



# TP-Link TL-WA701ND Access Point setup

July 1, 2016

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## 1 Overview

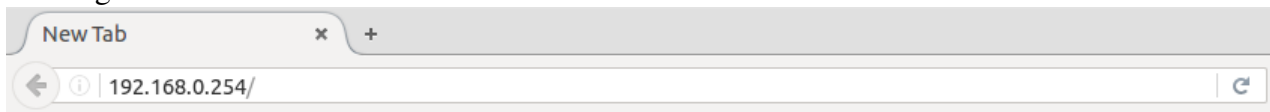
The TP-Link TL-WA701ND is a multi-function access point. This document is intended to assist with configuring the TL-WA701ND to allow the EG3000 to communicate on an existing WiFi network. This guide is designed only for use with a TP-WA701ND purchased through eGauge Systems.

For full documentation and other support issues, please visit the TP-Link website at <http://www.tp-link.com/>

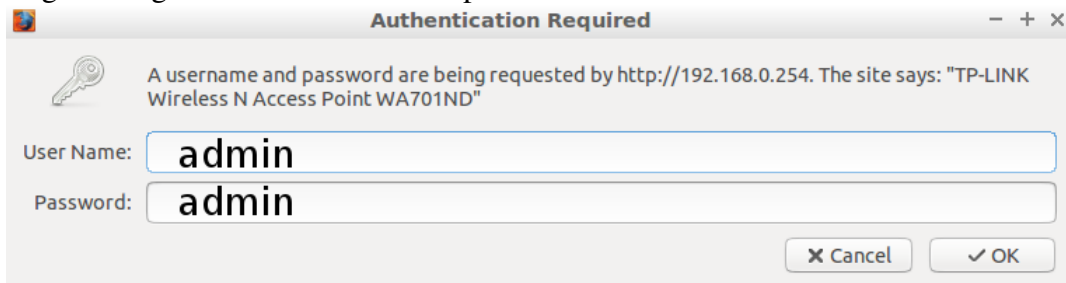
## 2 Configuration instructions

1. Power the TP-Link TL-WA701ND using the barrel jack or PoE (Power-over-Ethernet) injector, and connect a computer to the access point using an Ethernet cable (if using the PoE injector, connect the **LAN** port to your computer, and the **POE** port to the access point).
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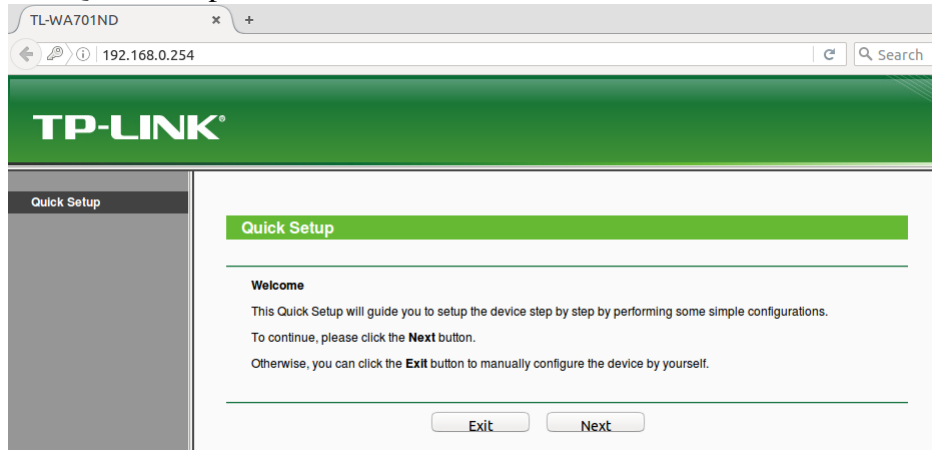
2. Ensure all wireless interfaces are disabled on the computer (such as WiFi and Bluetooth) and that DHCP is enabled on the Ethernet interface. Open a web browser and access the TL-WA701ND by entering 192.168.0.254 into the address bar.



