1. Find out the IP address of your computer. Have your computer get on Internet as normally, without EW-7228APn turning on.

If you use a Windows XP computer, click on **Start** -> **Run**. Type in "**ncpa.cpl**" hit OK.

If your computer is Vista or Windows 7, click on **Start**, click on **Search**. Type in "ncpa.cpl" hit OK.

	Control Panel
	Default Programs
All Programs	Help and Support
Start Search ncpa.cpl	<u> </u>
🚱 🖬 🖻 🏉	

If your computer is Windows 8, please press the Windows key on keyboard to switch into the Windows Start Menu. Bring up the **search** function. In the **Apps** box, type in **"ncpa.cpl"** hit OK.

Inside the Search box, type in "**ncpa.cpl**" then click on it. The <u>Network Connection window</u> will show up and you should see the icon of <u>Local Area Connection</u> (<u>Ethernet</u> icon in Windows 8) or <u>Wireless Network Connection</u>. (<u>Wi-Fi</u> icon in Windows 8)

Depends on how your computer get on Internet, double click either on <u>Local Area Connection</u> or on <u>Wireless Network</u> <u>Connection</u> to get into "Status" Window. Click on "Details" button.

General		Network Connection Details:	:
Connection		Property	Value
IPv4 Connectivity: IPv6 Connectivity: Media State: Duration: Speed:	Internet No network access Enabled 00:20:39 100.0 Mbps	Connection-specific DN Description Physical Address DHCP Enabled IPv4 Address IPv4 Subnet Mask	VIA Rhine II Compatible Fast Ethemet A 00-19-21-72-2F-1E Yes 192.168.1.2 255.255.255.0
Details		Lease Obtained Lease Expires IPv4 Default Gateway IPv4 DHCP Server	Friday, April 23, 2010 9:50:17 AM Friday, April 23, 2010 10:50:16 AM 192.168.1.1 192.168.1.1
Activity Sent	Received	IPv4 DNS Servers	192.168.1.1 192.168.1.1 192.168.1.1
Bytes: 292,921	1,710,434	IPv4 WINS Server NetBIOS over Tcpip En	Yes
Properties Disable	Diagnose		III
		0	Gose

Below is a screen shot from Windows 7.

Take a note about the IP address, subnet mask, and default gateway. The first three digits of the IP address and default gateway should be the <u>same</u>. For example, both addresses start with 192.168.1.x. Now you have some idea about the IP addressed used in your network. Later on, you can assign new IP address like 192.168.1.200 to Edimax extender.

Click on **Close** button to close "<u>Network Connection Details</u>" window. Click on **Close** button again to close the "<u>Status</u>" window. Leave the current <u>Network Connection Window</u> open.

2. Get an Ethernet cable. Plug one end of the Ethernet cable into your computer's Ethernet port. Plug the other end of the Ethernet cable into the Ethernet port on the back of the EW-7228APn.



- 3. Power on EW-7228APn. The Power LED and the Ethernet port should turn on.
- 4. Continue the Network Connection window left from the first step.

If your computer has wireless function available, you will have the <u>Wireless Network Connection</u> icon (<u>Wi-Fi</u> icon in Windows 8). Right click on the Wireless network connection icon. Click on <u>Disable</u>. We recommend you temporarily disable the wireless function of your computer.

Below is a screen shot from Windows 8.



5. Still in the <u>Network Connection window.</u> Right click on "Local Area Connection" icon (<u>Ethernet</u> icon in Windows 8), click on <u>Properties</u>



6. In the Local Area Connection properties, select Internet Protocol version 4. Click on Properties.

Ethernet Properties ×	Internet Protocol Version 4 (TCP/IPv4) Properties ? ×
Networking Sharing	General You can get IP settings assigned automatically if your network supports
Realtek PCIe GBE Family Controller	this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
<u>C</u> onfigure	Obtain an IP address automatically
This connection uses the following items:	• Use the following IP address:
File and Printer Sharing for Microsoft Networks Microsoft Network Adapter Multiplexor Protocol	IP address: 192 . 168 . 2 . 20
✓ ▲ Microsoft LLDP Protocol Driver	Subnet mask: 255 . 255 . 255 . 0
Link-Layer Topology Discovery Mapper I/O Driver Link-Layer Topology Discovery Responder	Default gateway:
	Obtain DNS server address automatically
< >	Use the following DNS server addresses:
Install Uninstall Properties	Preferred DNS server:
Description	Alternate DNS server:
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.	Validate settings upon exit Advanced
OK Cancel	OK Cancel

