Residential VoIP Cable Modem
Quick Start Guide

Chapter 1: Introduction

TCG220-Tdp is a Full Band Capture Front End Cable Voice and Wireless Gateway which has an 802.11 b/g/n access point that gives you wireless connection to the Internet with 2 Giga Ethernet ports which further expand the Local Area Network (LAN) capabilities.

If you have subscribed to phone services from your cable operator then you will be able to place normal phone calls using your analogue phone and/or fax machine. TCG220-Tdp provides one RJ-11 connector for your phone or home phone system.

TCG220-Tdp will give you broadband Internet access, telephone connection and wireless networking all in one unit. Besides that, this residential cable gateway offers Firewall for additional protection and security and VPN (virtual private network).
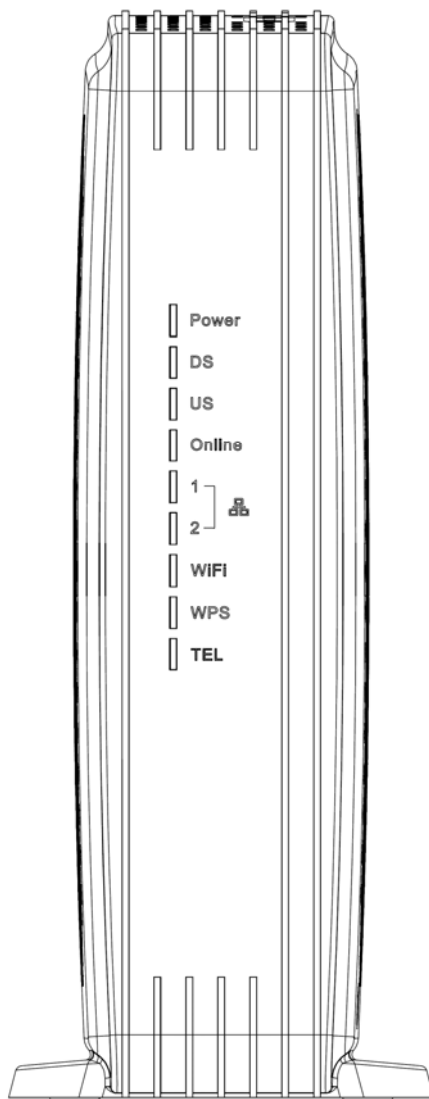
Package Contents

Package Contents	**x1**
TCG220-Tdp WiFi EMTA	**x1**
Ethernet Cable	**x1**
Power Adaptor	**x1**
QIG	**x1**
Warranty card	**x1**

Chapter 2: Overview

Front Panel

The following illustration shows the front panel of the EMTA:
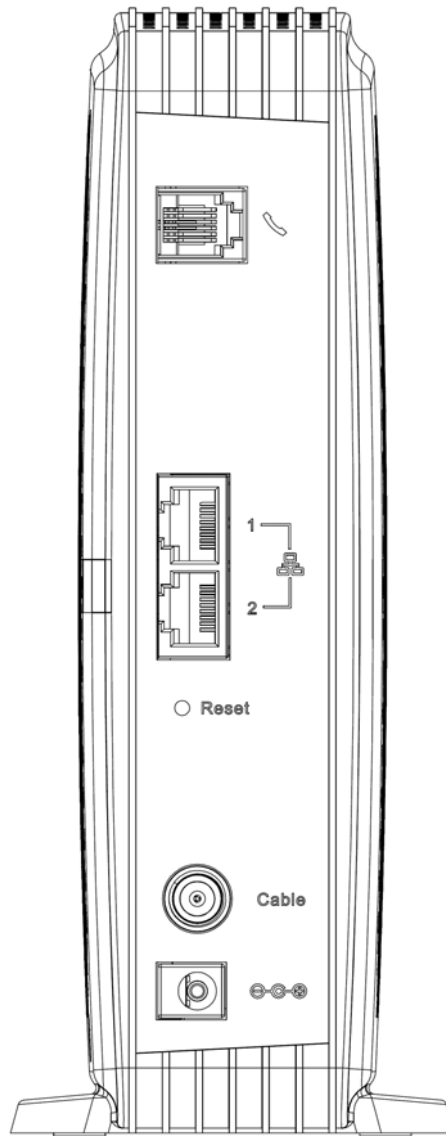

