN' button to its right, 'PIN : 1234' with a text input field, and 'WPS Session Status :'. At the bottom, there are two blue buttons: 'Apply' and 'Cancel'.

4. Within 2 minutes, initiate the WPS PIN method on the wireless device (consult wireless device's User's Guide for how to initiate the WPS method) you are connecting. The wireless connection between the wireless client device and your access point will automatically be established.

Setup

Wireless Setup

Wireless Basic

This section outlines available management options under basic wireless sub tab.

1. Log into your powerline access point management page.
2. Click on **Wireless Setup** and click on **Wireless Basic**.
3. Review the basic wireless settings and click **Apply** when finished.

- **Enable Wireless Interface** – Check the option to enable the wireless network/band or uncheck to disable. **Note:** It is recommended to leave this setting checked.
- **Wireless Name (SSID):** Enter the wireless name (SSID) for your wireless network. This acronym stands for Service Set Identifier and is the name of your wireless network. It differentiates your wireless network from others around you. By default, the access point's wireless name is unique to the device. If you choose to change the SSID, change it to a name that you can easily remember.
- **Wireless Security Mode:** Select the proper wireless encryption/key type for your wireless network.

How to choose the type of security for your wireless network

There are a few different wireless security types supported in wireless networking each having its own characteristics which may be more suitable for your wireless network taking into consideration compatibility, performance, as well as the security strength along with using older wireless networking hardware (also called legacy hardware).

It is strongly recommended to enable wireless security to prevent unwanted users from accessing your network and network resources (personal documents, media, etc.).

In general, it is recommended that you choose the security type with the highest strength and performance supported by the wireless computers and devices in your network. Please review the security types to determine which one you should use for your network.

Wireless Encryption Types

- **WEP:** Legacy encryption method supported by older 802.11b/g hardware. This is the oldest and least secure type of wireless encryption. It is generally not recommended to use this encryption standard, however if you have old 802.11 b or 802.11g wireless adapters or computers with old embedded wireless cards(wireless clients), you may have to set your access point to WEP to allow the old adapters to connect to the access point.
 - Note:** This encryption standard will limit connection speeds to 54Mbps.
- **WPA:** This encryption is significantly more robust than the WEP technology. Much of the older 802.11g hardware was been upgraded (with firmware/driver upgrades) to support this encryption standard. Total wireless speeds under this encryption type however are limited to 54Mbps.
 - **WPA-Auto:** This setting provides the access point with the ability to detect wireless devices using either WPA or WPA2 encryption. Your wireless network will automatically change the encryption setting based on the first wireless device connected. For example, if the first wireless client that connects to your wireless network uses WPA encryption your wireless network will use WPA encryption. Only when all wireless clients disconnect to the network and a wireless client with WPA2 encryption connects your wireless network will then change to WPA2 encryption.
 - Note:** WPA2 encryption supports 802.11n speeds and WPA encryption will limit your connection speeds to 54Mbps
- **WPA2:** This is the most secure wireless encryption available today, similar to WPA encryption but more robust. This encryption standard also supports the highest connection speeds. TRENDnet recommends setting your access point to this encryption standard. If you find that one of your wireless network devices does not support WPA2 encryption, then set your access point to either WPA or WPA-Auto encryption.

Note: Check the specifications of your wireless network adapters and wireless appliances to verify the highest level of encryption supported. Below is brief comparison chart of the wireless security types and the recommended configuration depending on which type you choose for your wireless network.

Security Standard	WEP	WPA	WPA2
Compatible Wireless Standards	IEEE 802.11b/g (802.11n devices will operate at 802.11g to connect using this standard)	IEEE 802.11b/g (802.11n devices will operate at 802.11g to connect using this standard)	IEEE 802.11b/g/n
Highest Performance Under This Setting	Up to 54Mbps	Up to 54Mbps	Up to 300Mbps
Encryption Strength	Low	Medium	High
Additional Options	Open System or Shared Key, HEX or ASCII, Different key sizes	TKIP or AES, Preshared Key or RADIUS	TKIP or AES, Preshared Key or RADIUS
Recommended Configuration	Open System ASCII 13 characters	TKIP Preshared Key 8-63 characters	AES Preshared Key 8-63 characters

4. Click Apply when finish.

Steps to improve wireless connectivity

There are a number of factors that can impact the range of wireless devices. Follow these tips to help improve your wireless connectivity:

1. Keep the number of obstructions to a minimum. Each obstruction can reduce the range of a wireless device. Position the wireless devices in a manner that will minimize the amount of obstructions between them.
 - a. For the widest coverage area, install your access point near the center of your home, and near the ceiling, if possible.
 - b. Avoid placing the access point on or near metal objects (such as file cabinets and metal furniture), reflective surfaces (such as glass or mirrors), and masonry walls.
 - c. Any obstruction can weaken the wireless signal (even non-metallic objects), so the fewer obstructions between the access point and the wireless device, the better.
 - d. Place the access point in a location away from other electronics, motors, and fluorescent lighting.
 - e. Many environmental variables can affect the access point's performance, so if your wireless signal is weak, place the access point in several locations and test the signal strength to determine the ideal position.

2. Building materials can have a large impact on your wireless signal. In an indoor environment, try to position the wireless devices so that the signal passes through less dense material such as dry wall. Dense materials like metal, solid wood, glass or even furniture may block or degrade the signal.

3. Antenna orientation can also have a large impact on your wireless signal. Use the wireless adapter's site survey tool to determine the best antenna orientation for your wireless devices.

- Interference from devices that produce RF (radio frequency) noise can also impact your signal. Position your wireless devices away from anything that generates RF noise, such as microwaves, radios and baby monitors.