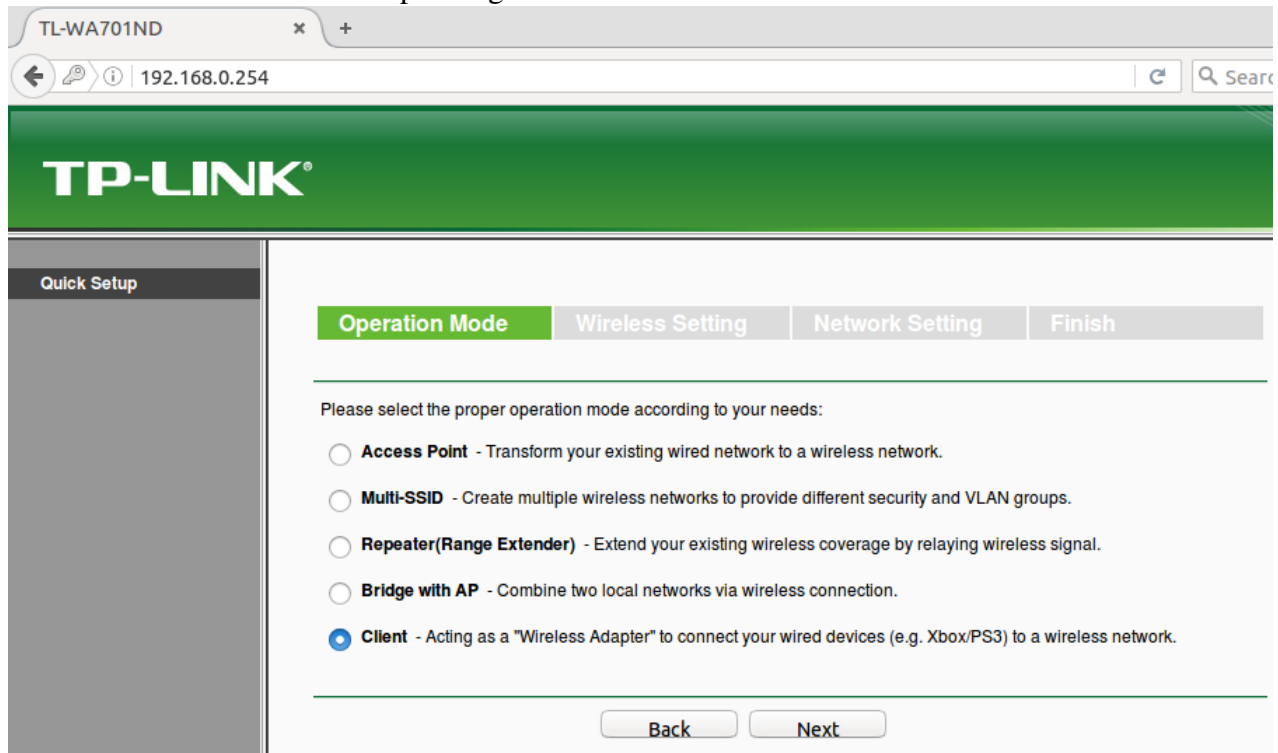
3. Log in using username `admin` and password `admin`.



4. The Quick Setup wizard will load in the browser. Click **Next** to start the configuration process.



5. Select **Client** from the list of operating modes. Click **Next**.



- Click **Survey** to scan for a list of available wireless access points. Alternatively, skip to step 8 and manually enter information.

