## **User Guide**

## **DSL-AC88U**

#### Dual-band Wi-Fi ADSL/VDSL Modem Router





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## Table of contents

1	Getting to know your wireless router	5
	Package contents	5
	Hardware features	6
2	Creating your network	9
	Positioning your router	9
	What you need	10
	Connecting your devices	11
	Before you proceed	14
3	Network configuration using the web GUI	21
	Logging in to the web GUI	21
	Setting up the wireless security settings	23
	Managing your network clients	25
	Monitoring your USB device	26
	Creating your Guest Network	28
	Using the Traffic Manager	29
	Managing QoS (Quality of Service) Bandwidth	29
	Monitoring Traffic	30
	Using USB application	31
	Using AiDisk for File Sharing	31
	Using the Servers Center	34
	Using the Network Place (Samba) Share service	34
	Using the FTP Share service	36
	Using the Miscellaneous setting	
	Configuring Advanced settings	
	Setting up the DHCP Server	
	Upgrading the firmware	40
	Restoring/Saving/Uploading settings	41

4	Firmware Upgrade	42
5	Troubleshooting	43
	Troubleshooting	43
	Restoring the firmware via the Rescue mode	46
	ASUS DDNS Service	48
A	ppendices	50
	Notices	50
	Networks Global Hotline Information	64
	ASUS Contact information	67

# 1 Getting to know your wireless router

## **Package contents**

- ADSL/VDSL WiFi modem router
- ✓ Network cable
- AC adapter
- ☑ Phone cable
- ☑ Quick Start Guide
- ☑ Warranty card
- Support CD (User Manual/utilities)
- Splitter (varies with regions)



- If any of the items is damaged or missing, contact ASUS for technical inquiries and support. Refer to the ASUS Support Hotline list at the back of this user manual.
- Keep the original packaging material in case you would need future warranty services such as repair or replacement.

### **Hardware features**



#### **Power LED**

Off: No power.

- On: Device is ready. Flashing slowly: Rescue mode
- Flashing quickly: WPS in progress.

#### 5GHz LED

Off: No 5GHz signal.

On: Wireless system is ready.

Flashing: Transmitting or receiving data via wireless connection.

#### 2.4GHz LED

3

4

5

2

1

Off: No 2.4GHz signal.On: Wireless system is ready.Flashing: Transmitting or receiving data via wireless connection.

#### **INTERNET LED**

Red: No power or no Internet connection. On: Connection to a Wide Area Network (WAN).

#### DSL LED

Off: No DSL connection.

On: Connection to DSL.

6	E-WAN LED Off: No Ethernet connection. ON: Connection to Ethernet.
7	LAN LED Off: No power or no physical connection. On: Has physical connection to a local area network (LAN).
8	<ul><li>USB LED</li><li>Off: No power or no physical connection with a USB device.</li><li>On: Has physical connection with a USB device.</li></ul>
9	<b>USB 3.0 port</b> Insert a USB 3.0/2.0 device such as USB hard disk or USB flash drive into the port. Insert your iPad's USB cable into the port to charge your iPad.
10	<b>LED Button</b> This button turns on/off the LED indicators.
1	<b>Wi-Fi Button</b> This button enables or disables Wi-Fi.

#### Power adapter specifications:

DC Power adapter	DC output 19V with max. 1.75A current				
Operating Temperature	0~40°C Storage Temperature 0~70°C				
Operating Humidity	50~90%	Storage Humidity	20~90%		



-

Use only the power adapter that came with your package. Using other adapters may damage the device.



12	<b>Reset button</b> This button resets or restores the system to its factory default settings.
B	WPS button This button launches the WPS Wizard.
14	<b>DSL port</b> Connect to a splitter or to a telephone outlet via an RJ-11 cable.
15	LAN 1 ~ 4 ports Connect network cables into these ports to establish LAN connection.
16	WAN port Connect a network cable into this port to establish WAN connection.
17	<b>USB 2.0 port</b> Insert a USB 2.0 devices such as USB hard disks or USB flash drives into this port.
18	<b>Power (DC-IN) port</b> Insert the bundled AC adapter into this port and connect your router to a power source.
19	<b>Power button</b> This button powers on or powers off the router.

## 2 Creating your network

## **Positioning your router**

To get the best wireless network performance from your wireless router, follow the recommendations below:

- Place the wireless router at the center of your network for maximum wireless coverage.
- Keep the device away from metal obstructions and away from direct sunlight.
- Keep the device away from 802.11g or 20MHz only Wi-Fi devices, 2.4GHz computer peripherals, Bluetooth devices, cordless phones, transformers, heavy-duty motors, fluorescent lights, microwave ovens, refrigerators, and other industrial equipment to prevent signal interference or loss.



## What you need

To set up your network, you need one or two computers that meet the following system requirements:

- Ethernet RJ-45 (LAN) port (10Base-T/100Base-TX/1000Base-T)
- IEEE 802.11a/b/g/n/ac wireless capability
- An installed TCP/IP service
- Web browser such as Microsoft Internet Explorer, Mozilla Firefox, Apple Safari, or Google Chrome

	/
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177	4
10	
1	

- If your computer does not have built-in wireless capabilities, install an IEEE 802.11a/b/g/n/ac WLAN adapter to your computer to connect to the network.
- With its dual band technology, your ADSL/VDSL router supports 2.4GHz and 5GHz wireless signals simultaneously. This allows you to browse the Internet or access e-mail messages using the 2.4GHz band while streaming high-definition audio/video files such as movies or music using the 5GHz band.
- If you are using only one computer with a single band IEEE 802.11a/b/g/n/ac WLAN adapter, you will only be able to use the 2.4GHz band.
- If you are using only one computer with a dual band IEEE 802.11a/b/g/n/ac WLAN adapter, you will be able to use the 2.4GHz or 5GHz band.
- If you are using two computers with both IEEE 802.11a/b/g/ n/ac WLAN adapters, you will be able to use both 2.4GHz and 5GHz bands simultaneously.
- The Ethernet RJ-45 cables used to connect the network devices should not exceed 100 meters.