If possible, upgrade wireless network interfaces (such as wireless cards in computers) from older wireless standards to 802.11n or 802.11ac. If a wirelessly networked device uses an older standard, the performance of the entire wireless network may be slower. If you are still experiencing low or no signal consider repositioning the wireless devices, installing additional access points or wireless extenders.

PLC Settings

Setup > PLC Setting

These settings allow you to pair or not with other powerline devices in the same powerline network.

LOCAL DEVICE INFO

Device Name	MAC Address	Device Password(DEK)	Network Name
Local Device	64:D9:54:11:1F:64	ZNLL-IEVC-JETR-NYHL	HomePlugAV

Set Local Device
Set All Device

REMOTE DEVICE LIST

Device Name	MAC Address	Device Password(DEK)	TX RX	Status	Edit Delete
Device1	00:B0:52:00:04:54		0 0	connected	✎ 🗑

Refresh
Add Member

LAN Settings

Setup > LAN Setting

The device comes with default IP of 192.168.10.30. When connected to a network, the DHCP client mode will turn on.

MAC Address :
64:D9:54:11:1F:65

IP Address :
192.168.1.81

Apply
Cancel

Advanced Wireless

Advanced

These settings are advanced options that can be configured to change advanced wireless broadcast specifications. It is recommended that these settings remain set to their default values unless you are knowledgeable about the effects of changing these values. Changing these settings incorrectly can degrade performance.

ADVANCED WIRELESS SETTINGS	
Wireless Name (SSID) :	TRENDnet410_2.4GHz_1
Network Name Status :	<input type="radio"/> Visible <input type="radio"/> Invisible
Transmission Rate :	Auto ▼
Transmit Power :	100% ▼
User Isolation :	On ▼
Enable WMM(Wireless QoS):	<input checked="" type="checkbox"/>
Max Clients :	16 (1 ~ 32)
Region :	USA ▼
802.11 Mode :	Mixed 802.11b/g/n ▼
Bandwidth :	20/40(AUTO) ▼
Wireless Channel :	Auto Scan(recommended) ▼
<input type="button" value="Apply"/> <input type="button" value="Cancel"/>	

Security

Setting up wireless security is very important. Leaving your wireless network open and unsecure could expose your entire network and personal files to outsiders. TRENDnet recommends reading through this entire section and setting up wireless security on your new powerline access point. Refer to wireless basic sections on how to pick the right security option for your network.

SECURITY	
<p>To protect your privacy you can configure wireless security features. This device supports three wireless security modes including: WEP, WPA, WPA2, WPA and WPA2 Mixed. WEP is the original wireless encryption standard. WPA provides a higher level of security.</p> <p><i>Note: If the wireless security mode is WEP or WPA-PSK(TKIP),the WPS function will be disable.</i></p>	
WIRELESS SECURITY MODE	
Wireless Security Mode :	WPA/WPA2-PSK ▼
WPA/WPA2MIX	
<p>Use WPA or WPA2 mode to achieve a balance of strong security and best compatibility. This mode uses WPA for legacy clients while maintaining higher security with stations that are WPA2 capable. Also the strongest cipher that the client supports will be used. For best security, use WPA2 Only mode. This mode uses AES(CCMP) cipher and legacy stations are not allowed access with WPA security. For maximum compatibility, use WPA Only. This mode use TKIP cipher. Some gaming and legacy devices work only in this mode.</p> <p>To achieve better wireless performance use WPA2 Only security mode (or in other words AES cipher).</p>	
WPA Mode :	WPA/WPA2 Mixed-Personal ▼
Encryption Mode :	<input type="radio"/> TKIP <input type="radio"/> AES <input type="radio"/> Both
Group Key Update Interval :	100 (60 - 65535)
PASSPHRASE	
PassPhrase :
<p>The PassPhrase should be 8 to 63 ASCII, or 64 hexadecimal numbers.</p>	
Show encryption key :	<input type="checkbox"/>
<input type="button" value="Apply"/> <input type="button" value="Cancel"/>	

Access Control

This section allows you to allow or block certain wireless clients to connect to the wireless network.

ACCESS CONTROL
Allows you to configure access control of the wireless LAN interface.

MODE

Enable Access Control

Access Control Mode : Black List ▼

WLAN FILTER LIST

MAC	Comment	Edit	Delete
-----	---------	------	--------

Add

Click **Enable Access Control** to turn on the feature, select White list or Black list then enter the MAC address then click on **Add**.

Note: If you white list the device, only the listed devices can access the powerline access point.

Maintenance

Device Management

In the **Old Password** field, enter the old password (by default, the password is admin) then enter the new password. Then enter the password again in the **Confirm Password** field to verify.

USER PASSWORD

Old Password :

New Password :

Confirm Password :

Apply Cancel

To save changes, click **Apply**.

Note: If you change the access point login password, you will need to access the access point management page using the User Name "admin" and the new password.

Reboot and Restore

You may want to restart or restore your powerline access point if you are encountering difficulties with your access point and have attempted all other troubleshooting.

Click on **Reboot** button will restart the device. Click **Restore** button will set the device back to factory default settings.

REBOOT AND RESTORE

Through this page, you can reboot the device or restore the device to factory configuration.

REBOOT

Click the button below to reboot the device.

RESTORE DEFAULT SETTINGS

Restore router settings to the factory defaults.