The screenshot shows the TP-Link web interface for the TL-WA701ND device. The browser address bar shows the IP address 192.168.0.254. The page title is 'TP-LINK'. The navigation tabs are 'Operation Mode', 'Wireless Setting', 'Network Setting', and 'Finish'. The 'Wireless Setting' tab is active. The form contains the following fields and options:

- Wireless Name of Root AP:** (also called SSID) - Input field
- MAC Address of Root AP:** - Input field
- Survey** - Button
- Region:** United States (dropdown menu)
- Warning:** Ensure you select a correct country to comply local law. Incorrect settings may cause interference.
- Wireless Security Mode:** Most Secure(WPA/WPA2-) (dropdown menu)
- Wireless Password:** - Input field

Additional text below the security mode dropdown: "All security settings, for example the wireless password should match the root AP/router. You can enter ASCII characters between 8 and 63 or Hexadecimal characters between 8 and 64." At the bottom of the form are 'Back' and 'Next' buttons.

- From the list of available WiFi networks, select the network to use by clicking **Connect** to the far right. Make sure the network has a good connection by checking the signal strength. The higher the number, the stronger the connection.

**AP List**

AP Count: 40

ID	BSSID	SSID	Signal	Channel	Security	Choose
13	A2-E5-47-82-33-EA	MyWiFi	60dB	2	WPA2-PSK	<a href="#">Connect</a>
14	1B-7C-CF-E7-3D-4C	MyGuestNetwork	40dB	2	WPA2-PSK	<a href="#">Connect</a>
15	05-1D-85-59-32-97	NeighborsWiFi	13dB	6	WPA2-PSK	<a href="#">Connect</a>
16	09-95-AA-BD-3E-73	FarAwayWiFi	2dB	6	OFF	<a href="#">Connect</a>

At the bottom of the table are 'Back' and 'Refresh' buttons.

8. Once the **Connect** option is clicked, these fields will automatically fill in. Alternatively, enter the **Wireless Name** (SSID) and **Wireless Security Mode** and **Wireless Password**. The wireless security settings will need to be manually entered for any password protected WiFi network. Click **Next**.

The screenshot shows a web browser window with the address bar displaying '192.168.0.254'. The page features a green header with the 'TP-LINK' logo. A sidebar on the left contains a 'Quick Setup' menu. The main content area has a navigation bar with four tabs: 'Operation Mode', 'Wireless Setting' (which is highlighted in green), 'Network Setting', and 'Finish'. Below the navigation bar, the 'Wireless Setting' section contains several fields and instructions:

