TP-LINK®

User Guide

TC-7610

DOCSIS 3.0 Cable Modem

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CE Mark Warning

This is a class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

Продукт сертифіковано згідно с правилами системи УкрСЕПРО на відповідність вимогам нормативних документів та вимогам, що передбачені чинними законодавчими актами України.

Safety Information

- When product has power button, the power button is one of the way to shut off the product; when there is no power button, the only way to completely shut off power is to disconnect the product or the power adapter from the power source.

- Don't disassemble the product, or make repairs yourself. You run the risk of electric shock and voiding the limited warranty. If you need service, please contact us.

- Avoid water and wet locations.

- Adapter shall be installed near the equipment and shall be easily accessible.

- The plug considered as disconnect device of adapter.

- Use only power supplies which are provided by manufacturer and in the original packing of this product. If you have any questions, please don't hesitate to contact us.

- The product should be connected to cable distribution system that grounded (earthed) in accordance with ANSI/NFPA 70, the National Electrical Code (NEC), in particular Section 820.93 - Grounding of Outer Conductive Shield of a Coaxial Cable.

Explanation of the symbols on the product label

Symbol	Explanation
===	DC voltage

RECYCLING

This product bears the selective sorting symbol for Waste electrical and electronic equipment (WEEE). This means that this product must be handled pursuant to European directive 2012/19/EU in order to be recycled or dismantled to minimize its impact on the environment.

User has the choice to give his product to a competent recycling organization or to the retailer when he buys a new electrical or electronic equipment.

CONTENTS

Package Contents

The following items should be found in your package:

➢ One TC-7610 DOCSIS 3.0 Cable Modem

➢ One Power Adapter for TC-7610 DOCSIS 3.0 Cable Modem

➢ Quick Installation Guide

➢ One RJ45 cable

☞ **Note:**

Make sure that the package contains the above items. If any of the listed items are damaged or missing, please contact with your distributor.

Chapter 1. Introduction

Thank you for choosing the **TC-7610 DOCSIS 3.0 Cable Modem** .

1.1 Product Overview

TP-LINK's DOCSIS 3.0 Cable Modem TC-7610 is designed for delivers ultra-high speed data through coax used in HFC networks. It's an incredibly robust device allowing users to access internet with up to 445 Mbps downstream data rates, 143 Mbps upstream data rates and share it with a Gigabit Ethernet port.

TC-7610 complies with DOCSIS/EuroDOCSIS, supports channel bonding of up to 8 downstream channels and 4 upstream, combined with Enhanced security of AES encryption, IPv4 and IPv6 dual stack, make it future-Proof.

1.2 Main Features

➢ DOCSIS 3.0/EuroDOCSIS 3.0. Compatible with DOCSIS/EuroDOCSIS 2.0/1.1/1.0

➢ 8 Downstream Channels bonding, Up to 445Mbps for Downstream

➢ 4 Upstream Channels bonding, Up to 143Mbps for Upstream

➢ IPv4 and IPv6 dual stack make it future-Proof

➢ Gigabit port ensure ultimate fast transfer speeds

➢ Remotely configurable and monitorable using TFTP

➢ Well-defined LEDs clearly display device and network status

➢ Quick and hassle free installation

1.3 Conventions

The Modem or device mentioned in this User Guide stands for TC-7610 without any explanations. Parameters provided in the pictures are just references for setting up the product, which may differ from the actual situation.

Chapter 2. Hardware Installation

2.1 The Front Panel

The modem's LEDs are located on the side panel (View from top to bottom). They indicate the device's working status. For details, please refer to LEDs Explanation.

LEDs Explanation:

Name	Status	Indication
⏻ (Power)	Off	The modem is powered off.
	On	The modem is powered on.
📺 (Downstream)	Off	The initialization is not started, or has failed.
	White	The modem is synchronized with one channel.
	Green	The modem is synchronized with more than one channel.
	Flashing	The modem is scanning for a downstream channel.

	Off	The initialization is not started, or has failed.
	White	The modem is synchronized with one channel.
(Upstream)	Green	The modem is synchronized with more than one channel.
	Flashing	The modem is scanning for an upstream channel.
	Off	Internet service is not available.
	On	Internet service is available.
(Internet)	Flashing	The modem is initializing.
	On	The LAN port is connected.
	Off	The LAN port is not connected.
(LAN)	Flashing	The LAN port is sending or receiving data.