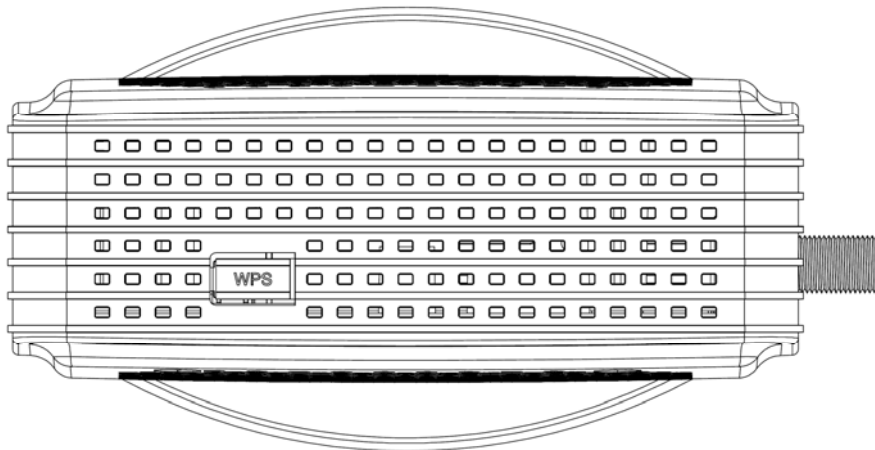|	
Power	Indicates the Power status.
DS	Indicates the status of Data reception by the cable modem from the Network (Downstream Traffic)
US	Indicates the status of Data transmission by the cable modem to the Network (Upstream Traffic)
Online	Displays the status of your cable connection. The light is off when no cable connection is detected and fully lit when the modem has established a connection with the network and data can be transferred
Ethernet	Indicates the state of Ethernet ports
WIFI	Indicates the traffic on the wireless network
WPS	Indicates the status of the WPS functionality
TEL	Indicates the status of the telephone Phone

There will be 9 LEDs on PKE1320SW-D112(US-Tdp-RoHS) / TCG220-TdP, but DS and US are bi-color LED. Looking at LED from top to bottom: Power, DS(bi-color), US(bi-color), Online, Ethernet 1,2, WiFi , WPS, TEL.

	Power	DS (green color)	DS1 (blue color)	US (green color)	US1 (blue color)	Online	Eth1	Eth2	Wifi	WPS	TEL	
Power Up	ON	X	X	X	X	X	X	X	X	X	X	Indicate Power On or OFF
Firmware fail	Flash	X	X	X	X	X	X	X	X	X	X	If during this process, the FW isn't in the CPE or there is a FW error and the CPE isn't going to be able to boot, one of the led will blinking.
Connect LAN1	ON	X	X	X	X	X	ON	X	X	X	X	When CPE device (PC) is connect to LAN1
LAN1 traffic	ON	X	X	X	X	X	Flash	X	X	X	X	When there is traffic, Eth1 LED will flash.
Connect LAN2	ON	X	X	X	X	X	X	ON	X	X	X	When CPE device (PC) is connect to LAN2
LAN2 traffic	ON	X	X	X	X	X	X	Flash	X	X	X	When there is traffic, Eth2 LED will flash.
CM boot cycle	ON	Flash	OFF	Flash	OFF	Flash	X	X	X	X	OFF	From Power on to system initial complete
DOCSIS operation	ON	Flash	OFF	OFF	OFF	OFF	X	X	X	X	OFF	During DS scanning and acquiring SYNC
	ON	ON	OFF	OFF	OFF	OFF	X	X	X	X	OFF	Complete synchronization of primary DS
	ON	ON	ON	OFF	OFF	OFF	X	X	X	X	OFF	Register as DS bonding mode(2ch or more)
	ON	ON	ON	Flash	OFF	OFF	X	X	X	X	OFF	After primary DS locked, process of ranging
	ON	ON	ON	ON	OFF	OFF	X	X	X	X	OFF	Ranging complete
	ON	ON	ON	ON	ON	OFF	X	X	X	X	OFF	Register as US bonding mode(2ch or more)
	ON	ON	ON	ON	ON	Flash	X	X	X	X	OFF	After US ranging complete, process of communication between DOCSIS provision server
	ON	ON	ON	ON	ON	ON	X	X	X	X	OFF	CM online(Operational)
MTA operation	ON	ON	X	ON	X	ON	X	X	X	X	Flash	MTA provision
	ON	ON	X	ON	X	ON	X	X	X	X	ON	MTA online(Operation)
Flash upgrade	ON	Flash	X	Flash	X	X	X	X	X	X	X	During SW upgrade
Factory reset	Flash	Flash	X	Flash	X	Flash	X	X	X	X	X	When performing factory reset, the device shall feedback to the user by a 2Hz blinking for during the perform of the factory reset
WiFi enable	X	X	X	X	X	X	X	X	ON	X	X	When WiFi is enabled, the WiFi LED will ON.
WiFi disable	X	X	X	X	X	X	X	X	OFF	X	X	When WiFi is disabled, the WiFi LED will OFF.
WiFi traffic	X	X	X	X	X	X	X	X	Flash	X	X	When there is traffic, the WiFi LED will Flash.
WPS Running	X	X	X	X	X	X	X	X	X	Flash	X	When there is a long press (>5seconds), the WPS process will initiate and the WPS LED will start to Flash.
WPS idle	X	X	X	X	X	X	X	X	X	OFF	X	

Rear Panel Connector Description

Slot	Description
12VDC	12V DC-IN Power connector
CABLE	F-Connector
RESET	Reset/Reboot this Cable modem
ETHERNET 1 2	Ethernet 10/100/1000 BaseT RJ-45 connector
TEL	Telephony RJ-11 connector

WPS – Indicates the status of the WPS (Wi-Fi Protected Setup^{TM}) functionality.