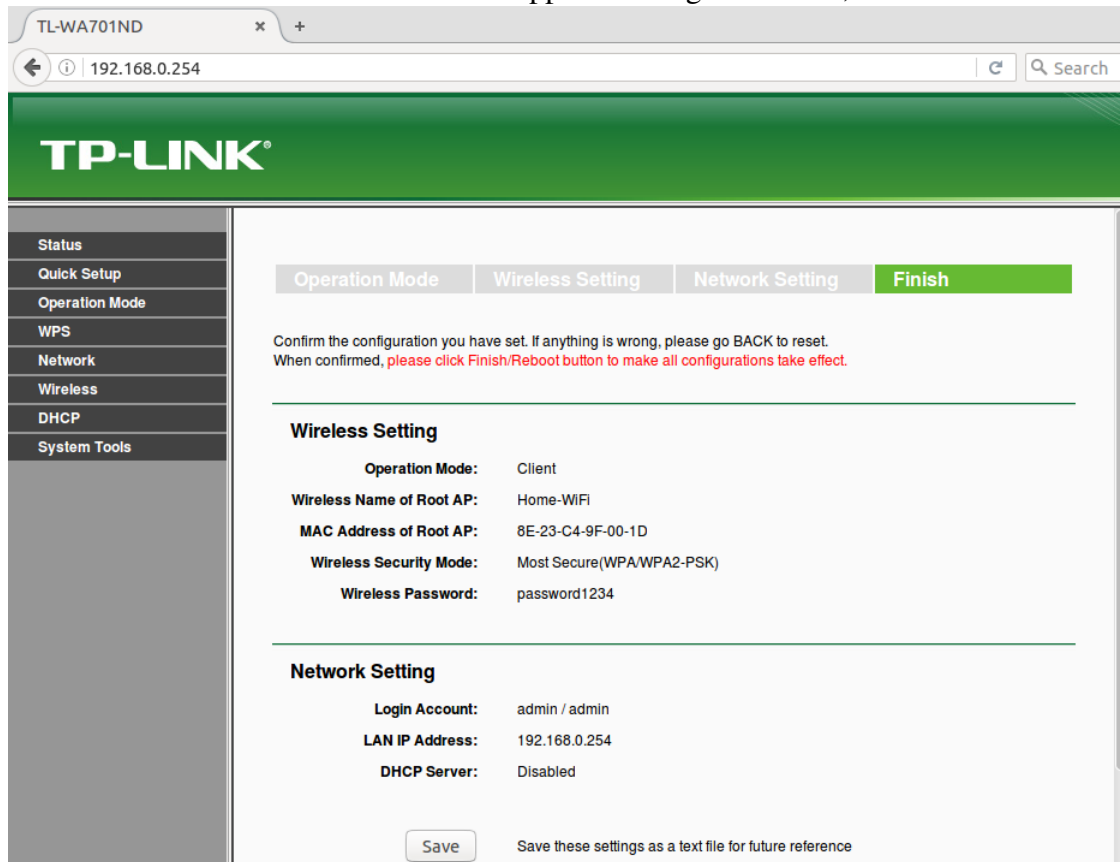
- Wireless Name of Root AP:** A text input field containing 'Home-WiFi' with a note '(also called SSID)' to its right.
- MAC Address of Root AP:** A text input field containing 'E-23-C4-9F-00-1D'.
- Survey:** A button labeled 'Survey' with the instruction: 'Click Survey button to scan the wireless networks, and choose the target one to setup.'
- Region:** A dropdown menu currently set to 'United States'.
- Warning:** A text block stating: 'Ensure you select a correct country to comply local law. Incorrect settings may cause interference.'
- Wireless Security Mode:** A dropdown menu currently set to 'Most Secure(WPA/WPA2)'.
- Wireless Password:** A text input field containing 'password1234' with a note: 'All security settings, for example the wireless password should match the root AP/router. You can enter ASCII characters between 8 and 63 or Hexadecimal characters between 8 and 64.'

At the bottom of the form, there are two buttons: 'Back' and 'Next'.

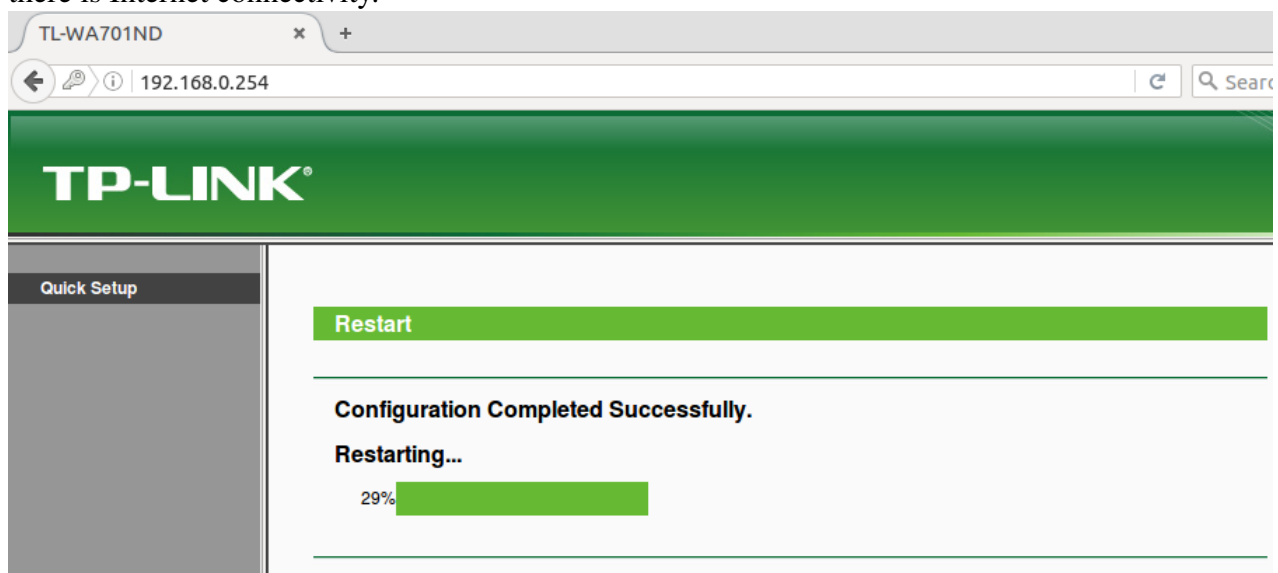
9. The default values are typically fine for these settings. If needed, obtain the correct settings from the network administrator. Be sure to make a note/take a screenshot of the IP address set in this step, as it will replace the original fallback IP address. When the correct settings have been applied, click **Next**.