Select the option of "Use the following IP address". Enter the IP address as 192.168.2.20. The subnet mask would be 255.255.255.0. Click on <u>OK</u>. Click <u>OK</u> button to save the setting and exit the Local Area Connection Properties.

Leave the **Network Connection** Window open.

7. Open Internet Explorer or other web browser. Inside the address bar, type http://192.168.2.1 and press Enter.

<u>File Edit View History Bookmarks Tools Help</u>	
New Tab +	This is Search Box
e http://192.168.2.1	

A window prompts and asks for login username and password. Enter the username : <u>admin.</u> Enter password as <u>1234</u>. Click on <u>OK</u> or <u>Login</u> button.

8. You should get into the setup page of the extender.

If you can not get into the page, you may reset the EW-7228APn to factory default by holding its Reset button for 20 seconds. That will erase all the setting and restore the factory default settings.

In the setup page, you will find the Runtime code version which is the firmware version. If you have an older firmware, you may want to upgrade the firmware under the <u>Configuration Tool</u> settings. The latest firmware file can be found on our web site <u>http://us.edimax.com</u>.

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	ې ک <u>ې ج</u> ک	Access Point ×	슈 ☆ 🛱
<u>File Edit View Favorites Tools H</u> el	p		
		English	\sim
• Home	Sta	tus and Information	^
Basic Setting	You can check the device's MAC	address, runtime code, hardware version, and	
	network status below.		
WPS Setting	System		
Wireless Advanced	Uptime	0day:0h:1m:1s	
System Utility	Hardware Version	Rev. A	
Configuration Tool	Runtime Code Version	1.15	
Configuration Tool	Wireless Settings		
	Mode	AP	
	ESSID	Edimax AP	
	Channel Number	11	
	Security	Disabled	
	BSSID (MAC)	80:1F:02:7C:0A:30	
	Associated Clients	0 Show Active Clients	
	LAN Settings		
	IP Address	192.168.2.1	
	Subnet Mask	255.255.255.0	
	Default Gateway		Ť

9. Click on **Basic Settings**.

There are different operating modes available for EW-7228APn.

Select the option of Universal Repeater.

parameters are used for the	e wireless stations to connect to the Access Point.
Mode	Universal Repeater
Band	2.4 GHz (B+G+N) 🗸
MAIN ESSID	Edimax AP
Channel Number	11 🗸
Associated Clients	Show Active Clients
Root AP SSID	
Select Site Survey	Select Site Survey

10. Click on <u>Select Site Survey</u> button. "Wireless Site Survey" window displays all available wireless networks. You should see your original Wi-Fi network. It also shows you the Encryption and Signal of your Wireless Network. Please note that the extender may not have a reliable wireless connection if the signal from your Wi-Fi router is less than 40.

connec	t it manually when clier	nt mode is enabled.	JIK. II AIIY	ALLESSI			
Select	SSID	BSSID (MAC)	Band	Channel	Security Type	Encryption	Siç
0	EdimaxCorp	14:5b:d1:e7:dd:f0	(B+G+N)	11	AP	WPA2-PSK	9
0	Edimax2	40:b7:f3:dd:ae:b0	(B+G+N)	6	AP	WPA-PSK/WPA2-PSK	9
•	HomeNetwork	80:1f:02:13:59:ee	(B+G+N)	6	AP	WPA2-PSK	8
0	Stumm	30:46:9a:43:16:be	(B+G+N)	1	AP	WPA-PSK/WPA2-PSK	8
0	kpk1503	00:21:91:0d:99:5b	(B+G+N)	3	AP	WPA2-PSK	8
0	DIRECT-iLSCX-3400	02:15:99:d5:2e:ae	(G)	10	AP	WPA2-PSK	8

Click on the **Select circle** to select your Wi-Fi network. Click on **Done**. The "Wireless Site Survey" window will be closed.