Administrator User Name	admin
Administrator Password	admin
Access Point IP Address	192.168.10.100
Access Point Subnet Mask	255.255.255.0
Wireless Interface	Enabled
Wireless Network Name/Encryption (WPA2-PSK AES)	Please refer to sticker or device label
Powerline Encryption Key	HomePlugAV

Firmware Update

TRENDnet may periodically release firmware upgrades that may add features or fix problems associated with your TRENDnet access point model and version. To check if there is a firmware upgrade available for your device, please check your TRENDnet model and version using the link. <http://www.trendnet.com/downloads/>

In addition, it is also important to verify if the latest firmware version is newer than the one your access point is currently running. To identify the firmware that is currently loaded on your access point, log in to the access point, click on the Administrator section and then on the Status. If there is a newer version available, also review the release notes to check if there were any new features you may want or if any problems were fixed that you may have been experiencing.

FIRMWARE UPDATE

The Firmware Upgrade section can be used to update to the latest firmware code to improve functionality and performance.

NOTE: The update process takes about 2.5 minutes to complete, and your device will reboot.

Firmware Version : 1.00.02

Select File : No file chosen

Clear Config

Please note the following:

- Do not interrupt the firmware upgrade process. Do not turn off the device or press the Reset button during the upgrade.
- If you are upgrade the firmware using a laptop computer, ensure that the laptop is connected to a power source or ensure that the battery is fully charged.
- Disable sleep mode on your computer as this may interrupt the firmware upgrade process.
- Do not upgrade the firmware using a wireless connection, only using a wired network connection.
- Any interruptions during the firmware upgrade process may permanently damage your access point.

Status

You may want to check the system information of your access point such as IP address settings, access point mode, wireless and wired network settings, access point wireless MAC addresses, and firmware version.

DEVICE INFO

This page will show you the device information, such as, system information, PLC status, LAN port information, Wi-Fi LAN information, etc.

SYSTEM INFO

Model Name	TPL-410AP
Firmware Version	1.00.02
Hardware Version	V1.0R
Serial Number	001EE3010203

PLC STATUS

MAC Address	64:D9:54:11:1F:64
Device Password	ZNLL-IEVC-JETR-NYHL
Network Name	HomePlugAV

LAN PORT INFORMATION

MAC Address:	64:D9:54:11:1F:65
IP Address:	192.168.1.81
Subnet Mask:	255.255.255.0

WIRELESS LAN INFORMATION

Wireless Radio	Enabled
Wireless Network Name (SSID)	TRENDnet410_2.4GHz_1234
BSSID	64:D9:54:11:1F:66
802.11 Mode	Mixed 802.11b/g/n
Wireless Channel	Auto Scan(Recommended)
Wireless Security Mode	WPA/WAP2 Mixed

Refresh

Installing your Powerline Adapters

Before you Install

1. Before you proceed with the installation, verify the following:

- You already have a router already installed.
- You already have Internet access through your existing network.
- An Ethernet port (also called LAN port) is available on your router.
- Verify that you have at least two Powerline adapters. You will need at least two Powerline adapters to create a Powerline network.

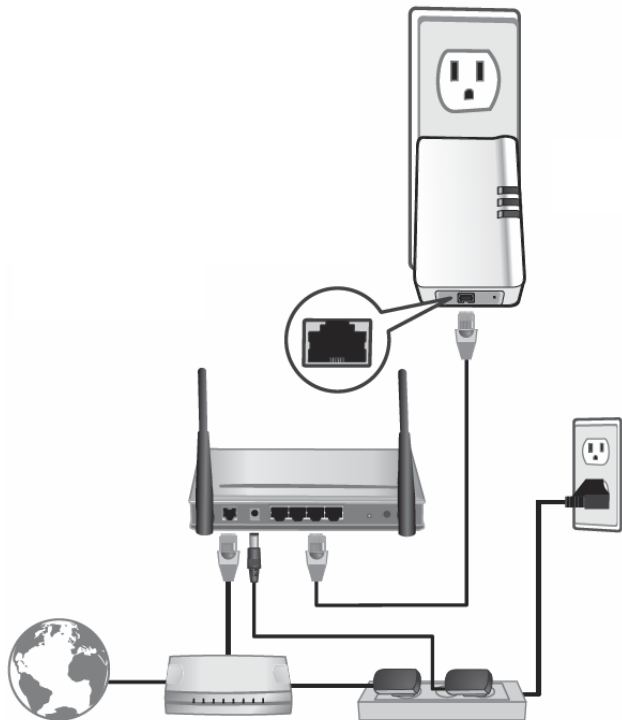
Note: The TPL-410AP package only includes a single Powerline adapter. The TPL-410APK package includes TPL-406E and TPL-410AP to create your Powerline network. Please ensure that your other Powerline adapter is HomePlug® AV or IEEE 1901 compliant (e.g. TRENDnet models TPL-406E, TPL-407E, TPL-420E, TPL-421E or another TPL-410AP.)

2. Plan the location of where you will install your Powerline adapters.

- Avoid plugging the adapters into power strips, extension cords, or surge protectors as this may prevent the adapter from functioning correctly or degrade performance.
- Avoid plugging the adapters into wall power outlets that are controlled by a light switch to prevent the Powerline adapter from being turned off accidentally.
- Avoid plugging the adapters into wall power outlets that are located near appliances that consume a lot of power (e.g. refrigerators, washers, dryers) as this may degrade performance.
- Make sure there is an available wall power outlet in the room where the router is installed and also near the router.
- Make sure there is an available wall power outlet in the room where you want to extend network connectivity.

Connect a Powerline adapter to your router

1. Plug the Powerline adapter into an available wall power outlet near your router.
Note: This will allow devices connected to your Powerline network to access the Internet and other devices connected to your network.
2. Connect the included Ethernet cable (also called network cable) from the Ethernet port (also called network port) of your Powerline adapter to an available Ethernet port (also called LAN port) on your router.
3. Once the Powerline adapter is installed and connected to your router, verify that the **Power LED** is on or blinking and the **Ethernet LED** is on or blinking.