## **Connecting your devices**



• Use a wired connection when setting up your wireless router to avoid possible wireless setup issues.

- Before setting up your ASUS wireless router, do the following:
  - If you are replacing an existing router, disconnect it from your network.
  - Disconnect the cables/wires from your existing modem. If your modem has a backup battery, remove it as well.
  - Reboot your computer (recommended).

#### **Wired connection**



#### To set up your ADSL/VDSL router using a wired connection:

- 1. Insert the splitter's line connector to the phone outlet and connect your phone into the phone port.
- 2. Using the bundled phone cable, connect your DSL-AC88U's DSL port to the splitter's DSL port.
- 3. Using the bundled network cable, connect your computer to the ADSL/VDSL modem router's LAN port.

#### **Wireless connection**



#### To set up your ADSL/VDSL router using a wireless connection:

- 1. Insert your wireless modem router's AC adapter into the DC-IN port and plug it to a power outlet.
- 2. Using the bundled phone cable, connect your DSL-AC88U's DSL port to the splitter's DSL port.
- 3. Install an IEEE 802.11 a/b/g/n/ac WLAN adapter to your computer to connect to the wireless network.

## **Before you proceed**



Before configuring your wireless router, apply the steps described in this section to each computer on the network to avoid problems connecting to the wireless network.

### A. Disable any configured proxy servers.

#### Windows<sup>®</sup> 7 / 8\*



The screenshots provided are for Windows<sup>®</sup> 7 only. The steps and options may be different for Windows<sup>®</sup> 8 and Windows<sup>®</sup> 8.1.

- 1. Click Start > Internet Explorer.
- 2. Click Tools > Internet options > Connections tab > LAN settings.



- 3. From the Local Area Network (LAN) Settings window, uncheck **Use a** proxy server for your LAN.
- 4. Click OK then Apply.

Local Area Network (LAN) Settings						
Automatic configuration						
Automatic configuration may override manual settings. To ensure the use of manual settings, disable automatic configuration.						
Automatically detect settings						
Use automatic configuration script						
Address						
Proxy server Use a proxy server for your LAN (These settings will not apply to dial-up or VPN connections).						
Address: Port: Advanced						
Bypass proxy server for local addresses						
OK Cancel						

#### **MAC OSX**

1. From your Apple Safari browser, click Safari > Preferences > Advanced. On the Proxies item, click Change Settings...



- 2. From the **Network** screen, uncheck **FTP Proxy** and **Web Proxy** (HTTP).
- 3. Click OK then Apply.



## B. Configure TCP/IP settings to automatically obtain an IP address.

#### Windows<sup>°</sup> 7 / 8



The screenshots provided are for Windows<sup>®</sup> 7 only. The steps and options may be different for Windows<sup>®</sup> 8 and Windows<sup>®</sup> 8.1.

- 1. Click Start > Control Panel > Network and Internet > Network and Sharing Center > Change adapter settings.
- 2. On the Network Connections window, click on **Local Area Connection**.
- 3. On the Local Area Connection Network Status window, click **Properties**.



Local Area Conn	ection Status	
Seneral		
Connection		
IPv4 Connectiv	rity:	Internet
IPv6 Connectiv	/ity:	No network access
Media State:		Enabled
Duration:		12:17:04
Speed:		100.0 Mbps
Details	J	
	Sent —	Received
Activity	Sent —	
Activity		apr .

4. Select Internet Protocol Version 4 (TCP/IPv4) or Internet Protocol Version 6 (TCP/IPv6), then click **Properties**.

Local Area Connection Properties						
Networking Sharing						
Connect using:						
Atheros AR8152 PCI-E Fast Ethernet Controller						
Configure						
This connection uses the following items:						
Ø         → Claret for Monocol Networks           Ø         Mutables Bidged Networkskrig Diver           Ø         Ø           Ø         Franke of Networks           Ø         Franke of Networks           Ø         Franke of Networks           Ø         Franke of Networks           Ø         Franke Networks						
Install Uninstall Properties						
Description Allows your computer to access resources on a Microsoft network.						
OK Cancel						

## 6. Tick Obtain an IP address automatically.

7. Click **OK**.

eneral	Alternate Con	figuration					
his cap	n get IP setting: bability. Otherw appropriate IP	ise, you nee					
0	btain an IP addr	ess automa	tically				
0 U:	se the following	IP address:			_		
IP a	ddress:						
Subr	net mask:						
Defa	ault gateway:			1			
0 O	btain DNS serve	r address a	utomatica	ally			
() U	se the following	DNS server	addresse	s:			
Prefi	erred DNS serve	er:					
Alter	rnate DNS serve	er:					
V	alidate settings	upon exit				Adv	anced

#### **MAC OSX**

1. Click Apple Menu >System Preferences > Network



- 2. Click **Ethernet** on the left panel.
- 3. On the Configure IPv4, item select **Using DHCP**.
- 4. Click Apply.

9 🔿 🔿	Network	
▲ ► Show All		٩
	Location: zhel connection	•
Ethernet      Connected     Self-Assigned IP	Status:	Connected Ethernet is currently active and has the IP address 10.0.2.15.
	Configure IPv4:	Using DHCP
	IF Address.	10.0.2.15
	Subnet Mask:	255.255.255.0
	Router:	10.0.2.2
	DNS Server:	
	Search Domains:	
+ - 0-		(Advanced) (?)
Click the lock to pre-	vent further changes.	Assist me Revert Apply

## Setting up your ADSL/VDSL router

1. Ensure that the DSL LED on the DSL-AC88U front panel is on and not flashing.



2. Launch your web browser. The QIS web page appears automatically and starts detecting your connection type, VPI/VCI value and encapsulation mode.



If the QIS web page does not appear after you launched your web browser, disable the proxy settings on your web browser.

