Samsung Advanced Wireless Gateway User Guide

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- . The basic settings are provided by the manufacturer and service provider.
- . The manual is intended to provide a basic guide for personal settings.

Document Content and Organization

This manual consists of ten Chapters, which are summarized as follow:

Chapter 1. This chapter describes the contents in the package and system requirements. It also provides an overview of the gateway's front, rear, and bottom panels.

Chapter 2. This chapter describes how to install the gateway.

Chapter 3. This chapter describes how to configure the gateway.

Chapter 4. This chapter describes how to understand the LEDs.

Chapter 5 – This chapter describes how to configure the gateway for advanced users.

Chapter 6 – This chapter provides troubleshooting information you can use in the unlikely event you encounter a problem with the gateway.

Conventions

The following paragraph contains special information that must be carefully read and thoroughly understood. Such information may or may not be enclosed in a rectangular box, separating it from the main text, but is always preceded by an icon and/or a bold title.



ΝΟΤΕ

Indicates additional information as a reference.

Chapter 1. Advanced Wireless Gateway Overview

1.1 Introduction

This chapter provides an overview of Samsung Advanced Wireless Gateway(AWG) features, indicators, and connectors to help you become familiar with the Advanced Wireless Gateway. This chapter also lists the accessories and equipment that are provided with the Advanced Wireless Gateway so you can verify that you received all of these items.

1.2 Features

This section provides a brief overview of the features of Samsung Gateway.

WAN connection features (DOCSIS 3.0/3.1)

- . 5 Gbps Downstream at 5 ~ 85 MHz frequency range.
- . 700+ Mbps Upstream at 5 ~ 85 MHz frequency range.

LAN connection features

- . MoCA 2.0 to interconnect your local MoCA devices via your coax network in home.
- . Four 10/100/1000BASE-T Ethernet ports for your local home network devices.
- . Wireless access point for your local home network devices via the integrated IEEE 802.11n 2.4 GHz and IEEE 802.11ac 5 GHz.
- . Firewall deters hackers and protects the home network from unauthorized access via Router Function.

Wi-Fi connection features

- . Dual Band Concurrent in mode 802.11a/b/g /n/ac
- . Wi-Fi 5GHZ ac 4x4 mode (4Tx, 4Rx) with MU-MIMO
- . Wi-Fi 2.4GHZ n 3x3 mode (3Tx, 3Rx) with MIMO

Fax/Telephony connection features

. Two-line RJ-11 telephony ports for connecting to traditional telephones or fax machines

Design and Additional Function

- . Elegant, compact cube type design
- . LED status indicators on the front panel, providing an easy-to-understand display that indicates the operational status

Management

- . The Web UI allows you to configure your Gateway and network via your web browser.
- . Allows software upgrades by your service provider via TR-069 methods or CableModem

1.3 What's is in the box?

When you receive Samsung AWG, you should check the equipment and accessories to verify that each item is in the box and that each item is undamaged.

Items of the box can be changed by by your service provider. Basically, the box contains the following items:

- . Advanced Wireless Gateway
- . Power Code
- . 35W Adpter for only Samsung Gateway

1.4 Front Panel



1. WPS (WIRELESS PROTECTED SETUP)—OFF (normal condition) Wireless Protected Setup is not active. Blinking indicates the button has been pressed and WPS is active so that a new wireless client can be added to the wireless network.

2. POWER—ON, power is applied to the Residential Gateway. OFF when power is off to the Residential Gateway.

3. DS—ON, the Gateway is exchanging data with the cable network. Blinking indicates the downstream scan is in progress.

4. US—ON, the Gateway is exchanging data with the cable network. Blinking indicates the upstream scan is in progress.

5. ONLINE—ON, the Gateway is registered on the network and fully operational. OFF indicates the Gateway has not registered on the network.

6. WiFi **2.4 G**—ON, the wireless access point is operational. Blinking indicates that data is being transferred over the wireless connection. OFF indicates that the wireless access point is not enabled.

7. WiFi 5 G—ON, the wireless access point is operational. Blinking indicates that data is being transferred over the wireless connection. OFF indicates that the wireless access point is not enabled.

8. TEL1—ON indicates telephony service is enabled. Blinks when line 1 is in use. OFF indicates that phone service for TEL 1 is not enabled.