Add adapters to your network

Once you have installed and connected the first Powerline adapter to your router, you can easily extend your network to other rooms by adding additional Powerline adapters.

To extend your network using an additional Powerline adapter:

1. First, make sure the first Powerline adapter is installed and connected to your router.
Note: This will allow devices connected to your Powerline network to access the Internet and other devices connected to your network.
2. Plug the additional Powerline adapter into an available wall power outlet in another room near a computer or network device (e.g. game consoles, network-enabled TVs, network attached storage, network media server/players, etc.) that you would like to connect to your network.
3. Connect the included Ethernet cable from the Ethernet port on your Powerline adapter to the Ethernet port of your computers or network devices.
4. After the additional Powerline adapter is connected and installed to your computer or network device, wait for the **DATA LED** to turn on. After the **DATA LED** turns on, verify that the **Power LED** is on, the **DATA LED** is on or blinking, and the **Ethernet LED** is on or blinking.

Note: To verify that your Powerline adapters are connected successfully to your network, you can check if the computer(s) or network device(s) can access the Internet through your Powerline network.

To install additional Powerline adapters in other rooms, repeat the steps above for each adapter.

Securing your Powerline Network

Powerline networks consist of two or more Powerline devices connected together using the same encryption key. TRENDnet Powerline adapters automatically connect to each other over a secure encrypted signal and share the same encryption key (Default encryption key: HomePlugAV).

In order for your Powerline devices to connect to the same Powerline network, the same encryption key must be assigned to all Powerline devices in that network. Powerline devices that are not assigned the same encryption key will not be able to connect to the Powerline network.

For additional security, TRENDnet recommends changing adapter default encryption key to prevent a neighbor with a Powerline adapter and the same default encryption key from gaining access to your network.

Note: *After the default encryption key has been changed and the Powerline adapters have been connected using a new encryption key, the Powerline adapters will retain their security settings when they are unplugged and moved to a new location. No additional reconfiguration of the Powerline adapters is needed after the default encryption has been changed.*

There are two methods to change the default encryption key:

- Use the physical **Sync/Link** button on your Powerline adapter to generate a random encryption key.
****Recommended method****
OR
- Create a customized encryption key for your Powerline network using the Powerline Utility. (download from TRENDnet's website)

Troubleshooting

Q: I typed <http://TPL-410AP> in my Internet Browser Address Bar, but an error message says "The page cannot be displayed." How can I access the access point management page?

Answer:

Assign your computer a static IP address in the subnet of 192.168.10.x (ex. 192.168.10.25) and access the access point using the default IP address 192.168.10.100. <http://192.168.10.100>

Q: I typed <http://192.168.10.100> in my Internet Browser Address Bar, but an error message says "The page cannot be displayed." How can I access the access point management page?

Answer:

1. Check your hardware settings again.
2. Make sure the LAN port you are connected to is on.
3. Make sure your network adapter TCP/IP settings are set to *Obtain an IP address automatically* or *DHCP* (see the steps below).
4. Make sure your computer is connected to one of the access point's LAN ports
5. Press on the factory reset button for 15 seconds, the release.

Windows 7

- a. Go into the **Control Panel**, click **Network and Sharing Center**.
- b. Click **Change Adapter Settings**, right-click the **Local Area Connection** icon.
- c. Then click **Properties** and click **Internet Protocol Version 4 (TCP/IPv4)**.
- d. Then click **Obtain an IP address automatically** and click **OK**.

Windows Vista

- a. Go into the **Control Panel**, click **Network and Internet**.
- b. Click **Manage Network Connections**, right-click the **Local Area Connection** icon and click **Properties**.
- c. Click **Internet Protocol Version (TCP/IPv4)** and then click **Properties**.
- d. Then click **Obtain an IP address automatically** and click **OK**.

Windows XP/2000

- a. Go into the **Control Panel**, double-click the **Network Connections** icon
- b. Right-click the **Local Area Connection** icon and the click **Properties**.
- c. Click **Internet Protocol (TCP/IP)** and click **Properties**.
- d. Then click **Obtain an IP address automatically** and click **OK**.

Note: If you are experiencing difficulties, please contact your computer or operating system manufacturer for assistance.

Q: The Wizard does not appear when I access the access point. What should I do?

Answer:

1. Click on Main and Wizard on the left hand side.
2. Near the top of the browser, "Pop-up blocked" message may appear. Right click on the message and select Always Allow Pop-ups from This Site.
3. Disable your browser's pop up blocker.

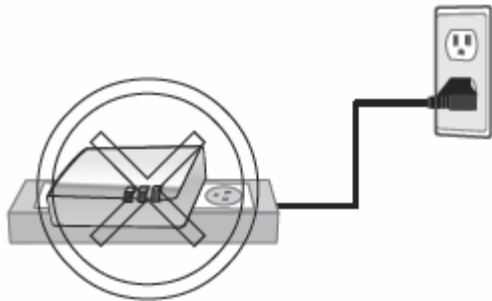
Q: I cannot connect wirelessly to the access point. What should I do?

Answer:

1. Double check that the Wireless LED on the access point is on.
2. Power cycle the router. Unplug the power to the access point. Wait 15 seconds, then plug the power back in to the access point.
3. Contact the manufacturer of your wireless network adapter and make sure the wireless network adapter is configured with the proper SSID. The default predefined SSID is printed on the device label on the bottom or on the sticker on the side of the unit.
4. To verify whether or not wireless is enabled, login to the access point management page, click on *Basic and Wireless*.