/15115	Contract of the local division of the local	
Quick Internet Setup	Quick Manual Setting	
Quick Internet Setup  Check Connection  Internet Setup  Router Setup	Dirick Manual Saturg           Table Oakis Head puides yoo la gickly condyrum that DBL ACADM WAN settings, pleases the decasary information. Canada you situaned Sanota Provider (SP) for information about your ACQ, connection weather of the decasary of the decasary of the Country.           Country.         Australia           SP:         ALAPT	

# 3 Network configuration using the web GUI

## Logging in to the web GUI

Your ASUS Wireless Router uses a web-based user interface that allows you to configure the router using any web browser such as Internet Explorer, Mozilla Firefox, Apple Safari, or Google Chrome.

#### To log in to the web GUI:

- Launch your web browser and manually key in the wireless router's default IP address: <u>http://router.asus.com</u>
- 2. On the login page, key in the default user name (**admin**) and password (**admin**).



3. The wireless router GUI provides access to various configuration settings.



## Setting up the wireless security settings

To protect your wireless network from unauthorized access, you need to configure its security settings.

#### To set up the wireless security settings:

- 1. Key in http://router.asus.com on your web browser.
- 2. On the login screen, key in the default user name (**admin**) and password (**admin**), then click **OK**. The wireless router's web GUI launches.
- 3. On the Network Map screen, the **System status** area displays the wireless security settings such as SSID, security level, and encryption settings.



You can set up different wireless security settings for 2.4GHz and 5GHz bands.

System Status
2.4GHz 5GHz
Wireless name(SSID)
ASUS
Authentication Method
Open System 🔽
Apply
LAN IP
192.168.1.1
PIN code
12345670
LAN MAC address
00:90:4C:0F:F0:00
Wireless 2.4GHz MAC address
00:90:4C:0F:F0:00

- 4. On the **Wireless name (SSID)** field, key in a unique name for your wireless network.
- 5. From the **Authentication Method** dropdown list, select the encryption method for your wireless network.
- 6. Key in your security passkey.
- 7. Click Apply.

## Managing your network clients

#### To manage your network clients:

- 1. Launch the wireless router's web GUI.
- 2. On the Network Map screen, click the **Clients** icon to display information about your network clients.

Quick Internet	Firmware Version: 3.0.0.4.374_1828 SSID: ASUS ASUS_SG	8 <b>0</b> <u>0</u> <del>4</del> <u>8</u>
General	Internet status: Connected	Client status
🔒 Network Map	WAN IP: 10.10.10.1 DDNS: GO	A android-29f7a 192.168.1.2
😹 Guest Network		RENJIE LEE-NB 192.168.1.8
Manager		ANNE1_CHEN_NB1 192.168.1.80
Parental control	can Security level: Open System ୀ	Refresh
USB application		
AiCloud		
Advanced Settings		
🛜 Wireless		
	Clients: 3 No Device	
🕀 WAN		
🚳 ІРV6		
🤹 VPN		
Firewall		
Administration		
System Log		
Network Tools		

## Monitoring your USB device

The ASUS Wireless Router provides one USB 3.0 port for connecting USB devices such as a USB storage device and USB printer.

- To use this feature, you need to plug a USB storage device, such as a USB hard disk or USB flash drive, to the USB 3.0 port on the rear panel of your wireless router. Ensure that the USB storage device is formatted and partitioned properly.
  - Refer to the Plug-n-Share Disk Support List at <u>http://event.asus.com/networks/disksupport</u>



You first need to create a user account to allow other network clients to access the USB device. For more details, refer to the section **Using AiDisk for sharing files** in this user manual.

#### To monitor your USB device:

- 1. Launch the wireless router's web GUI.
- 2. On the Network Map screen, select the **USB Disk Status** icon to display information about your USB device.



3. On the AiDisk Wizard item, click **GO** to set up an FTP server for Internet file sharing.





- For more details on setting up AiDisk, refer to the section Using the Network Place (Samba) Share service and Using the FTP Share service in this user manual.
- This router works with most USB HDDs/Flash disks (up to 2TB size) and supports read-write access for FAT16, FAT32, EXT2, EXT3, and NTFS.
- To safely remove the USB disk, launch the web GUI (<u>http://</u> <u>router.asus.com</u>), then in the Network Map page, click the USB icon > Eject USB disk.
- Incorrect removal of the USB disk may cause data corruption.

## **Creating your Guest Network**

Setting up a Guest Network provides wireless Internet connectivity for temporary visitors while restricting access to your private network.

#### To create your guest network:

- 1. Click **Guest Network** on the left navigation panel.
- 2. Click Enable.
- 3. To configure additional options, click any of the items listed.

É	General	Guest Network			
品	Network Map	The Gues		net connection for guests bu	it restricts access
**	Guest Network	to your In			
₩	Traffic Manager	2.4GHz			
Ð	Parental control	Network Name(SSID)			
۲	USB application	Authentication Method Network Key	WPA2-Personal asustools2014		
<u></u>	AiCloud	Time Remaining	Limitless	Enable	Inable
-0)	Advanced Settings Wireless	Access Intranet	off Disable		

- 4. Assign a wireless name for your temporary network on the **SSID** field.
- 5. Select an Authentication Method.
- 6. Select a **WEP Encryption** method.
- 7. Specify the **Access time** or click **Limitless**.
- 8. Select Disable or Enable on the **Access Intranet** item.
- 9. Click Apply.

Hetwork Map			
	to your Intranet.		
Traffic Manager	Guest Network index	1	
Parental control	SSID		
USB application	Authentication Method	WPA2-Personal	
🚖 AiCloud	WPA Encryption WPA Pre-Shared Key	AES  anstooh;2014	
Advanced Settings	Access time	asustools/U14	
🛜 Wireless		Disble	
🔂 LAN		Cancel Apply	
💮 wan			

## **Using the Traffic Manager**

#### Managing QoS (Quality of Service) Bandwidth

The **Quality of Service** feature allows you to set the bandwidth priority and manage network traffic.