9. TEL2—ON indicates telephony service is enabled. Blinks when line 2 is in use. OFF indicates that phone service for TEL 2 is not enabled.

10. MoCA— ON, MoCA is operational. Blinking indicates that data is being transferred over the MoCA connection. OFF indicates that the MoCA is not enabled.

1.5 Back Panel



1. RESET—A momentary pressing (1-2 seconds) of this switch restarts the device. To press this switch, insert a thin object, such as a paper clip, into the RESET port; then press and hold the switch for more than ten seconds to reset all settings to their factory-settings and then restart the device.

2. USB — Connects the Residential Gateway to selected devices. For models that support USB, the default is one USB port.

3. TEL1 and TEL2—RJ-11 telephone ports for connecting telephones, fax machines, and/or an analog home alarm system.

4. ETHERNET—Four RJ-45 Ethernet ports allow connection to the Ethernet port on your PC or network device.

5. CABLE/MoCA—F-connector connects to your home coax network to provide Cable and MoCA service.

6. POWER—Connects the Gateway to the Samsung only Adpter with 35W.

1.6 Bottom panel

Product label (item A)

The label on the bottom of the Gateway contains information about your Gateway, like:

- Device information
- Wireless security settings



SSID 1 NAME(2.4Ghz) is the network name of the 2.4 GHz access point and is of the following format: MC990CLXXXX-2.4G (where X is an alphanumeric character).

SSID 2 NAME(5Ghz) is the network name for the 5 GHz access point and is of the following format: MC990CLXXXX-5G (where X is an alphanumeric character).

Wi-Fi Password(2.4/5G) is the WPA2-PSK password for the 2.4/5 GHz access point and is of the following format: GXMC990XXXXXX (where X is an alphanumeric character).

1.7 Gateway for the Installation

The ideal location for your Gateway is where it has access to adpter and other devices. Think about the layout of your home or office, and consult with your service provider to select the best location for your Gateway. Read this user guide thoroughly before you decide where to place your Gateway. Consider these recommendations:

- Choose a location close to your computer if you will also use the Gateway for high-speed Internet service.
- Choose a location that is near an existing RF coaxial connection to eliminate the need for an additional RF coaxial outlet.
- Choose a location that is relatively protected from accidental disturbance or harm, such as a closet, basement, or other protected area.
- Choose a location so that there is plenty of room to guide the cables away from the Gateway without straining or crimping them.

Choose a location that allows adequate ventilation around the Gateway.

Choose a location for the Residential Gateway that is adjacent to your telephone equipment if you plan on connecting your phone directly to the Gateway.

Chapter 2. Installing the Advanced Wireless Gateway

2.1 Introduction

This chapter provides how to properly install the Advanced Wireless Gateway to your service provider's network and to connect the Advanced Wireless Gateway to your PC and your other IT devices.

2.2 Connect the Wireless Gateway

Connecting Coax Cable to your cable splitter and the Gateway

- 1. Choose an appropriate and safe location to install the Gateway.
- 2. Power off your PC and other IT device.
- 3. Connect the active RF coaxial cable from your service provider to the coax connector labeled CABLE/MoCA on the back of the Wireless Gateway.
- 4. If your Wireless Gateway supports telephone service , connect one end of a telephone jumper cable to a telephone outlet in your home. Then connect the other end of the jumper cable to the appropriate RJ-11 TEL1 or TEL2 port on the back of the Wireless Gateway.
- 5. Connect your PC to the Wireless Gateway using the Ethernet Connection or the Wireless Connection.
- 6. Connect the DC jack end of the Adapter into the DC plug on the back of the Gateway. Connect the power code to adpter and an electrical outlet.

The Wireless Gateway will perform an automatic search to locate and sign on to the broadband data network. This process may take up to 2-5 minutes. The Wireless Gateway will be ready for use when the Power, DS,US, and Online LEDs on the front panel of the Wireless Gateway stop blinking and remain on continuously.

7. If your wireless devices uses wireless networking, the WiFi 2.4 G or WiFi 5 GHz LED on the Wireless Gateway should be on or blinking.

8 Finally, the installation is complete, and you can begin surfing the Internet sites.

An example of connection diagram is shown in the below figure.