Please reference the items below if you continue to experience difficulty with installing and using your Powerline adapters.

- Do not plug the Powerline adapters into a power strip. Make sure to plug the adapters directly into a power outlet and not through power strip. Using adapters through a power strip may negatively affect Powerline connectivity and performance.



- Do not use the Sync button for more than 2 Powerline adapters to connect simultaneously. Wait for each Powerline adapter to connect to your Powerline network one at a time before connecting the next adapter. Using more than one adapter to Sync simultaneously may cause some of your adapters not to Sync and establish connection to your Powerline network.
- Power-cycle the Powerline adapters by disconnecting them from their power outlets for 15 seconds and then reconnect them.
- If the Powerline (PL) LED is red, try plugging the Powerline adapter into another available power outlet. The quality of the connection may be better in a different power outlet.
- If you are having issues connecting the Powerline adapters after changing the encryption key using the Sync button or Powerline utility, reset the Powerline adapters to defaults using the physical Reset button.
- Using a pin or paperclip; press and hold the Reset button for 1 second on each Powerline adapter. All LEDs will turn off then turn back on. This will reset the Powerline adapters to their default settings. The default encryption key is HomePlugAV.
- The Powerline adapters can provide better connectivity and performance when plugged directly into a power outlet. Connecting the Powerline adapters to a power strip or surge protector may degrade or block Powerline signals.

- Avoid using the Powerline adapters on GFI protected outlets and electrical systems with AFCI circuit breakers. They may degrade or block Powerline signals.
- The Powerline adapters should not be used in areas with excessive heat.
- Florescent and incandescent lighting can generate significant Powerline interference.
- If your building has more than one circuit breaker box, the Powerline adapter may not be able to establish connectivity between them. In this case, connect a Powerline adapter into a power outlet located on each of the circuit breaker boxes. Then connect an Ethernet cable between the Powerline adapters to bridge the two circuits together.

In addition to this User's Guide, you can find help below:

- <http://www.trendnet.com/support>
(documentation, downloads, FAQs, how to contact technical support)
- Autorun CD (Quick Installation Guide)

Appendix

How to find your IP address?

Note: Please note that although the following procedures provided to follow for your operating system on configuring your network settings can be used as general guidelines, however, it is strongly recommended that you consult your computer or operating system manufacturer directly for assistance on the proper procedure for configuring network settings.

Command Prompt Method

Windows® 2000/XP/Vista/7/8/8.1

1. On your keyboard, press **Windows Logo+R** keys simultaneously to bring up the Run dialog box.
2. In the dialog box, type **cmd** to bring up the command prompt.
3. In the command prompt, type **ipconfig /all** to display your IP address settings.

MAC OS® X

1. Navigate to your **Applications** folder and open **Utilities**.
2. Double-click on **Terminal** to launch the command prompt.
3. In the command prompt, type **ipconfig getifaddr <en0 or en1>** to display the wired or wireless IP address settings.

Note: **en0** is typically the wired Ethernet and **en1** is typically the wireless Airport interface.

Graphical Method

MAC OS® 10.6/10.5

1. From the Apple menu, select **System Preferences**.
2. In System Preferences, from the **View** menu, select **Network**.
3. In the Network preference window, click a network port (e.g., Ethernet, AirPort, modem). If you are connected, you'll see your IP address settings under "Status:"

MAC OS® 10.4

1. From the Apple menu, select **Location**, and then **Network Preferences**.
2. In the Network Preference window, next to "Show:", select **Network Status**. You'll see your network status and your IP address settings displayed.

Note: If you are experiencing difficulties, please contact your computer or operating system manufacturer for assistance.

How to configure your network settings to obtain an IP address automatically or use DHCP?

Note: Please note that although the following procedures provided to follow for your operating system on configuring your network settings can be used as general guidelines, however, it is strongly recommended that you consult your computer or operating system manufacturer directly for assistance on the proper procedure for configuring network settings.

Windows® 7/8/8.1

- a. Go into the **Control Panel**, click **Network and Sharing Center**.
- b. Click **Change Adapter Settings**, right-click the **Local Area Connection** icon.
- c. Then click **Properties** and click **Internet Protocol Version 4 (TCP/IPv4)**.
- d. Then click **Obtain an IP address automatically** and click **OK**.

Windows® Vista

- a. Go into the **Control Panel**, click **Network and Internet**.
- b. Click **Manage Network Connections**, right-click the **Local Area Connection** icon and click **Properties**.
- c. Click **Internet Protocol Version (TCP/IPv4)** and then click **Properties**.
- d. Then click **Obtain an IP address automatically** and click **OK**.

Windows® XP/2000

- a. Go into the **Control Panel**, double-click the **Network Connections** icon
- b. Right-click the **Local Area Connection** icon and the click **Properties**.
- c. Click **Internet Protocol (TCP/IP)** and click **Properties**.
- d. Then click **Obtain an IP address automatically** and click **OK**.

MAC OS 10.4/10.5/10.6

- a. From the **Apple**, drop-down list, select **System Preferences**.
- b. Click the **Network** icon.
- c. From the **Location** drop-down list, select **Automatic**.
- d. Select and view your Ethernet connection.
 - a. In MAC OS 10.4, from the **Show** drop-down list, select **Built-in Ethernet** and select the **TCP/IP** tab.
 - b. In MAC OS 10.5/10.6, in the left column, select **Ethernet**.
- e. Configure TCP/IP to use DHCP.

In MAC 10.4, from the **Configure IPv4**, drop-down list, select **Using DHCP** and click the **Apply Now** button.