#### To set up QoS:

- 1. Click **Traffic Manager** on the left navigation panel and click the **QoS** tab.
- 2. Click **ON** to enable QoS.
- 3. Input values for **Upload Bandwidth** and **Download Bandwidth**.



Your bandwidth information is available from your ISP.

- 4. Click Save.
- 5. If you want to prioritize specific network applications and network services, click **User-defined Priority** on the upper-right hand corner.

Quick Internet	Firmware Version: 3.0.	0.4.374_1828 SSID:	ASUS ASUS_5G		8	0 🖕 🔶 🛙		
seaap	QoS Traffic Monitor							
General	Traffic Manager - Qo	s				le 💌		
品 Network Map		The Quality of Service (Qc	S) ensures (he netwo	rk's speed perfor	nance. The default			
Suest Network		The sate online gaming and web suffing as the highest priority and are not influenced by P2P applications (peer-to-peer applications such as BitTornet). To enable QoS function: Citck the OoS sides which, and fill in the unload and download bandwidth						
Manager		fields. Get the bandwith in If you want to prioritize spi rour preferred priority from	formation from your IS wific network applicat	SP. tions and network				
Parental control								
USB application	QoS							
AiCloud			Save					
Advanced Settings								
察 Wireless	User Specify Rule List		_			_		
*	Service Name	Source IP or MAC	Destination Port	Protocol	Transferred	Priority		
	Web Surf							
💮 wan	HTTPS							
IPv6	File Transfer							
~	File Transfer							
VPN								
Firewall								

6. Adjust the values as needed. Click **Apply**.

#### **Monitoring Traffic**

Click the **Traffic Monitor** tab to view the network activity of your Internet, Wired, and Wireless connections for the last 24 hours, daily or in real-time.

***	Quick Internet Setup		irmware Version: <u>3.0.0,4.374_1828</u> SSID: <u>ASUS_ASUS_SG</u> DOS Traffic Monitor								
	General		raffic Manager - Traffic Monitor								
品	Network Map	Traffic Monitor allows	affic Monitor allows you to monitor the incoming or outgoing packets of the following:								
	Guest Network		Internet Wired Wireless								
44	Traffic Manager	Reception							n wireless		
ß	Parental control	Transmission									
	USB application	NOTE: Packets from t	he Internet a	are evenly transmitte	d to the wired	and wireless devi					
<u></u>	AiCloud	Traffic Monitor FAQ	ed Wire	less (2.4GHz)	Wireless	(5GHz)					
A	dvanced Settings	85.45 KB/s						Mon 05:52 p	m / 73.73 KB/	\$	
(lto	Wireless	59.81 KB/s									
ជ	LAN	39.01 K0/5									
	WAN	42.72 KB/s									
-	IPv6										
×	VPN	21.36 KB/s									
Q	Firewall										
&	Administration	Current		Averag	•	Maxim	num	т	otal		
	System Log	2.29 KB/s		0.17 KB/s		12.13 KB/s		102.54 KB			
R	Network Tools	2.08 KB/s		0.16 KB	/s	11.62 KB/s 95.21 KB			21 KB		
😨 Help & Support Manual   Utility						FAQ			٩		

## **Using USB application**

The USB application menu displays several options including AiDisk, Servers Center, and Network Printer Server.



### **Using AiDisk for File Sharing**

AiDisk allows you to share files stored in a connected USB storage device through the network.

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Before using AiDisk, connect a USB storage device, such as a USB hard disk or USB flash drive, to the USB 3.0 port on the rear panel of your wireless router. The USB storage device should be formatted and partitioned properly. Refer to the **Plug-n-Share Disk Support List** for disk format, file and partition size at <u>http://event.asus.com/networks/disksupport</u>



To avoid data loss or damage to the USB storage device, always follow the steps to safely remove your USB device.

#### To use AiDisk:

- 1. Click **USB application** on the left navigation panel and click the **AiDisk icon**.
- 2. From the Welcome to AiDisk wizard screen, click Go.



3. Assign access rights to the USB storage device. **Select limitless** access rights, limited access rights, and admin rights to define read-right privileges to files stored in the USB storage device. Click Next.



- 4. To set up your domain name via the ASUS DDNS service, select **I will use the service and accept Terms of service** and key in your preferred domain name. Your domain name will follow the format **xxx.asuscomm.com**, where xxx is your host name.
- 5. Click Next.

Quick Internet	Firmware Version: 3.0.0.4.374_1828 SSID: ASUS ASUS_56	28 🕀 🔁 <del>4</del> 2
General		
Hetwork Map		
Suest Network	Create your domain name via the ASUS DDNS services.	
Manager Traffic Manager	◎ I will use the service and accept Terms of service	
Parental control	Key in the name .asuscomm.com	
K USB application	Key III the name     Jost Commission	
AiCloud		
Advanced Settings	Previous Next	
察 Wireless		

- 6. Click **Finish**.
- 7. To access the USB storage device via FTP from a client on the network, launch a web browser or a third-party FTP client utility and key in the FTP link (**ftp://<domain name>**) you previously created.

## **Using the Servers Center**

Servers Center provides settings for Samba and FTP Shares.

#### Using the Network Place (Samba) Share service

The Network Place (Samba) Share feature allows Mac OSX, Windows, and Linux clients to access files on the USB storage device.

#### To use Samba share:

- 1. Click **USB application** on the left navigation panel and click the **Servers Center** icon.
- 2. Click the Network place (Samba) Share tab.
- 3. Click Share with account.