11. Back to the setup page of Universal Repeater mode . Please verify the mode is <u>Universal Repeater</u>. The Main ESSID <u>is Edimax AP</u> by default. The Main ESSID will be used as the network name for the extender network. You can change it to any name you like. For example, *HomeNetwork-extender*. Click on <u>Apply</u>.

Mode	Universal Repeater
Band	2.4 GHz (B+G+N) 🗸
MAIN ESSID	Edimax AP
Channel Number	6 🗸
Associated Clients	Show Active Clients
Root AP SSID	HomeNetwork
Select Site Survey	Select Site Survey

12. Click on Continue.

Settings sav	ved successfully!
Click CONTINUE make the changes	to continue other configuring settings, or click APPLY to restart the system and s take effect.
CONTINUE	APPLY

13. Click on <u>Wireless Advanced</u>. Select <u>Enabled</u> for WMM. Click on <u>Apply</u>.

	KTO HIICOIOU.	
Resis Setting	Beacon Interval:	100 (20-1024 ms)
Basic Setting	DTIM Period:	3 (1-10)
WPS Setting	Data Rate:	Auto 🗸
Security	N Data Rate:	Auto
MAC Filtering	Channel Width:	Auto 20/40MHz O 20MHz
System Utility	Preamble Type:	● Short Preamble ○ Long Preamble
Configuration Tool	Broadcast ESSID:	Enabled Disabled
	WMM:	Enabled Disabled
	CTS Protect:	● Auto ○ Always ○ None
	Tx Power:	100 % 🗸
		APPLY Cancel

14. Click on <u>Continue</u>.

Settings sav	ved successfully!
Click CONTINUE make the changes	to continue other configuring settings, or click APPLY to restart the system and s take effect.
CONTINUE	APPLY

15. Click on <u>Security</u>. If your primary Wi-Fi network has wireless security password, you need to enter the same wireless security password into the Edimax extender. From step 10, you saw the type of your encryption.

In our example, we use WPA2-PSK. Select the Encryption of WPA Pre-share key.

Home	Security
Basic Setting	This page allows you setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network.
WPS Setting	Encryption Disable
 Wireless Advanced Security MAC Filtering 	Enable 802.1x Authentica WPA pre-shared key WPA RADIUS APPLY Cancel

If your primary network use WPA TKIP, then you choose the circle of WPA(TKIP). If your primary network supports WPA2 AES, then you choose the option of WPA2(AES).

In the box of KEY, <u>type in the same wireless</u> <u>security password of your original Wi-Fi</u> <u>network</u>. Click on <u>Apply</u>.

Security

This page allows you setup the wireless security. Turn on WEP or WPA by using Encryption Keys could prevent any unauthorized access to your wireless network.

Encryption	WPA pre-shared key V		
WPA Unicast Cipher Suite	○WPA(TKIP)		
Pre-Shared Key Format	Passphrase		
Key	your wireless password		
	APPLY Cancel		

16. Click on Continue.

Settings say	/ed successfully!
Click CONTINUE make the change	to continue other configuring settings, or click APPLY to restart the system and s take effect.
CONTINUE	APPLY

17. Click on <u>System Utilities</u>. This step is optional but recommended. In the first step, you have checked the IP address used in your own network. You can assign a new IP address to the extender so the extender can be in the same subnet with your network. If you are not sure about this, you can skip this and just go to next step.

Computers in the same network has to have the same first three numbers of their IP address. Only the 4th number is different. For example, your Wi-Fi router could have IP address 192.168.1.1 while ethernet desktop uses 192.168.1.100 and iPhone uses 192.168.1.102...etc.. You can assign an address like 192.168.1.200 to the extender.