In MAC 10.5, from the **Configure** drop-down list, select **Using DHCP** and click the **Apply** button.

In MAC 10.6, from the **Configure** drop-down list, select **Using DHCP** and click the **Apply** button.

f. Restart your computer.

Note: *If you are experiencing difficulties, please contact your computer or operating system manufacturer for assistance.*

How to configure your network settings to use a static IP address?

Note: *Please note that although the following procedures provided to follow for your operating system on configuring your network settings can be used as general guidelines, however, it is strongly recommended that you consult your computer or operating system manufacturer directly for assistance on the proper procedure for configuring network settings.*

Windows® 7/8/8.1

- a. Go into the **Control Panel**, click **Network and Sharing Center**.
- b. Click **Change Adapter Settings**, right-click the **Local Area Connection** icon.
- c. Then click **Properties** and click **Internet Protocol Version 4 (TCP/IPv4)**.
- d. Then click **Use the following IP address**, and assign your network adapter a static IP address. Click **OK**

Windows® Vista

- a. Go into the **Control Panel**, click **Network and Internet**.
- b. Click **Manage Network Connections**, right-click the **Local Area Connection** icon and click **Properties**.
- c. Click **Internet Protocol Version (TCP/IPv4)** and then click **Properties**.
- d. Then click **Use the following IP address**, and assign your network adapter a static IP address. Click **OK**

Windows® XP/2000

- a. Go into the **Control Panel**, double-click the **Network Connections** icon
- b. Right-click the **Local Area Connection** icon and the click **Properties**.
- c. Click **Internet Protocol (TCP/IP)** and click **Properties**.

d. Then click **Use the following IP address**, and assign your network adapter a static IP address. Click **OK**

MAC OS® 10.4/10.5/10.6

- a. From the **Apple**, drop-down list, select **System Preferences**.
- b. Click the **Network** icon.
- c. From the **Location** drop-down list, select **Automatic**.
- d. Select and view your Ethernet connection.

How to find your MAC address?

In Windows 2000/XP/Vista/7/8,

Your computer MAC addresses are also displayed in this window, however, you can type **getmac -v** to display the MAC addresses only.

In MAC OS 10.4,

1. **Apple Menu > System Preferences > Network**
2. From the **Show** menu, select **Built-in Ethernet**.
3. On the **Ethernet** tab, the **Ethernet ID** is your MAC Address.

In MAC OS 10.5/10.6,

1. **Apple Menu > System Preferences > Network**
2. Select **Ethernet** from the list on the left.
3. Click the **Advanced** button.
3. On the **Ethernet** tab, the **Ethernet ID** is your MAC Address.

How to connect to a wireless network using the built-in Windows utility?

Note: Please note that although the following procedures provided to follow for your operating system on configuring your network settings can be used as general guidelines, however, it is strongly recommended that you consult your computer or operating system manufacturer directly for assistance on the proper procedure for connecting to a wireless network using the built-in utility.

Windows® 7/8/8.1

1. Open Connect to a Network by clicking the network icon (📶 or 🖨️) in the notification area.
2. In the list of available wireless networks, click the wireless network you would like to connect to, then click **Connect**.
4. You may be prompted to enter a security key in order to connect to the network.
5. Enter in the security key corresponding to the wireless network, and click **OK**.

Windows® Vista

1. Open Connect to a Network by clicking the **Start Button** (🌐) and then click **Connect To**.
2. In the **Show** list, click **Wireless**.
3. In the list of available wireless networks, click the wireless network you would like to connect to, then click **Connect**.
4. You may be prompted to enter a security key in order to connect to the network.
5. Enter in the security key corresponding to the wireless network, and click **OK**.

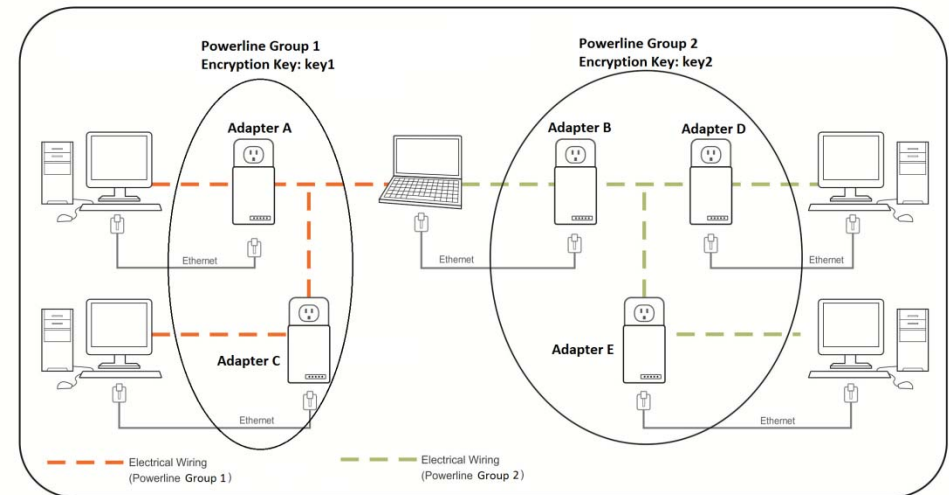
Windows® XP

1. Right-click the network icon in the notification area, then click **View Available Wireless Networks**.
2. In **Connect to a Network**, under **Available Networks**, click the wireless network you would like to connect to.
3. You may be prompted to enter a security key in order to connect to the network.
4. Enter in the security key corresponding to the wireless network, and click **Connect**.