+	Quick Internet Setup	Firmware Version:	3.0.0.4.3	374_1828 SSID:	ASUS ASUS	5_5G			B	è 4	• 🗉
<u> </u>	setup	Media Server Ne	etwork Place	e(Samba) Share / (	Cloud Disk	FTP Share	Miscellaneou	s setting			
	General										
品	Network Map	USB Applicatio	on - Netwo	ork Place(Samb	a) Share /	Cloud Disk				(	
	Network Prop	Set the account and	I permission	of network place(sa	mba) service.						
*	Guest Network	Disable Share	She	are with account	Pofror	sh page					
		Disable share		are with account	Tremes	sii page					
<u> </u>	Traffic Manager	(A)	<u> </u>						a)		$\mathbf{k}$
•			$\odot$						- <del>1</del> -		
D	Parental control	admin		DSL-AC68U			R/W		No		
	USB application			🖕 🦲 Ut165 USE	32FlashStorag	ge					
	050 application										
	AiCloud					Ар	ply				
1											

4. Click the **Add** button 🕑 to create user accounts for users who will be accessing the USB storage device via Samba.

5. Assign a name for the user account and key in a password. Click **Add**.



- 6. Use the **Modify** and **Delete** buttons  $\bigcirc$  to change the password or remove the user account.
- 7. Select a user and assign the type of access rights for files or folders located in the storage device:
  - **R/W**: Select this option to assign read/write access for a specific file/folder.
  - **R**: Select this option to assign read only access for a specific file/folder.
  - **No**: Select this option if you do not want to share a specific file/folder.



8. Click Apply.

#### **Using the FTP Share service**

Your ASUS wireless router can set up the connected USB storage device as an FTP server.

#### To set up the FTP Share service:

- 1. Configure file sharing using the steps in **Using AiDisk for File Sharing**.
- 2. Click **USB application** on the left navigation panel and click the **Servers Center** icon.
- 3. Click the FTP Share tab.
- 4. Click Enable FTP.
- 5. Click Share with account.

Quick Internet	Firmware Version: 3.	0.0.4.374_1832 SSID: AS	USTITUTE ASUS_SG		8	3 💮 🛙	i 🔶 🖻
- Demp	Media Server Netw	us setting	1				
General							
Retwork Map	USB Application						
🞊 Guest Network	Enable FTP	mission of FTP service. Share with account	Refresh page				
Manager Traffic Manager		) Ø				a)	
Parental control		DSL-AC68U	lashStorage	R/W	WR	No	
usb application			ushchorage				
AiCloud			are.big	٥	••	•	
-		🔤 minidi Downi-		0	••	•	
Advanced Settings				<b>O</b>	•		
🛜 Wireless			А	pply			

- 6. Click the **Add** button to create accounts for users who will be accessing the USB storage device via FTP Server.
- 7. Assign a name for the user account and key in a password. Click **Add**.


- 8. Select the type of access rights for the storage device:
  - **R/W**: Select this option to assign read/write access for a specific file/folder.
  - W: Select this option to assign write only access for a specific file/folder.
  - **R**: Select this option to assign read only access for a specific file/folder.
  - **No**: Select this option if you do not want to share a specific file/folder.



- 9. Click Apply.
- 10.To access the FTP server from a client on the network, key in **ftp://<hostname>.asuscomm.com** on a web browser or a third-party FTP utility. Once prompted, key in the account username and password you set up in Step 7.

# Using the Miscellaneous setting

The Miscellaneous settings page allows you to configure additional properties for the USB disk. You can change the maximum number of users who can access the USB storage device, assign a device name and work group, or specify the language settings for the FTP server.

### To configure additional USB device settings:

- 1. Click **USB application** on the left navigation panel and click **Servers Center.**
- 2. Click the Miscellaneous setting tab.
- 3. Specify or change configuration settings as needed.
- 3. Click Apply.

+*	Quick Internet	Firmware Versi	on: 3.0.0.4.374_1828	SSID: ASUS ASUS	5_5G	8	8 🕀 🔁 🕀 🖻
<i>.</i>	Šetup	Media Server	Network Place(Samba) S	hare / Cloud Disk	FTP Share	Miscellaneous setting	
	General						
品	Network Map	USB Application - Miscellaneous setting					
		More detailed settings for the USB Disk.					
*	Guest Network	Maximum num connections	ber of concurrent				
₩	Traffic Manager	Device Name					
	Parental control	Work Group		WORKGROUP			
-		Character set on FTP Server		UTF-8 💌			
USB application		NTFS Sparse Files support		Disable 🔽			
â	AiCloud			Арр	ly		,
Ac	dvanced Settings						
(îo	Wireless						
ដ	LAN						

# **Configuring Advanced settings** Setting up the DHCP Server

Your wireless router uses DHCP to assign IP addresses automatically on your network. You can specify the IP address range and lease time for the clients on your network.

# To configure the DHCP server:

- 1. Click LAN on the left navigation panel.
- 2. Click the DHCP Server tab.
- 3. In the Enable the DHCP Server? field, tick Yes.
- 4. In the **IP Pool Starting Address** field, key in the starting IP address.
- 5. In the **IP Pool Ending Address** field, key in the ending IP address.
- 6. In the **Lease Time** field, specify in seconds when an assigned IP address will expire. Once it reaches this time limit, the DHCP server will then assign a new IP address.

+ Quick Internet	Firmware Version: 3.0.0.4.374_1828 SSID: ASUS_ASU5_5G				
Śetup	LAN IP DHCP Server Route IPTV	Switch Control			
General					
Hetwork Map	LAN - DHCP Server				
🔏 Guest Network	DHCP (Dynamic Host Canfiguration Protocol) is a protocol for the automatic configuration used on IP networks. The DHCP sever can assign each client an IP address and informs the client of the of DNS server IP and default gateway IP. Manually Assigned. <u>TP acronal the DHCP list FAQ</u>				
Manager	lic Manager Basic Config				
Parental control	Enable the DHCP Server	© Yes ● No			
-	DSL-AC68U's Domain Name				
USB application	IP Pool Starting Address				
AiCloud	IP Pool Ending Address				
Advanced Settings	Lease Time				
察 Wireless	Default Gateway				
	DNS and WINS Server Setting				



- ASUS recommeds that you use an IP address format of 192.168.1.xxx (where xxx can be any number between 2 and 254) when specifying an IP address range.
- An IP Pool Starting Address should not be greater than the IP Pool Ending Address.