2.2 The Back Panel

➢ **Reset**: With the modem powered on, use a pin to press and hold the Reset button for at least 8-10 seconds. And the modem will reboot to its factory default settings.

➢ **LAN:** Through this port, you can connect the modem to your PC or the other Ethernet network device.

➢ **Cable:** Through this port, you can connect the modem to coaxial cable.

➢ **Power**: The power plug where you will connect the power adapter.

2.3   Installation Environment

➢ The Product should not be located where it will be exposed to moisture or excessive heat.

➢ Place the Modem in a location where it can be connected to the various devices as well as to a power source.

➢ Make sure the cables and power cord are placed safely out of the way so they do not create a tripping hazard.

➢ The Modem can be placed on a shelf or desktop.

➢ Keep away from the strong electromagnetic radiation and the device of electromagnetic sensitive.

➢ The product should be connected to cable distribution system that grounded (earthed) in accordance with ANSI/NFPA 70, the National Electrical Code (NEC), in particular Section 820.93 - Grounding of Outer Conductive Shield of a Coaxial Cable.

Chapter 3. Connecting the Modem

3.1 System Requirements

➢ Broadband Internet Access Service (Cable).

➢ PCs with a working Ethernet Adapter and an Ethernet cable with RJ45 connectors.

➢ TCP/IP protocol on each PC.

➢ Web browser, such as Microsoft Internet Explorer, Mozilla Firefox or Apple Safari.

3.2 Connecting the hardware

Before installing the device, please make sure your broadband cable service provided by your ISP is available. If there is any problem, please contact your ISP. Before cable connection, cut off the power supply and keep your hands dry. You can follow the steps below to install it.

Step 1: Connect the coaxial cable to the modem.

**Step 2:** Connect the power adapter to the modem.

Step 3: Connect your computer to the modem using an Ethernet cable.

If you want to share the Internet access, connect a router to the modem instead.

For additional configuration, log into the web interface at http://192.168.100.1, and enter admin (all lowercase) for both username and password.

☞ **Note:**

The product should be connected to cable distribution system that grounded (earthed).
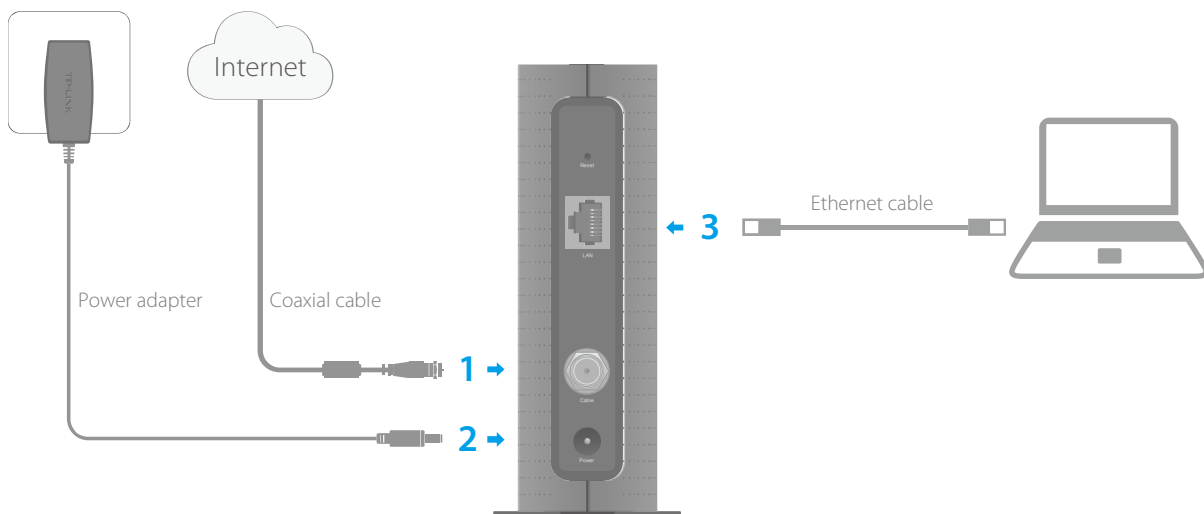
Chapter 4. Software Configuration

This User Guide recommends using the "Quick Installation Guide" for first-time installation. If you want to know more about this device, maybe you will get help from this chapter to configure the advanced settings through the Web-based Utility.