Overlapping Powerline networks

It is possible to create multiple Powerline networks on the same electrical system separated and grouped by different network encryption keys. The Powerline networks will work and communicate independently of each other which can provide security between different groups of Powerline adapters. For example, if you have five powerline adapters (Adapter A, Adapter B, Adapter C, Adapter D, Adapter E), you can group Adapters A,B, and C together on one powerline network and group Adapters D and E on a different Powerline network. Each group will use a different encryption key.

Note: It is recommended that only a maximum of up to 4 Powerline networks can be created per electrical system. Any additional Powerline networks above the recommended may result in significant degradation in Powerline performance.



Federal Communication Commission Interference Statement

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

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

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

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.

For product available in the USA/Canada market, only channel 1~11 can be operated. Selection of other channels is not possible.

This device and its antennas(s) must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with FCC multi-transmitter product procedures.

IMPORTANT NOTE:

FCC Radiation Exposure Statement:

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



RoHS

This product is RoHS compliant.



Europe – EU Declaration of Conformity

This device complies with the essential requirements of the R&TTE Directive 1999/5/EC, 2004/108/EC, 2006/95/EC and 2009/125/EC.



Regulation (EC) No. 1275/2008

EN 55022: 2010/AC: 2011

EN 55024: 2010

EN 50412-2-1: 2005/AC: 2009

EN60950-1: 2006 + A11: 2009 + A1: 2010 + A12: 2011 +A2:2013

Safety of Information Technology Equipment

EN 50385: 2002

Product standard to demonstrate the compliance of radio base stations and fixed terminal stations for wireless telecommunication systems with the basic restrictions or the reference levels related to human exposure to radio frequency electromagnetic fields (110MHz - 40 GHz) - General public

EN 301 489-1 V1.9.2: (2011-09)










Electromagnetic compatibility and Radio Spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements










EN 301 489-17 V2.2.1: (2012-09)


Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment; Part 17: Specific conditions for 2,4 GHz wideband transmission systems, 5 GHz high performance RLAN equipment and 5,8 GHz Broadband Data Transmitting Systems

In Italy the end-user should apply for a license at the national spectrum authorities in order to obtain authorization to use the device for setting up outdoor radio links and/or for supplying public access to telecommunications and/or network services.

This device may not be used for setting up outdoor radio links in France and in some areas the RF output power may be limited to 10 mW EIRP in the frequency range of 2454 – 2483.5 MHz. For detailed information the end-user should contact the national spectrum authority in France.

 Český [Czech]	TRENDnet tímto prohlašuje, že tento TPL-410AP je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES, 2004/108/ES, 2006/95/ES, a 2009/125/ES.
 Dansk [Danish]	Undertegnede TRENDnet erklærer herved, at følgende udstyr TEW- TPL-410AP overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF, 2004/108/EF, 2006/95/EF, og 2009/125/EF.
 Deutsch [German]	Hiermit erklärt TRENDnet, dass sich das Gerät TPL-410AP in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG, 2004/108/EG, 2006/95/EG und 2009/125/EG befindet.
 Eesti [Estonian]	Käesolevaga kinnitab TRENDnet seadme TPL-410AP vastavust direktiivi 1999/5/EÜ, 2004/108/EÜ, 2006/95/EÜ ja 2009/125/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
 English	Hereby, TRENDnet, declares that this TPL-410AP is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC, 2004/108/EC, 2006/95/EC, and 2009/125/EC.
 Español [Spanish]	Por medio de la presente TRENDnet declara que el TPL-410AP cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE, 2004/108/CE, 2006/95/CE, 2009/125/CE y.
 Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑΤRENDnet ΔΗΛΩΝΕΙ ΟΤΙ ΤΡΡ-410ΑΡ ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ, 2004/108/ΕΚ, 2006/95/ΕΚ, 2009/125/ΕΚ κλπ.
 Français [French]	Par la présente TRENDnet déclare que l'appareil TPL-410AP est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE, 2004/108/CE, 2006/95/CE, 2009/125/CE et.
 Italiano [Italian]	Con la presente TRENDnet dichiara che questo TPL-410AP è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE, 2004/108/CE, 2006/95/CE e 2009/125/CE.

 Latviski [Latvian]	AršoTRENDnetdeklarē, ka TPL-410AP atbilstDirektīvas 1999/5/EK, 2004/108/EK, 2006/95/EK, un 2009/125/EK būtiskajāmprasībām un citiemar to saistītajiemnoteikumiem.
 Lietuvių [Lithuanian]	Šiuo TRENDnet deklaruoja, kad šis TPL-410AP atitinka esminius reikalavimus ir kitas 1999/5/EB, 2004/108/EB, 2006/95/EB ir 2009/125/EB Direktyvos nuostatas.
 Nederlands [Dutch]	Hierbij verklaart TRENDnet dat het toestel TPL-410AP in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG, 2004/108/EG, 2006/95/EG, en 2009/125/EG.
 Malti [Maltese]	Hawnhekk, TRENDnet, jiddikjara li dan TPL-410AP jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 1999/5/KE, 2004/108/KE, 2006/95/KE, u 2009/125/KE.
 Magyar [Hungarian]	Alulírott, TRENDnet nyilatkozom, hogy a TPL-410AP megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EK irányelv, a 2004/108/EK a 2006/95/EK és a 2009/125/EK irányelv egyéb előírásainak.
 Polski [Polish]	Niniejszym TRENDnet oświadcza, że TPL-410AP jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/WE, 2004/108/WE, 2006/95/WE i 2009/125/WE.
 Português [Portuguese]	TRENDnet declara que este TPL-410AP está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE, 2004/108/CE, 2006/95/CE e 2009/125/CE.
 Slovensko [Slovenian]	TRENDnet izjavlja, da je ta TPL-410AP v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES, 2004/108/ES, 2006/95/ES in 2009/125/ES.
Slovensky [Slovak]	TRENDnettýmto vyhlasuje, že TPL-410AP spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES, 2004/108/ES, 2006/95/ES, a 2009/125/ES.
 Suomi [Finnish]	TRENDnet vakuuttaa täten että TPL-410AP tyyppinen laite on direktiivin 1999/5/EY, 2004/108/EY, 2006/95/EY ja 2009/125/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.