# **Upgrading the firmware**



Download the latest firmware from the ASUS website at https://www.asus.com/support

### To upgrade the firmware:

- 1. Click Administration from the left navigation panel.
- 2. Click the Firmware Upgrade tab.
- 3. In the **New Firmware File** item, click **Choose File**. Navigate to the downloaded firmware file.
- 4. Click Upload.

Cuick Internet	Firmware Version: <u>3.0.0.4.374_1828</u>		8 🕀 📴 🚓 🖻	
	System Firmware Upgrade Restore/	Save/Upload Setting DSL Setting		
General				
🐣 Network Map	Administration - Firmware Upgrad	e		
	Note:			
Guest Network	The latest firmware version include updates on the previous version The latest firmware version include updates on the previous version For a configuration parameter existing both in the old and new firmware, its setting will be kept during the upgrade process In case the upgrade process fails, DSI, AC680 enters the emergency mode automatically. The LED signals at the firm of DIS, AC680 will indicate such situation. Use the Firmware Restruction utility on the CD to do system recovery. Get the latest firmware version from ASUS Support site at <a href="http://support.sasa.com">http://support.sasa.com</a>			
Manager				
Parental control				
disb application				
AiCloud	Product ID			
	Firmware Version	3.0.0.4.374_1828-g9c8f8c0 Check		
Advanced Settings	New Firmware File	Choose File No file chosen		
察 Wireless		Upload		



If the upgrade process fails, the wireless router automatically enters rescue mode and the power LED indicator on the front panel starts flashing slowly.

# **Restoring/Saving/Uploading settings**

### To restore/save/upload wireless router settings:

- 1. Click **Administration** on the left navigation panel.
- 2. Click the Restore/Save/Upload Setting tab.

tyt Quick Internet	Firmware Version: 3.0.0.4.374_1828	SSID: ASUS ASUS_SG	8 🕀 🖻 🔶 🖻	
Setup	System Firmware Upgrade Restore,	Save/Upload Setting DSL Setting		
General				
🔒 Network Map	Administration - Restore/Save/Upload Setting			
<b>A</b> )	This function allows you to save current settings of DSL-AC68U to a file, or load settings from a file.			
Guest Network	Factory default	Restore		
Manager Traffic Manager	Save setting	Save		
Parental control	Restore setting	Upload 選擇檔案 未選擇檔案		
usb application				
A				

- 3. Select a task from the configuration options:
  - To restore to default factory settings, click **Restore**, and click **OK** once prompted.
  - To save the current system settings, click **Save**, navigate to the folder where you intend to save the file and click **Save**.
  - To restore from a saved system settings file, click **Browse** to locate your file, then click **Upload**.

# 4 Firmware Upgrade

Download the latest firmware from the ASUS website at <u>http://www.asus.com</u>



# To upgrade the firmware:

- 1. From the navigation panel, go to Advanced Settings > Administration > Firmware Upgrade tab.
- 2. In the **New Firmware File** field, click **Choose File** to locate the downloaded file.
- 3. Click Upload.

	P
-	

- When the upgrade process is complete, wait for some time for the system to reboot.
- If the upgrade process fails, follow the Rescue mode process. For more details, refer to **Troubleshooting**.

# 5 Troubleshooting



If you encounter problems that are not mentioned in this chapter, contact ASUS Technical Support.

# Troubleshooting

# I cannot access the router GUI for configuring the router.

- Delete the cookies and temporary files in your web browser. To do this in Internet Explorer 8:
  - 1. Launch your web browser, then click **Tools** > **Internet Options.**
  - 2. On the General tab, click **Delete** under Browsing history.
  - 3. Tick Temporary Internet Files and Cookies. Click Delete.



Instructions for deleting cookies and temporary Internet files vary with the web browser.

 Disable the proxy server settings, remove any dial-up connections, and set the TCP/IP settings to obtain IP addresses automatically. For more details, refer to the section **Before you** proceed in this user manual.

# The client cannot establish a wireless connection with the router.

## **Out of Range:**

•Place the router closer to the wireless client.

•Change the channel settings.

## Authentication:

- Use a wired connection to connect to the router.
- Check the wireless security settings.
- Press the Reset button at the rear panel for more than five seconds.

### Cannot find the router:

- Press the Reset button at the rear panel for more than five seconds.
- Check the settings in the wireless adapter such as SSID and encryption method.

## Cannot access the Internet using a wireless LAN adapter.

- Place the router closer to the wireless client.
- Check whether the wireless adapter is connected to the correct wireless router.
- Check whether the wireless channel in use conforms to the channels available in your country/area.
- Check the encryption settings.
- · Check if the ADSL or VDSL connection is connected.
- Use a different Ethernet cable.

# Internet is not accessible.

- Check the status indicators on the VDSL/ADSL modem and the wireless router.
- Check if the WAN LED on the wireless router is on. If the LED is off, switch Ethernet cables and try again.

#### The DSL light is ON (steady and not blinking) and means Internet access is possible, but I still cannot browse the Internet.

- Restart your computer.
- Check if the WAN LED on the wireless router is on.
- Check the wireless encryption settings.
- Check if the computer can get an IP address (using both a wired or wireless connection).
- Check that your web browser is configured to use the local LAN and is not configured to use a proxy server.

# If the DSL light blinks continuously or stays off, Internet access is not possible - the Router is unable to establish a connection with the ADSL network.

- Ensure that all your cables are properly connected.
- Disconnect the power cord from the ADSL/VDSL or cable modem, wait a few minutes, then reconnect the cord.
- If the ADSL/VDSL light continues to blink or stays OFF, contact your Internet service provider.

#### Network name or encryption keys are forgotten.

- Set up a wired connection and reconfigure the wireless security settings.
- Press the Reset button at the rear panel of the wireless router for more than five seconds.