I92.168.2.1/index.asp	📩 ⊽ 😋 🚼 ▼ Google	₽ ∎- ♦
		English
NETWORKING PEOPLE TOGETHER		
	you need to assign this device an unique iP add	iess.
Home	Password Settings	
Basic Setting	Current Password :	
WPS Setting	New Password :	
Wireless Advanced	Re-Enter Password :	
System Utility	Management IP	
Configuration Tool	IP Address : 192.16	8.1.200 🖕
	Subnet Mask : 255.25	5.255.0
	Gateway Address :	
	DHCP Server	
	DHCP Server : Disable	ed 🗸
	Default Gateway : 192.16	8.2.1

18. Click on Apply.

If you modified the IP address of the extender, you will get a reminding prompt. Click on OK.

The IP address was modified. You have to re-connect	with the new address.
	ОК

19. Click on <u>Apply</u>. We have finished the setup.

Settings say	ed success	fully!
Click CONTINUE t system and make	o continue other c the changes take	onfiguring settings, or click APPLY to restart the effect.
CONTINUE	APPLY	

20. The extender saves the setting and reboots. This will take 60 seconds.

System restarting.	Please	wait for	a moment.	•
OK(58)				

Click on **OK** while it is available. You may get the message saying the page is not available.

21. Minimize the browser.

Firefox 🔻		
Universal Repeater	+	Minimize

22. Back to the <u>Network Connection</u> window on step 6. Right click on "Local Area Connection" icon (<u>Ethernet</u> icon in Windows 8), click on <u>Properties</u>



In the Local Area Connection properties, select Internet Protocol version 4. Click on Properties.

etworking Sharing	General Alternate Configuration	
Connect using:	You can get IP settings assigned automatically if this capability. Otherwise, you need to ask your for the appropriate IP settings	your network supports network administrator
<u>C</u> onfigure	Obtain an IP address automatically	
This connection uses the following items:	Use the following IP address:	
✓ ➡ File and Printer Sharing for Microsoft Networks	IP address:	1
	Sybnet mask:	1
	Default gateway:	
Anterest Protocol Version 6 (TCP/IPv6)	O Obtain DNS server address automatically	
✓ Internet Protocol Version 4 (TCP/IPV4)	Use the following DNS server addresses:	
	Preferred DNS server:	
Install Uninstall Properties	Alternate DNS server:	
Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.	Validate settings upon exit	Ad <u>v</u> anced
		OK Cancel

Select the option of Obtain an IP address automatically and the option of Obtain DNS sever address automatically.

Click on **OK** to close the Internet Protocol version 4 properties.

23. Click on OK to close the Local Area Connection Properties.

The Local Area Connection (or Wi-Fi) shows Identifying.



24. The Local Area Connection displays the network name of the original network. It means the connection is successful.



25. You can open your web browser to verify you can get on Internet. The extender is setup successfully.

If your computer has wireless function, continue the following.

Unplug the Ethernet network cable from your computer

Right click on <u>Wireless Network Connection</u> (Wi-Fi for Windows 8), click on **Enable**.

			•	
and the	Wi-Fi			
	Disabled			
dll	Ralink F	۲	Enable	
			Status	

Right click on Wireless Network Connection (Wi-Fi for Windows 8), click on Connect / Disconnect



Select the Extender network. Click on Connect.

Below screen is from Windows 8. You may find it different with Windows 7 and Windows Vista.



Type in your wireless security password of the original Wi-Fi network. Click on Connect.

You may double click on the Wireless Network Connection to verify the connection status and the SSID is the extender.

VMware Network Adapte	म्प	Wi-Fi Status	
Disabled VMware Virtual Ethernet ,	General		
VMware Network Adapte Disabled VMware Virtual Ethernet	Connection IPv4 Connectivity: IPv6 Connectivity:	No netwo	Internet rk access
Wi-Fi HomeNetwork-extender Ralink RT5390R 802.11bgr	Media State: SSID: Duration:	HomeNetwork	Enabled extender 00:11:48
	Speed: Signal Quality: Details	15 Wireless Properties	i0.0 Mbps
	Activity	Sent — 🙀 —	Received
	Bytes:	18,602	53,993
	Properties	Disable Diagnose	
	1		Close

If the extender has been setup successfully, you can go ahead move the extender to another room.