4.1 TCP/IP Configuration

The default IP address of the **TC-7610** DOCSIS 3.0 Cable Modem is 192.168.100.1. And the default Subnet Mask is 255.255.255.0. we use all the default values for description.

Connect the local PC to the LAN port of the modem. And then you can configure your PC in the following way.

1) Set up the TCP/IP Protocol in "**Obtain an IP address automatically**" mode on your PC. If you need instructions as to how to do this, please refer to Appendix C: Configure the PC.

2) Then the built-in DHCP server will assign IP address for the PC.

Now, you can run the Ping command in the command prompt to verify the network connection. Please click the **Start** menu on your desktop, select **run** tab, type **cmd** or **command** in the field and press **Enter**. Type *ping 192.168.100.1* on the next screen, and then press **Enter**.

If the result displayed is similar to the screen below, the connection between your PC and the modem has been established.

```
Pinging 192.168.100.1 with 32 bytes of data:

Reply from 192.168.100.1: bytes=32 time<1ms TTL=64
Reply from 192.168.100.1: bytes=32 time<1ms TTL=64
Reply from 192.168.100.1: bytes=32 time<1ms TTL=64
Reply from 192.168.100.1: bytes=32 time<1ms TTL=64

Ping statistics for 192.168.100.1:
    Packets: Sent = 4, Received = 4, Lost = 0 (0% loss),
Approximate round trip times in milli-seconds:
    Minimum = 0ms, Maximum = 0ms, Average = 0ms
```

If the result displayed is similar to the screen shown below, it means that your PC has not connected to the modem.

You can check it following the steps below:

1) **Is the connection between your PC and the modem correct?**

The LEDs of LAN port which you link to the device and the LEDs on your PC's adapter should be lit.

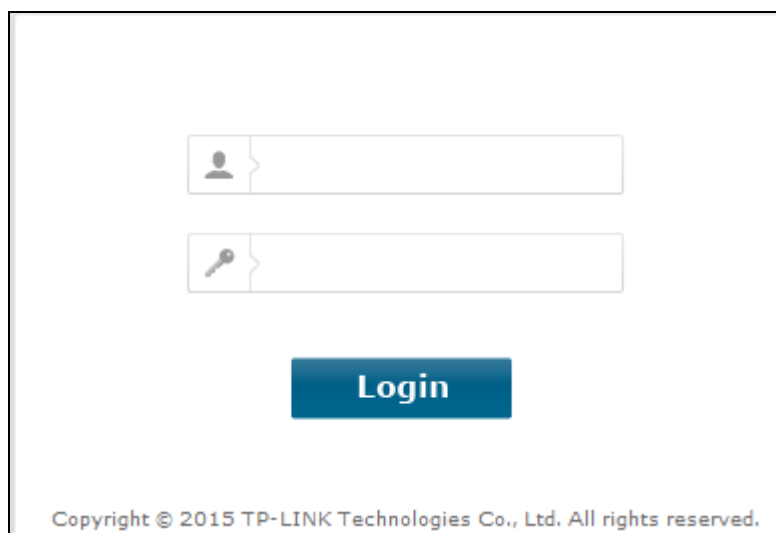**2)** **Is the TCP/IP configuration for your PC correct?**

Make sure the computer connected to the modem is set to dynamically obtain an IP address.

4.2   Login

To access the configuration utility, open a web-browser and type the default address 192.168.100.1   in the address field of the browser.

After a moment, a login window will appear, similar to the Figure 3-2. Enter **admin** for the Username and Password, both in lower case letters. Then click the **Login** button or press the Enter key.

Then you can see the current status information about the modem in this page.

4.3 Status

There are four submenus under the Status menu, **Connection, Software, Security** and **Event Log.** Click any of them, and you will be able to configure the corresponding function.