2.3 Connect your wireless Note PC

The Gateway has two access points that allows you to connect wireless devices to your home network:

The 5 GHz (4x4) IEEE 802.11ac access point offers superior transfer rates, is less sensitive to interference and allows you to connect IEEE802.11a/n/ac wireless clients.

The 2.4 GHz (3x3) IEEE 802.11n access point allows you to connect IEEE802.11b/g/n wireless clients. Use this access point for wireless clients that don't support 5 GHz.

2.3.1 How to connect your wireless Note PC

Requirements

Your network device must be equipped with a wireless client.

Your network device must be configured to obtain an IP address automatically. This is the default setting. Procedure

If you want to connect a computer using the wireless network, configure the wireless client on your computer with the wireless

settings printed on the Gateway's side or back panel label.

For the network name, two values are available:

Network Name 1 (SSID) is the network name of the 5 GHz access point and is of the following format: MC990CLXXXX-2.4G (where X is an alphanumeric character).

Network Name 2 (SSID) is the network name for the 5 GHz access point and is of the following format: MC990CLXXXX-5G (where X is an alphanumeric character).

The password is common for both access points.

To configure these settings on Windows 7.

Proceed as follows:

1 Click the wireless network icon in the notification area.

2 A list of available wireless networks appears.



Double-click the Gateway access point.

The Gateway is listed with the MC990CLXXXX-2.4G and MC990CLXXXX-5G which is printed on the Gateway's bottom side.

3 Windows prompts you to enter the security key.

Type the Password which is printed on the Gateway's bottom panel label in the Security key and click OK.

Connect to a Net	work	×
Type the netwo	ork security key	
Security key:	Hide characters	
	OK	cel

4. And then, the wireless Note PC is connected to the Gateway



CHAPTER 3. Basic Gateway Configuration

3.1 Introduction

In this chapter, the basic gateway configuration using web and how to use Web UI is described.

3.2 Using Web UI

3.2.1 Web UI Connection

1. Open your web browser and browse to http://192.168.0.1, using a computer or device that is currently connected to you Gateway (either wired or wirelessly).

 The Gateway prompts you to enter the username and password. Enter your user name (default: admin) and password (default:admin) and click OK.
 Input the password of the Gateway that you got from your system default.

(Default ID and Passwd : admin/admin, support/support, user/user)

er name and password will be sent using basic n a connection that isn't secure.
a connection that isn't secure.
user
user
Password
Remember my credentials

3.2.2 Wireless Gateway Main Window.

The Gateway Main window consists of menu bar, sub-menus, and detail windows of each menu.

SAMSUNG Data Gateway	GX-MC990CL	
Device Info	Device Info	
WAN	Board ID:	BCM93390SMWVG
LAN	Symmetric CPU Threads:	2
Statistics	Build Timestamp:	20170207_1728
ARP	Software Version:	S-MC990CLDKUC-0010
DHCP	Linux Version:	3.14.28-rgProd_6.1.2
dvanced Setup	Wireless Driver Version:	7.14.164.303 (r666427 WLTEST)
Wireless	Uptime:	0D 2H 4M 19S
management Network Topology	Systime:	1970-01-01T02:04:18-00:00
Spectrum Analyzer WiFi Visualization Cable Modem Docsis MTA	This information reflects the c WAN Hardware Address:	urrent status of your WAN connect 00:16:68:FF:A4:0A 00:16:6b:ff:a4:08
Logout	LAN Hardware Address:	00:16:6B:FF:A4:0B

3.2.3 Managing Operator Account

After the first login, you go through the course of changing the password via Access Control Menu.

Configuration using Web UI

In the menu of **<Management >**, select **<Aceess Control >** and then select the **<Passwords>** menu in the sub-menus. When you enter ID/PW values and click the **<Apply/Save>** button, the configuration is applied.

Device Info	Access Control Passwords
Advanced Setup Wireless	Access to your broadband router is controlled through three user accounts: admin, support, and user.
Management	The user name "admin" has unrestricted access to change and view configuration of your Broadband Router.
Settings Internet Speed Test	The user name "user" can access the Broadband Router, view configuration settings and statistics, as well as, update the router's software.
System Log	Use the fields below to enter up to 16 characters and click "Apply/Save" to change or create passwords. Note: Password cannot contain a space.
Security Log	
Internet Time	User Name:
Access Control	Old Password:
Passwords	New Password:
Network Topology	Confirm Password:
Spectrum Analyzer	
WiFi Visualization	Apply/Save
Cable Modem Docsis	

3.2.4 Managing the Gateway for the Wireless Network

The Gateway supports 2 primary wireless network (2.4G/5G) and 6 multiple guest networks in each one primary wireless network.