# How do you restore the system to its default settings?

- Press the Reset button at the rear panel of the wireless router for more than five seconds.
- Refer to the section **Restoring/Saving/Uploading settings** of this user manual.

The following are the factory default settings:

User name:	admin
Password:	admin
IP address:	router.asus.com
SSID (2.4GHz):	Refer to the label at the bottom of the router
SSID (5GHz):	Refer to the label at the bottom of the router

# Restoring the firmware via the Rescue mode.

If the firmware upgrade fails, do the Rescue mode process. Please follow these steps:

- 1. Ensure that your computer has a static IP address such as 192.168.1.xx (xx can be any number between 2 and 254).
- 2. Turn off your DSL-AC88U. Hold the Reset button then power on your device for five seconds. When the power LED blinks, release the Reset button.
- 3. On your web browser, enter <u>http://192.168.1.1</u>. The interface below appears.



4. From the interface, click **Choose File**, and browse for your firmware file.



You can download the latest firmware file from the ASUS Support site at <u>https://www.asus.com/support</u>

- 5. Click **Update Software**. The process takes about two minutes to complete.
- After the process is completed, the login page appears. If it does not appear, enter <u>http://192.168.1.1</u> on your web browser.

Q4	SIGN IN DSL-AC88U
	Sign in with your ASUS router account
	Username
	Password
	Sign in

# **ASUS DDNS Service**

The ASUS DSL-AC88U WiFi Modem Router supports the ASUS DDNS service. If you have registered for the ASUS DDNS service but need to exchange devices at the service center, inform the service center that you want to keep the original domain name and retain the DDNS service. Visit your local service center for more information.



- If there is no activity in the domain such as reconfiguring the router or accessing the registered domain name - within 90 days, the system automatically deletes the registered information.
- If you encounter any problem or difficulty in using your device, contact the service center.

# **Frequently Asked Questions (FAQs)**

# 1. Will the registered information be lost or registered by others?

If you have not updated the registered information in 90 days, the system automatically deletes the registered information and the domain name may be registered by others.

# 2. I did not register the ASUS DDNS for the router I bought six months ago. Can I still register it?

Yes, you can still register the ASUS DDNS service for your router. The DDNS service is embedded in your router, so you can register the ASUS DDNS service anytime. Before registering, click **Query** to check if the hostname has been registered or not. If the hostname is available, the system registers the hostname automatically. 3. I have registered a domain name before and it has been working well until my friends told me that they could not access my domain name.

Check the following:

- 1. Internet connection is available.
- 2. The DNS server is working properly.
- 3. The last time you updated the domain name.

If there are still problems in accessing your domain name, contact the service center.

# 4. Can I register two domain names so I can access my HTTP and FTP servers separately?

No, you cannot. You can only register one domain name for one router. You can use port mapping to implement both services and make them available from outside your local network.

#### 5. After restarting the router, why is it that I see a different WAN IP address in MS-DOS and in the router configuration page?

This is normal. The interval time between the ISP DNS server and ASUS DDNS results in different WAN IPs in MS-DOS and in the router configuration page. Different ISPs may have different interval times for updating IP addresses.

## 6. Is the ASUS DDNS service free, or is it just a trial version?

The ASUS DDNS service is a free and embedded service in some ASUS routers. Check your ASUS router if it supports the ASUS DDNS service.

# **Appendices**

# Notices

# ASUS Recycling/Takeback Services

ASUS recycling and takeback programs come from our commitment to the highest standards for protecting our environment. We believe in providing solutions for you to be able to responsibly recycle our products, batteries, other components, as well as the packaging materials. Please go to <u>http://csr.asus.com/english/Takeback.htm</u> for the detailed recycling information in different regions.

# REACH

Complying with the REACH (Registration, Evaluation, Authorisation, and Restriction of Chemicals) regulatory framework, we published the chemical substances in our products at ASUS REACH website at http://csr.asus.com/english/index.aspx

# **Federal Communications Commission Statement**

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

- This device may not cause harmful interference.
- 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 or more 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.



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

# **Prohibition of Co-location**

This device and its antenna(s) must not be co-located or operating in conjunction with any other antenna or transmitter

# **Safety Information**

To maintain compliance with FCC's RF exposure guidelines, this equipment should be installed and operated with minimum distance 20cm between the radiator and your body. Use on the supplied antenna.

# Declaration of Conformity for R&TTE directive 1999/5/EC

Essential requirements – Article 3

Protection requirements for health and safety – Article 3.1a Testing for electric safety according to EN 60950-1 has been conducted. These are considered relevant and sufficient.

Protection requirements for electromagnetic compatibility – Article 3.1b

Testing for electromagnetic compatibility according to EN 301 489-1 and EN 301 489-17 has been conducted. These are considered relevant and sufficient.

Effective use of the radio spectrum – Article 3.2

Testing for radio test suites according to EN 300 328- 2 has been conducted. These are considered relevant and sufficient.

# **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.

# Canada, Industry Canada (IC) Notices

This Class B digital apparatus complies with Canadian ICES-003 and RSS-210.

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.

# **Radio Frequency (RF) Exposure Information**

The radiated output power of the Wireless Device is below the Industry Canada (IC) radio frequency exposure limits. The Wireless Device should be used in such a manner such that the potential for human contact during normal operation is minimized.

This device has been evaluated for and shown compliant with the IC Specific Absorption Rate ("SAR") limits when installed in specific host products operated in portable exposure conditions (antennas are less than 20 centimeters of a person's body).

This device has been certified for use in Canada. Status of the listing in the Industry Canada's REL (Radio Equipment List) can be found at the following web address: http://www.ic.gc.ca/app/sitt/reltel/srch/nwRdSrch.do?lang=eng

Additional Canadian information on RF exposure also can be found at the following web: http://www.ic.gc.ca/eic/site/smt-gst. nsf/eng/sf08792.html

# Canada, avis d'Industry Canada (IC)

Cet appareil numérique de classe B est conforme aux normes canadiennes ICES-003 et RSS-210.