The screenshot shows the TP-Link web interface for a TL-WA701ND device. The browser address bar shows the IP address 192.168.0.254. The interface features a green header with the TP-LINK logo. A sidebar on the left is labeled 'Quick Setup'. The main content area has a progress bar with four steps: 'Operation Mode', 'Wireless Setting', 'Network Setting' (which is highlighted in green), and 'Finish'. Below the progress bar, the 'DHCP Server' is set to 'Disable' (selected with a radio button). A note below it states: 'In most of the cases your root AP/router has enabled DHCP server function, we highly recommended that you disable DHCP server function on this device to void any unpredictable problems.' The 'IP Address' field contains '192.168.0.254' and the 'Subnet Mask' dropdown is set to '255.255.255.0'. A note below the subnet mask reads: 'We recommend you configure this AP with the same IP subnet and subnet mask, but different IP address from your root AP/Router.' The 'Change the login account' option is set to 'NO' (selected with a radio button). At the bottom of the form, there are 'Back' and 'Next' buttons.

10. Make a note or take a screenshot of the applied settings if desired, then click **Save**.



11. The device will reboot. The configuration page will likely not load; try loading a web-page (e.g., <http://www.egauge.net>) while the TP-Link Access Point is connected to the computer to see if there is Internet connectivity.



12. After the configuration is complete and Internet access is confirmed, connect the TP-Link WA701ND to the eGauge using an Ethernet cable. From there, follow steps for checking eGauge connectivity. Once the eGauge is connected to the proxy-server, the eGauge status LED should blink between dark blue and off.

### 3 Troubleshooting

- The TP-Link TP-WA701ND does not have any LEDs illuminated
  - Ensure the access point has power either directly to the barrel jack on the back, or via the POE injector's POE Ethernet port. The POE injector requires power via barrel jack.
  - Verify the ON/OFF button next to the access point's Ethernet port is depressed in the ON position.
- I cannot access the device configuration page.
  - The TP-Link WA701ND has a default fallback IP address of 192.168.0.254. To access the device configuration pages, connect a computer directly via an Ethernet cable, configure the computer to use an IPv4 address in the same range (for example, 192.168.0.100), open a web browser, and enter the fallback IP address of 192.168.0.254 in the address bar. If you changed the IP address on the **Network Setting** page during configuration step 9, use that IP address instead.
- I cannot access the device at all (lost credentials, major configuration issue, etc)
  - The TP-Link TL-WA701ND has a recessed reset button located on the back of the device. This button is closest to the antenna, and a pin or paperclip is needed to press it. Hold the button down for 8+ seconds. All of the LEDs should turn off and back on; after this the initial configuration steps can be used to gain access. Note that this will reset all device settings to the factory default.