Configuration Primary Wireless Network

Device Info Advanced Setup Wireless 5GHz	Wireless Basic This page allows you to configure basic features of the wireless LAN interface. You can enable or disable the wireless LAN interface, hide the network from active scans, set the wireless network name (also known as SSID) and restrict the channel set based on country requirements. Click "Apply/Save" to configure the basic wireless options.
Z.4002 Management Network Topology	Enable Primary Network
Spectrum Analyzer WiFi Visualization	Hide Access Point
Cable Modem Docsis MTA	Clients Isolation
Logout	Disable WMM Advertise
	Enable Wireless Multicast Forwarding (WMF)
	Enable DWDS
	SSID: MC990CLA2F0-5G
	BSSID: 00:16:68:FF:A2:F4
	Country: UNITED STATES
	Country Rev: 0
	Max Clients: 50
	Mode Required: None 🗸

1. In the menu of **<Wireless>**, select Primary Wireless Network (**<5GHz-Basic>** or **<2.4GHz-Basic>**) to configure.

- 2. Check/Uncheck "Enable Primary Network" check box to turn ON or OFF primary wireless network.
- 3. Check "Hide Access Point" check box to block broadcasting and hide primary wireless network.
- 4. Enter new SSID to change primary wireless network's name in SSID field.
 - -. 32 characters maximum (letters, numbers and/or special characters)
- 5. Click <Apply/Save> button to apply and save the changed configuration.

Device Info	Wireless - Guest/Virtual Access Points:										
Advanced Setup Wireless 5GHz	Enabled	SSID	Hidden	Isolate Clients	Disable WMM Advertise	Enable WMF	Enable DWDS	Max Clients	Mode Required	Guest Or LAN	BSSID
Basic		MC990CL_GUEST_0_1						50	None 🗸	LAN 🗸	N/A
Security MAC Filter		MC990CL_GUEST_0_2						50	None 🗸	LAN 🗸	N/A
Wireless Bridge Advanced		MC990CL_GUEST_0_3						50	None 🗸	LAN 🗸	N/A
Media		MC990CL_GUEST_0_4						50	None 🗸	LAN 🗸	N/A
Passpoint		MC990CL_GUEST_0_5						50	None 🗸	LAN 🗸	N/A
2.4GHz Management		MC990CL_GUEST_0_6						50	None 🗸	LAN 🗸	N/A
Network Topology Spectrum Analyzer WiFi Visualization Cable Modem Docsis MTA Logout	Apply/Save Restore Wireless Defaults Scan Wireless APs										

Configuration Guest Wireless Network

- 1. To enable guest network, check "Enabled" check boxes.
- 2. Enter new SSID to change guest wireless network's name in SSID field.
 - -. 32 characters maximum (letters, numbers and/or special characters)
- 3. Check "Hidden" check box to block broadcasting and hide guest wireless network.
- 5. Click **<Apply/Save>** button to apply and save the changed configuration.

Configuration Wireless Network Security – Manual Setup AP

Device Info Advanced Setup Wireless 5GHz Basic	Manual Setup AP You can set the network authenticat specify whether a network key is res Click "Apply/Save" when done.	tion method, selecting data encryption, juired to authenticate to this wireless network and specify the encryption strength
Security MAC Filter	Select SSID:	MC990CLA2F0-5G V
Wireless Bridge Advanced	Network Authentication:	WPA2-PSK 🗸
Media Station Info Passpoint 2.4GHz	WPA/WAPI passphrase: WPA Group Rekey Interval: WPA/WAPI Encryption:	3600 AES V
Management Network Topology Spectrum Analyzer WiFi Visualization Cable Modem Docsis	Protected Management Frame:	Off Apply/Save