 Svenska
[Swedish]

Härmed intygar TRENDnet att denna TPL-410AP står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG, 2004/108/EG, 2006/95/EG och 2009/125/EG.

[cs] Český [Czech]	TRENDnet tímto prohlašuje, že tento TPL-406E je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 2004/108/ES.
[da] Dansk [Danish]	Undertegnede TRENDnet erklærer herved, at følgende udstyr TPL-406E overholder de væsentlige krav og øvrige relevante krav i direktiv 2004/108/EF.
[de] Deutsch [German]	Hiermit erklart TRENDnet, dass sich das Gerät TPL-406E in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 2004/108/EG befindet.
[et] Eesti [Estonian]	Käesolevaga kinnitab TRENDnet seadme TPL-406E vastavust direktiivi 2004/108/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.
[en] English	Hereby, TRENDnet, declares that this TPL-406E is in compliance with the essential requirements and other relevant provisions of Directive 2004/108/EC.
[es] Español [Spanish]	Por medio de la presente TRENDnet declara que el TPL-406E cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 2004/108/CE.
[el] Ελληνική [Greek]	ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ TRENDnet ΔΗΛΩΝΕΙ ΟΤΙ ΤΡΡ-406Ε ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΡΡΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 2004/108/ΕΚ.
[fr] Français [French]	Par la présente TRENDnet déclare que l'appareil TPL-406E est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 2004/108/CE.
[it] Italiano [Italian]	Con la presente TRENDnet dichiara che questo TPL-406E è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 2004/108/CE.
Latviski [Latvian]	Ar šo TRENDnet deklarē, ka TPL-406E atbilst Direktīvas 2004/108/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvių [Lithuanian]	Šiuo TRENDnet deklaruoją, kad šis TPL-406E atitinka esminius reikalavimus ir kitas 2004/108/EB Direktyvos nuostatas.
[nl] Nederlands [Dutch]	Hierbij verklaart TRENDnet dat het toestel TPL-406E in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 2004/108/EG.

[mt] Malti [Maltese]	Hawnhekk, TRENDnet, jiddikjara li dan TPL-406E jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn relevanti li hemm fid-Dirrettiva 2004/108/EC.
[hu] Magyar [Hungarian]	Alulírott, TRENDnet nyilatkozom, hogy a TPL-406E megfelel a vonatkozó alapvető követelményeknek és az 2004/108/EC irányelv egyéb előírásainak.
[pl] Polski [Polish]	Niniejszym TRENDnet oświadcza, że TPL-406E jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 2004/108/EC.
[pt] Português [Portuguese]	TRENDnet declara que este TPL-406E está conforme com os requisitos essenciais e outras disposições da Directiva 2004/108/CE.
[sl] Slovensko [Slovenian]	TRENDnet izjavlja, da je ta TPL-406E v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 2004/108/ES.
Slovensky [Slovak]	TRENDnet týmto vyhlasuje, že TPL-406E spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 2004/108/ES.
[fi] Suomi [Finnish]	TRENDnet vakuuttaa täten että TPL-406E tyyppinen laite on direktiivin 2004/108/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.
[sv] Svenska [Swedish]	Härmed intygat TRENDnet att denna TPL-406E står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 2004/108/EG.

Industry Canada Statement

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This device and its antennas(s) must not be co-located or operating in conjunction with any other antenna or transmitter except in accordance with IC multi-transmitter product procedures.

Cet appareil et son antenne (s) ne doit pas être co-localisés ou fonctionner en association avec une autre antenne ou transmetteur.

IMPORTANT NOTE:

IC Radiation Exposure Statement:

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

For product available in the USA/Canada market, only channel 1~11 can be operated.

Selection of other channels is not possible.

Pour les produits disponibles aux États-Unis / Canada du marché, seul le canal 1 à 11 peuvent être exploités. Sélection d'autres canaux n'est pas possible.

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.

TPL-410AP / TPL-410APK – 3 Years Warranty

AC/DC Power Adapter, Cooling Fan, and Power Supply carry 1 year warranty.

If a product does not operate as warranted during the applicable warranty period, TRENDnet shall reserve the right, at its expense, to repair or replace the defective product or part and deliver an equivalent product or part to the customer. The repair/replacement unit's warranty continues from the original 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.

TRENDnet shall not be responsible for any software, firmware, information, or memory data of customer contained in, stored on, or integrated with any products returned to TRENDnet pursuant to any warranty.

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. Upon proper submission of required documentation a Return Material Authorization (RMA) number will be issued. An RMA number is required in order to initiate warranty service support for all TRENDnet products. Products that are sent to TRENDnet for RMA service must have the RMA number marked on the outside of return packages and sent to TRENDnet prepaid, insured and packaged appropriately for safe shipment. Customers shipping from outside of the USA and Canada are responsible for return shipping fees. Customers shipping from outside of the USA are responsible for custom charges, including but not limited to, duty, tax, and other fees.

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PWP05202009v2

2016/05/16



Product Warranty Registration

Please take a moment to register your product online.
Go to TRENDnet's website at <http://www.trendnet.com/register>

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