4.3.1 Connection

Choose menu "**Status → Connection**", you can see the information of startup procedure, downstream/upstream bonded channels and time information.

4.3.2 Software

Choose menu "**Status** → **Software**", you can see the device information and system information.

Software Information
This page displays information on the current system software.

Device Information

Standard Specification Compliant	DOCSIS 3.0
Hardware Version	1.0
Software Version	v1.0.1 Build 20150308 Rel62000
Cable Modem MAC Address	c4:e9:84:f8:b6:8f
Cable Modem Serial Number	TPLT001212350
CM certificate	Installed

System Information

System Up Time	0 days 00h:01m:41s
Network Access	Denied
Cable Modem IP Address	---.---.---.---

4.3.3 Security

Choose menu "**Status** → **Security**", you can see the screen below. Here you can set a new password to log in the modem's web-based management page.

Security
This page allows configuration of administration access privileges.
Current Password
New Password
Re-Enter New Password
Apply

4.3.4 Event Log

Choose menu "**Status** → **Event Log**", you can view and clear the logs of the modem.

SNMP Event Log
This page displays the contents of the SNMP event log.

Time	Priority	Description
	Clear Log	

➢ **Clear Log –** Click to delete all the logs.

Chapter 5. Logout

Choose "**Logout**" and click **Back to Login**, and you will back to the login screen.

Logout
You are now logged out.
Back to Login
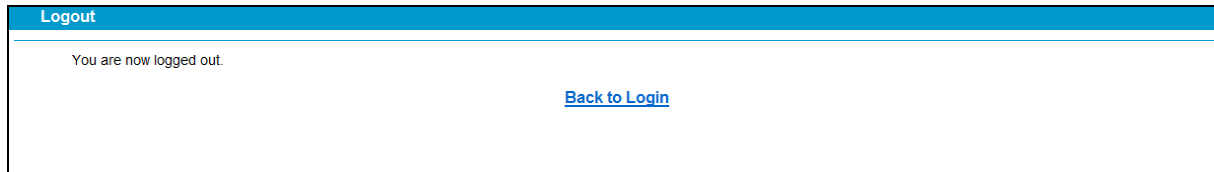
Appendix A: Specifications

Specification		
Product Description	DOCSIS 3.0 Cable Modem	
Physical Specifications		
Interface	1 F-Connector (female 75 Ω)	
	1 10/100/1000 Mbps Ethernet Interface (RJ45)	
	1 Power Jack	
Button	1 Reset Button	
DOCSIS Features		
Standards	DOCSIS 3.0, EuroDOCSIS 3.0	
Capture Bandwidth	Full Band Capture windows	
MoCA Reject Filter	Internal MoCA Reject Filter	
Downstream		
Channel Bonding	Up to 8	
Maximum Data Rate	Up to 445 Mbps	
Bonded Channel RF	Level Tolerance	10dBmV
	Input Impedance	75 Ω
Frequency Range	108 to 1006 MHz (edge to edge)	
Frequency Plan	Annex A	
Security	DOCSIS/EuroDOCSIS 3.0 Security (BPI+, EAE, SSD)	
Upstream		
Channel Bonding	Up to 4	
Maximum Data Rate	Up to 143 Mbps	
Output Impedance	75 Ω	
Frequency Range	5-65 MHz (edge to edge),	
Network Function		
IP Stack	Supports IPv4 and IPv6 dual stack	
DHCP	DHCP Client	
VPN Passthrough	PPTP, L2TP, IPSec	
Muticast	Support IGMP v1/v2/v3	
Flow Control	802.3x flow control at the UNI	
Management and Maintance		
Managed by Web and TFTP		
Reset to Factory default by Reset button		
Real-time statistics、System Log		
Others		
Safety, Emission and others	CE	
	RoHS compliant	

Protocol Support	Network: IP, ICMP, ARP Transport: TCP, UDP Application: TFTP,DHCP, ToD	
Power	Input	12VDC/1A
Environment	Operating Temperature	32 °F to 104 °F (0 °C to 40 °C)
	Storage Temperature	−22 °F to 158 °F (−30 °C to 70 °C)
	Operating Humidity	5 to 95% R.H. (non-condensing
	Storage Humidity	5%~95% non-condensing

Appendix B: Troubleshooting

T1. What can I do if I cannot access the Internet?