There is one WPS button on the Top Side Panel of TCG220-Tdp and is designed to have multiple function. This button can be used to:

Securely and Simply Get WiFi Client Connected: WPS button can be used to pairing WiFi client which also supports WPS function. A long press (press more than 5 seconds) on the WPS button will enable TCG220-Tdp scan for any available WPS device.

Note: You must ensure that the WiFi client device supports WPS function in order to use this WPS function on TCG220-TdP.

3. Connecting the Residential VoIP cable modem to Your Computer

Installation Procedure for Ethernet Interface

Follow the steps below for proper installation:

1. Connect one end of the coaxial cable to the **CABLE** connection on the wall, and the other end to the CABLE jack on the TCG220-Tdp.

Note: To speed up the registration process of cable modem, the coaxial cable should be connected to the modem before the modem turned ON

2. Connect the plug from the power supply into the **POWER** jack on the TCG220-Tdp, and plug the power supply into an AC outlet.

Note: Use only the power supply that accompanied this unit. Using other adapters may damage the unit.

3. Connect one end of the Ethernet cable to the Ethernet port of your computer, and the other end to the **ETHERNET** port on the TCG220-Tdp.

4. The TCG220-Tdp will look for the proper cable modem signal in the Cable Television network and process the initial registration. The voice gateway is ready for data transfer after the LED "Cable Link" is lit solid green.

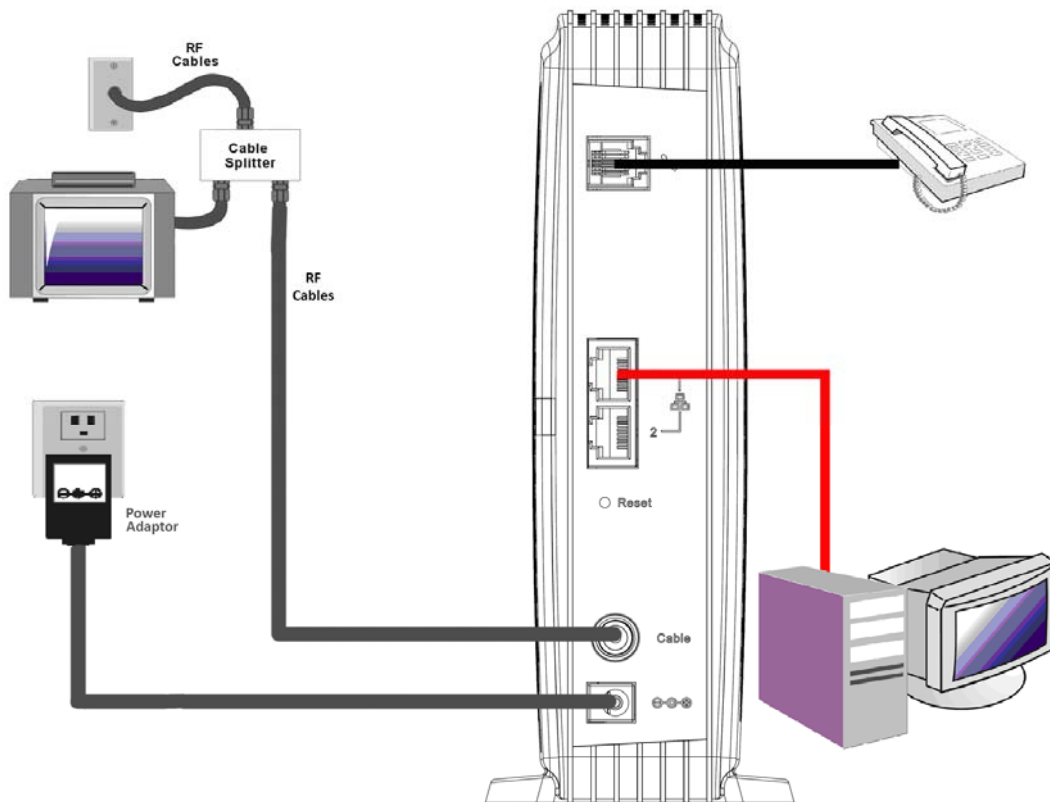**Note: The REBOOT button at the rear panel is for maintenance purposes only. You don't need to use it.**

Fig. How to set up your connection

CAUTION for UL

North American Cable Installer:

This reminder is provided to call your attention to Article 820.93 of the National Electrical Code (Section 54 of the Canadian Electrical Code, Part 1) which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.

This symbol on your set guarantees that your product complies with the European Directives 1999/5/EC and 2009/125/EC on Safety, Telecom, Electromagnetic Compatibility and Energy using Products.

Federal Communication Commission Interference Statement

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.

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 transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

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.

Note: The country code selection is for non-US model only and is not available to all US model. Per FCC regulation, all WiFi product marketed in US must fixed to US operation channels only.