Son utilisation est sujette aux deux conditions suivantes : (1) cet appareil ne doit pas créer d'interférences nuisibles, et (2) cet appareil doit tolérer tout type d'interférences, y compris celles susceptibles de provoquer un fonctionnement non souhaité de l'appareil.

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Version 2, June 1991

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END OF TERMS AND CONDITIONS

# **Networks Global Hotline Information**

Region	Country	Hotline Number	Service Hours
	Cuprus	800-92491	09:00-13:00;
	Cyprus	600-92491	14:00-18:00 Mon-Fri
	France	0033-170949400	09:00-18:00 Mon-Fri
		0049-1805010920	
	Germany	0049-1805010923	09:00-18:00 Mon-Fri
	Germany	(component support)	10:00-17:00 Mon-Fri
		0049-2102959911 (Fax)	
	Hungary	0036-15054561	09:00-17:30 Mon-Fri
	Italy	199-400089	09:00-13:00 ; 14:00-18:00 Mon-Fri
	Greece	00800-44142044	09:00-13:00 ; 14:00-18:00 Mon-Fri
	Austria	0043-820240513	09:00-18:00 Mon-Fri
	Netherlands/ Luxembourg	0031-591570290	09:00-17:00 Mon-Fri
	Belgium	0032-78150231	09:00-17:00 Mon-Fri
Europe	Norway	0047-2316-2682	09:00-18:00 Mon-Fri
	Sweden	0046-858769407	09:00-18:00 Mon-Fri
	Finland	00358-969379690	10:00-19:00 Mon-Fri
	Denmark	0045-38322943	09:00-18:00 Mon-Fri
	Poland	0048-225718040	08:30-17:30 Mon-Fri
	Spain	0034-902889688	09:00-18:00 Mon-Fri
	Portugal	00351-707500310	09:00-18:00 Mon-Fri
	Slovak Republic	00421-232162621	08:00-17:00 Mon-Fri
	Czech Republic	00420-596766888	08:00-17:00 Mon-Fri
	Switzerland-German	0041-848111010	09:00-18:00 Mon-Fri
	Switzerland-French	0041-848111014	09:00-18:00 Mon-Fri
	Switzerland-Italian	0041-848111012	09:00-18:00 Mon-Fri
	United Kingdom	0044-1442265548	09:00-17:00 Mon-Fri
	Ireland	0035-31890719918	09:00-17:00 Mon-Fri
	Russia and CIS	008-800-100-ASUS	09:00-18:00 Mon-Fri
	Ukraine	0038-0445457727	09:00-18:00 Mon-Fri

Region	Country	Hotline Numbers	Service Hours
	Australia	1300-278788	09:00-18:00 Mon-Fri
	New Zealand	0800-278788	09:00-18:00 Mon-Fri
	Japan	0000 1000707	09:00-18:00 Mon-Fri
		0800-1232787	09:00-17:00 Sat-Sun
		0081-570783886	09:00-18:00 Mon-Fri
		(Non-Toll Free )	09:00-17:00 Sat-Sun
	Korea	0082-215666868	09:30-17:00 Mon-Fri
	Thailand	0066-24011717	09:00-18:00 Mon-Fri
		1800-8525201	
	Singapore	0065-64157917	11:00-19:00 Mon-Fri
Asia-Pacific		0065-67203835	11:00-19:00 Mon-Fri
		(Repair Status Only)	11:00-13:00 Sat
	Malaysia	1300-88-3495	9:00-18:00 Mon-Fri
	Philippine	1800-18550163	09:00-18:00 Mon-Fri
	India	1800-2090365	09:00-18:00 Mon-Sat
	India(WL/NW)		09:00-21:00 Mon-Sun
	Indonesia	0062-2129495000	09:30-17:00 Mon-Fri
		500128 (Local Only)	9:30 – 12:00 Sat
	Vietnam	1900-555581	08:00-12:00
			13:30-17:30 Mon-Sat
	Hong Kong	00852-35824770	10:00-19:00 Mon-Sat
	USA	1-812-282-2787	8:30-12:00 EST Mon-Fri
Americas	Canada	004 0000047047	9:00-18:00 EST Sat-Sun
	Mexico	001-8008367847	08:00-20:00 CST Mon-Fri
			08:00-15:00 CST Sat

Region	Country	Hotline Numbers	Service Hours	
	Egypt	800-2787349	09:00-18:00 Sun-Thu	
	Saudi Arabia	800-1212787	09:00-18:00 Sat-Wed	
Middle	UAE	00971-42958941	09:00-18:00 Sun-Thu	
East +	Turkey	0090-2165243000	09:00-18:00 Mon-Fri	
Africa	South Africa	0861-278772	08:00-17:00 Mon-Fri	
	Israel	*6557/00972-39142800	08:00-17:00 Sun-Thu	
		*9770/00972-35598555	08:30-17:30 Sun-Thu	
	Romania	0040-213301786	09:00-18:30 Mon-Fri	
	Bosnia Herzegovina	00387-33773163	09:00-17:00 Mon-Fri	
	Bulgaria	00359-70014411	09:30-18:30 Mon-Fri	
Balkan		00359-29889170	09:30-18:00 Mon-Fri	
Countries	Croatia	00385-16401111	09:00-17:00 Mon-Fri	
	Montenegro	00382-20608251	09:00-17:00 Mon-Fri	
	Serbia	00381-112070677	09:00-17:00 Mon-Fri	
	Slovenia	00368-59045400	08:00-16:00 Mon-Fri	
		00368-59045401		
	Estonia	00372-6671796	09:00-18:00 Mon-Fri	
Baltic	Latvia	00371-67408838	09:00-18:00 Mon-Fri	
Countries	Lithuania-Kaunas	00370-37329000	09:00-18:00 Mon-Fri	
	Lithuania-Vilnius	00370-522101160	09:00-18:00 Mon-Fri	



For more information, visit the ASUS support site at: https://www.asus.com/support

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••	
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Online support	https://www.asus.com/support