1) Make sure that all cables are connected properly and securely to the modem.

2) Contact your ISP to verify the modem is activated. If the modem is not activated, your ISP will activate it for you.

3) Check the device that is connected to the modem and make sure that the device is set to obtain an IP address automatically.

4) Power cycle the cable modem by unplugging the power adapter from the electrical outlet and plugging it back in.

5) Reset the cable modem. Please refer to Troubleshooting > T4 for instruction.

6) Contact our Technical Support if the problem persists.

T2. What can I do if the login page of the modem's web interface does not appear?

1) Check if the computer is set to a static for fixed IP address. If so, change the setting to obtain an IP address automatically.

2) Make sure http://192.168.100.1 is correctly entered in the web browser.

3) Use another web browser.

4) Unplug and reconnect both ends of the Ethernet cable.

T3. How can I reset the password to the modem's web interface?

If you have changed the password and have forgotten it, refer to T4 to reset the modem. This will reset the password back to **admin**.

T4. How do I restore the modem to its factory default settings?

With the modem powered on, press and hold the **Reset** button on the rear panel of the modem until all LEDs turn on momentarily, then release the button.

T5. How can I reset the password to the cable modem's web interface?

If you have changed the password and have forgotten it, you must restore the cable modem to the factory defaults. This will reset the password back to admin.

☞ **Note:**

For more details about Troubleshooting and Technical Support contact information, please log on to our Technical Support Website: **http://www.tp-link.com/en/support**

Appendix C: Configure the PC

In this section, we'll introduce how to install and configure the TCP/IP correctly in Windows 7. First make sure your Ethernet Adapter is working, refer to the adapter's manual if needed.
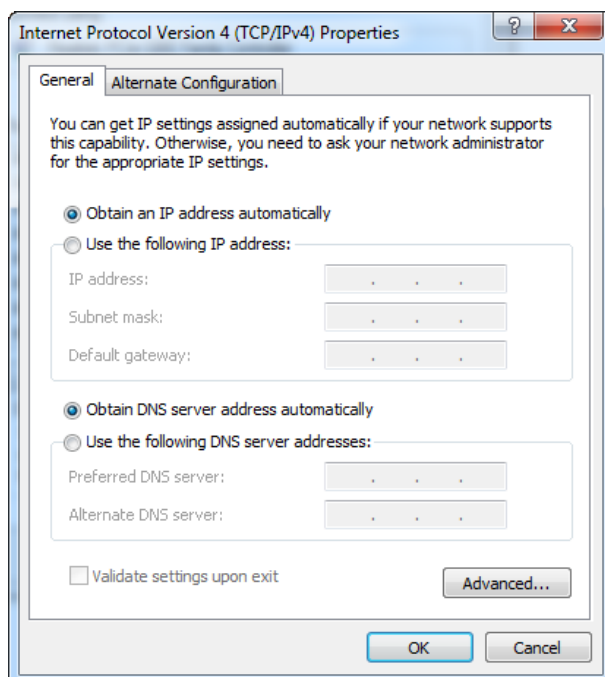
1. On the Windows taskbar, Right-click Network icon![icon], and select Open Network and Sharing Center > Change adapter settings.