- 1. In the menu of **<Wireless>**, select Security Menu (**<5GHz-Security>** or **<2.4GHz-Security>**) to configure wireless networks' security settings.
- 2. Select one of the following Network Authentication:
 - A. Open : allows access to the wireless network without security key.
 - B. WPA2 : uses an authentication server to generate keys or certificates.
 - C. WPA2-PSK : use Pre-Shared key(PSK) for encryption.
 - D. Mixed WPA2/WPA : combination Wi-Fi Protected Access version 2 and Wi-Fi Protected Access with using an authentication server to generate keys or certificates.
 - E. Mixed WPA2/WPA-PSK : combination Wi-Fi Protected Access version 2 with Pre-Shared Key and Wi-Fi Protected Access with Pre-Shared Key.
- 3. WPA/WAPI passphrase : Enter wireless network's password.
- 4. WPA/WAPI Encryption :
 - A. AES (Advanced Encryption Standard) : enhanced encryption type to WPA2 over WPA.
 - B. TKIP+AES(Temporal Key Integrity Protocol and Advanced Encryption Standard) : TKIP and AES encryption types are capable to access wireless network.
- 5. Protected Management Frame : Select "Capable or Required" to protect management frames such as authentication, de-authentication, association, dissociation.
- 6. Click **<Apply/Save>** button to apply and save the changed configuration.

Configuration Wireless Network Security – WPS (WiFi Protected Setup) Setup

Device Info Advanced Setup Wireless SGHz Basic	Wireless - Security This page allows you to configure security features of the wireless LAN interface. You may setup configuration manually through WRE Protected Setup(WRS) Where WMan both Stat BW and Windowsch WRC are amone. BRD is used 17 Hide Access Point anabled or Mar filter list is empty with "allow" chosen WRSD will be disabled
Security	Hotel when bear 514 1 are not Addressed hims are empty, the is decar at the Access form endored on hite methods is empty war anow endored, while an address
MAC Filter	
Wireless Bridge	WPS Setup
Advanced	[Deckloder]
Media	Enable WPS Enabled
Station Info	
Passpoint	Add Client (This feature is available only when WPA-PSK(WPS1), WPA2 PSK or OPEN mode is configured)
2.4GHz	
Management	
Network Topology	rep
Spectrum Analyzer	Set Authorized Station MAC
WiFi Visualization	Help
Cable Modem Docsis	

- 1. In the menu of **<Wireless>**, select Security Menu (**<5GHz-Security>** or **<2.4GHz-Security>**) to configure wireless networks' WPS setup.
- 2. Select "Enabled" to Enable WPS.
 - A. For WPS-PIN configuration, choose "Use STA PIN" radio button and enter Client's PIN number. Press "Add Enrollee" button and start Client's WPS PIN.

B. For WPS-PBC configuration, choose "Use STA PIN" radio button and empty both STA PIN and Authorized MAC. Press "Add Enrollee" button and start Client's WPS PBC.

Device Info	Wireless Advanced				
Advanced Setup Wireless 5GHz Basic	This page allows you to configure advanced features of the wireless LAN interface. You can select a particular channel on which to operate, force the transmission rate to a particular speed, set the fragmentation threshold, set the RTS threshold, set the wakeup interval for clients in power-save mode, set the beacon interval for the access point, set XPress mode and set whether short or long preambles are used. Click "Apply/Save" to configure the advanced wireless options.				
Security MAC Filter	Band:	5GHz 🗸			
Wireless Bridge Advanced	Channel: Auto Channel Timer(min)	15	Current: 36		
Media Station Info	802.11n/EWC:	Auto	Ouroach SMML		
Passpoint 2.4GHz	Control Sideband:	Lower V	Current: N/A		
Management Network Topology	802.11n Rate: 802.11n Protection:	Auto 🗸			
WiFi Visualization	RIFS Advertisement:	Auto 🗸			
MTA	OBSS Coexistence: 54g™ Rate:	6 Mbps V			
Logout	Multicast Rate:	Auto 🗸			

Configuration Wireless Network Channel/Bandwidth

- 1. In the menu of **<Wireless>**, select Advanced Menu (**<5GHz-Advanced>** or **<2.4GHz-Advanced>**) to configure wireless networks' radio configuration.
- 2. Select "Channel" and "Bandwidth" to improve wireless network interference and throughput performance.