2. Right-click your wired network connection (Local Area Connection or Ethernet by default), and select Properties.
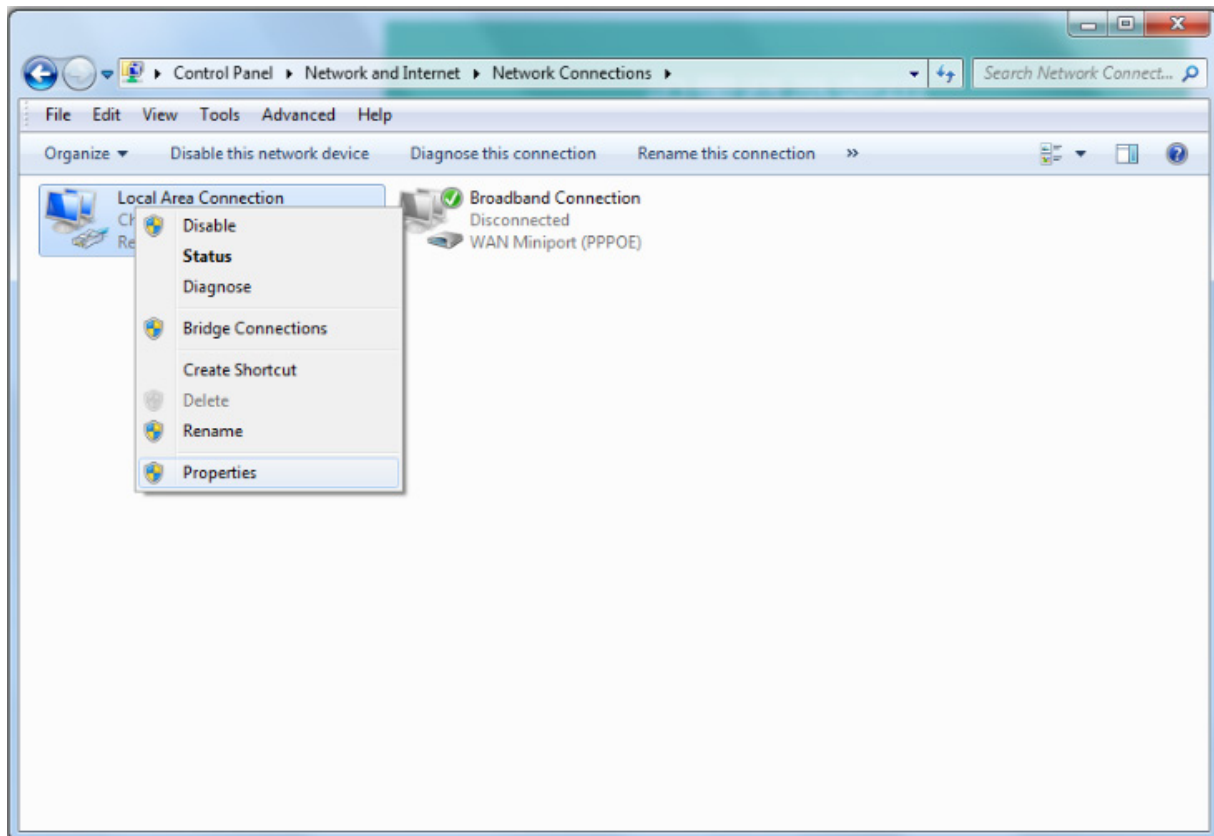
3. Double-click Internet Protocol Version 4 (TCP/IPv4).
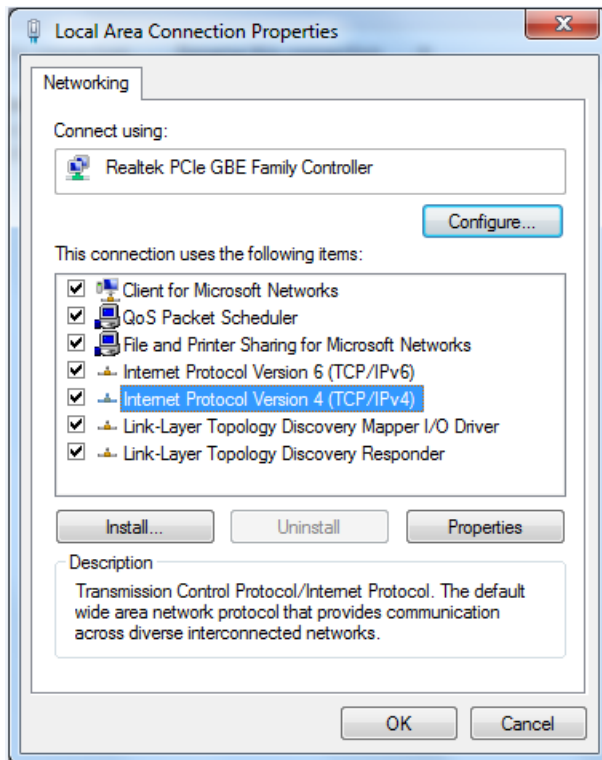
4. Select Obtain an IP address automatically and Obtain DNS server address automatically.

5. Click OK to save the settings.