CHAPTER 4. Gateway LED Status

4.1 Introduction

This chapter provides LED's status of front panel when the Advanced Wireless Gateway is power on, provisioning, normal status, and abnormal status.

Gateway LED indicates the various statuses of system. Each LED displays the following information:

POWER LED status is below table

POWER	LED State	Description				
	ON	The Gateway is power on when the DC input supplied				
	OFF	The Gateway is power off when the DC input don't				
		supplied				

CableMode start up LED sequence is table below.

CableModem	LED	Status	Description				
	DS	ON	Downstream looking is in completed				
		Blinking	Downstream looking is in progress				
		OFF	The Gateway is power off				
	US	ON	Upstream looking is in completed				
		Blinking	Downstream looking is in progress				
		OFF	The Gateway is power off				
	ONLINE	ON	Downstream and Upstream looking				
			are completed				
			The connection is completed on				
			internet				
		Blinking	Downstream and Upstream looking				
			are in progress				
		OFF	The Gateway is power off				

Wi-Fi connection LED sequence is table below.

Wi-Fi	LED	Status	Description
	WiFi 2.4G	ON	The Wi-Fi 2.4Ghz service is enabled
		Blinking	The data is being transferred in
			2.4Ghz over the wireless connection
		OFF	The 2.4Ghz Wi-Fi service is disabled
	WiFi 5G	ON	The Wi-Fi 5Ghz service is enabled
		Blinking	The data is being transferred in 5Ghz

		over the wireless connection
	OFF	The 5Ghz Wi-Fi service is disabled

Telephony and MoCA connection LED sequence are table below.

	LED	Status	Description
Telephony	TEL1/TEL2	ON	The telephone or fax is not in use
			(on-hook)
		Blinking	The telephone or fax is in use
			(off-hook)
		OFF	The telephony service is disabled
MoCA	MoCA	ON	The MoCA service is enabled
		Blinking	The MoCA network has traffice
		OFF	The MoCA service is disabled

Ethernet connection LED sequence of rear panel are table below.

	LED	Status	Description			
Ethernet	Orange	Blinking	Blinking while data exchanging			
		OFF	No data exchanging			
	Green	ON Link connection display				
		OFF	No link connection			

CHAPTER 5. Advanced Gateway Setup

5.1 Introduction

This chapter describes the setup procedures for the security related setting such as parental control And port control for IP application. It includes blocking or open function, remote access, firewall function, and more

5.2 Parental control

Keep your children safe online with the parental control rules for Gateway A max rules number is 64 entries.

SAMSUNG Data Gateway	GX-MC	990CL																
Device Info Advanced Setup	Access Time	Restriction Blackli	st A max	timum 64 e	ntries (can be	configure	d.										
WAR LAN NAT Security	Rulename	MAC Address	URL Keyword	Protocol	Start Port	End Port	Enabled	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Start (hh:mm in 24 hour format)	Stop (hh:mm in 24 hour format)	Edit	Remove
Time Restriction	Game	80:18:A7:90:18:C0	*	×	8	*	Yes	x						x	09:00	23:59	Edit	
Passthrough MAC Router Configuration Power Management									Add	Remove]							

The configuration windows is shown below. Click <Add> button for input values.

SAMSUNG Data Gateway	GX-MC990CL
Device Info Advanced Setup WAN LAN NAT Security Parental Control Time Restriction DNS Passthrough MAC Router Configuration Power Management Interface Grouping Wireless	Access Time Restriction This page adds time of day restriction to a special LAN device connected to the Router. By default, it will block WAN access for any URLs on the LAN device. If only want to block specific URLs, enable Advanced filtering. Rule Name: Game UPN Device MAC Address B0:18:A7:90:18:C0 Enable Advanced filtering Ventor Machine Control Con
Network Topology Spectrum Analyzer WiFi Yisaulization Cable Modem Docsis MTA Logout	Days of the week Sunday Menday Tuesday Wednesday Thursday Friday Saturday Click to select Image: Click tot select Image:

Configuration using Web UI

In the menu **Advanced Setup>**, select **Parental Control >**, select **Time Restriction >** and then select the **Add>** button .

Click Apply/Save after input Rule Name, MAC Address, days, and times, then user can configure the restricted service status.

5.3 Port Forwarding (virtual server)

Port forwarding opens certain ports on your home or small business network, usually blocked from access by your router, to the Internet. Opening specific ports can allow games, NAS servers, BitTorrent clients, and other applications to work through the usual security of your router that otherwise does not permit connections to these ports.

The port Forwarding has 32 entries.

← → @ http://192.168	0.1/ Q -	C SAMSUNG	Data Gateway	×						- □ × ≮
SAMSUNG Data Gateway	GX-MC990CL									
Device Info Advanced Setup WAN LAN NAT	NAT Virtual Servers Set Virtual Server allows you to c required only if the external p	tup lirect incoming traffic fro port needs to be conver	om WAN side (identifie ted to a different port	d by Protoc number use	ol and External port) to d by the server on the Add Remove	the Internal server wi LAN side. A maximum	th private IP address of 32 entries can be coni	on the LAN side. Th figured.	e Internal po	vrt is
Port Triggering	Server Name	External Port Start	External Port End	Protocol	Internal Port Start	Internal Port End	Server IP Address	WAN Interface	Remove	
DMZ Host ALG Configuration	NAS_HTTP	280	280	тср	80	80	192.168.0.13	wanbridge		
Security Parental Control DNS	NAS_FTP	221	221	ТСР	21	21	192.168.0.13	wanbridge		

Configuration using Web UI

In the menu of **<Advanced Setup** >, select **<NAT** > and then select the **<Virtual Servers>** menu in the sub-menus.

When you click the **<Add>** button in the Virtual Servers window, the servers creation window is displayed. When you enter a configuration value and click the **<Apply/Save>** button, the configuration is applied.

← → Ø http://192.168.0	0.1/ D + C 🧟 SAMSUNG Data Gateway ×
SAMSUNG Data Gateway	GX-MC990CL
Device Info Advanced Sotup WAN LAN NAT Vistual Sensers Dot Triggering DMZ Host ALG Configuration Security Parental Control DMS Passthrough MAC Router Configuration Power Management Interface Grouping Wireless Management Network Topology Spectrum Analyzer WHY Visualization Cable Modem Docsis HTA Logout	
	Apply/Save

5.4 port triggering

The Port Triggering is an advanced feature that can be used for gaming and other internet applications.

The Port Triggering setup window is displayed as below.

SAMSUNG Data Gateway	GX-MC990CL													
Device Info Advanced Setup WAN LAN NAT Virtual Servers	NAT Port Triggering Setup Some applications require that specific ports application on the LAN initiates a TCP/UDP of the application on the LAN side using the 'O	in the Router's firewall onnection to a remote pen Ports'. A maximum	be opened party using 32 entries o	for acce the 'Trig an be c	ss by ti gering onfigure Add	he remote p Ports'. The ed.	ve	ort Trig allows t	ger dynamically op he remote party fro	ens up the ' m the WAN	Open Ports' ir side to establ	1 the firewall 1 lish new conne	when an ections back	to
DMZ HJSt			Т	rigger		(Open							
ALG Configuration		Application Name	Protocol	Port F	Range	Dectored	Port F	Range	WAN Interface	Remove				
Parental Control			Protocol	Start	End	Protocol	Start	End						
DNS Passthrough MAC		battle	TCP	88	90	тср	88	1023	wanbridge					

Configuration using Web UI

In the menu of **<Advanced Setup >**, select **<NAT >** and then select the **<Port Triggering>** menu in the sub-menus.

When you click the **<Add>** button in the Port Triggering window, the triggering creation window is displayed. When you enter a configuration value and click the **<Apply/Save>** button, the configuration is applied.

vanced Setup										-					
VAN	Some applicat	ions such as ga	mes, video con	terencing, ren	note access ap	plications and ot	ners require tha	t specific	ports	the Ro	uter's fire	wall be ope	ned for access l	by the applicat	ions. You (
AN	Remaining n	umber of ent	ries that can b	e configure	d:31	ication of creatin	g your own (cu	scom app	ncatio		K Davej/	apply to au	016		
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Virtual Servers	Use Interface		wan-ip-inte	erface/war	nbridge 🗸										
Port Triggering	Application Na	ime:													
DMZ Ho	O Select	an application:	Select On	9	~										
ALG Configuration	O Custon	n application:	battle												
ecurity								6							
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assthrough MAC	Trigger Port	StartTrigger	Port End Trig	ger Protoco	Open Port	StartOpen Port	End Open Pr	otocol							
	88	90	TC	PV	88	1023	TCP	\sim							
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5.5 DMZ host

A DMZ (demilitarized zone) on a gateway refers to a DMZ Host. A gateway DMZ host is a host on the internal network that has all UDP and TCP ports open and exposed, except those ports otherwise forwarded. They are often used a simple method to forward all ports to another firewall/NAT device.

Configuration using Web UI

In the menu of **<Advanced Setup >**, select **<NAT >** and then select the

<DMZ Host> menu in the sub-menus.

When you enter a configuration IP value and click the **<Apply/Save>** button, the configuration is applied.

SAMSUNG Data Gateway	GX-MC990CL
Device Info Advanced Setup WAN LAN NAT Virtual Servers Port Triggering DMZ Hest ALG Conguration	NAT DMZ Host The Broadband Router will forward IP packets from the WAN that do not belong to any of the applications configured in the Virtual Servers table to the DMZ host computer. Enter the computer's IP address and click 'Apply' to activate the DMZ host. Clear the IP address field and click 'Apply' to deactivate the DMZ host. Note that the RG DMZ host only supports the TCP and UDP protocol types. DMZ Host IP Address: 192.168.0.11
Security Parental Control DNS	Save/Apply

CHAPTER 6. Troubleshooting the Gateway

6.1 Introduction

In this chapter, troubleshooting method are described.

6.2 Configuration TCP/IPv4 on Windows system (XP)

- 1. Open Network Connections by clicking the Start button, and then clicking Control Panel.
- 2. Selecting Network and Sharing Center, click View network connections as below.

Control Panel Home	View your basic network information	and set up connections	
/lanage wireless networks	🔊 — — — —	=	See full map
Change adapter settings	WIN-3ILGMT000KH MC990CL1	8C0-2.4G Internet	
Change advanced sharing settings	(This computer)		
	View your active networks Connect or disconnect		
	MC990CI 18C0-2 4G	Access type: No Internet access	
	Public network Co	Connections: M Wireless Netwo	rk Connection

3. Selecting the connection , you can see status as below.



4. Selecting the Properties , you can see networking protocol and then click **Internet Protocol Version 4 (TCP/IPv4)**



6.2 Reset/Restore the Gateway via the RESET button in Rear Panel

To reset the Gateway to factory defaults, you should press and hole the RESET button on the rear panel of Gateway for more five or seconds. You can also need to do this if a misconfigurations ha locaked out all access.

1 Make sure that the Gateway is turned on.

2 If you want to:

Reset the Gateway, use a pen or an unfolded paperclip to push the recessed Reset button on the back panel of the Gateway for approximately 5 seconds and then release it.

Restore the factory default settings of the Gateway, use a pen or an unfolded paperclip to push the recessed Reset button on the back panel of the Gateway for at least 15 seconds and then release it.

3 The Gateway can restart.

FCC Information

This device complies with part 15 of the FCC Results. Operation is subject to the following two conditions :

- (1) This Device may not cause harmful interface, and
- (2) This device must accept any interference received, including interference that

may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for CLASS B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment 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 correct the interference by one or more of the following measures:

1.1. Reorient or relocate the receiving antenna.

1.2. Increase the separation between the equipment and receiver.

1.3. Connect the equipment into an outlet on a circuit different from that to which receiver is connected.

1.4. Consult the dealer or experienced radio/TV technician for help.

WARNING

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

"CAUTION : Exposure to Radio Frequency Radiation.

Antenna shall be mounted in such a manner to minimize the potential for human contact during normal operation. The antenna should not be contacted during operation to avoid the possibility of exceeding the FCC radio frequency exposure limit.

Information for OEM Integrator

This device is intended only for OEM integrators under the following conditions:

1) The antenna must be installed such that 20 cm is maintained between the antenna and users, and

2) The transmitter module may not be co-located with any other transmitter or antenna.

" CAUTION: Exposure to Radio Frequency Radiation.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20cm between the radiator and your body. This transmitter module is authorized only for use in device where the antenna may be installed such that 20 cm may be maintained between the antenna and users."

Samsung Advanced Wireless Gateway User Guide

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Information in this manual is subject to change without notice.