This article can apply on EW-7228APn and EW-7416APn. We used screen shots of EW-7416APn in this instruction. We recommend you use wired computer to do the configuration. If you have to use wireless computer, please check which wi-fi network is connected.

First Step: Find out the regular IP address of your computer. Have your wired computer get on Internet as normally, without EW-7416APn/EW-7228APn get involved.

If you use a Windows XP computer, click on Start -> Run. Type in "ncpa.cpl" hit OK. If your computer is a Vista or a Windows 7, click on Start, in the "Search programs and files" field, type in "ncpa.cpl" then hit the Enter key. The Network Connection window will show up and there is an icon of "Local Area Connection". Double click on the Local Area Connection to get into "Local Area Connection Status". Click on "Details" button.

Local Area Connec	ction Status	<u> </u>	Network Connection Detail	s
General			Network Connection Details:	
Connection			Property	Value
IPv4 Connectivity IPv6 Connectivity Media State: Duration: Speed: Details		Internet No network access Enabled 00:20:39 100.0 Mbps	Connection-specific DN Description Physical Address DHCP Enabled IPv4 Address IPv4 Subnet Mask Lease Obtained Lease Expires	VIA Rhine II Compatible Fast Ethemet Ad 00-19-21-72-2F-1E Yes 192.168.1.2 255.255.255.0 Friday, April 23, 2010 9:50:17 AM Friday, April 23, 2010 10:50:16 AM
Activity ———	Sent — 🔰	— Received	IPv4 Default Gateway IPv4 DHCP Server IPv4 DNS Servers	192.168.1.1 192.168.1.1 192.168.1.1 192.168.1.1 192.168.1.1
Bytes:	292,921	1,710,434	IPv4 WINS Server NetBIOS over Tcpip En	Yes
Properties	🛞 Disable 🛛 🔹 Di	agnose	•	III.
		Close		Qose

Below is a screen shot from Windows7.

Take a note about your IP address, subnet mask, and default gateway. In our example, the computer uses IP address 192.168.1.2 so every computer in the network uses 192.168.1.x. You can assign a new IP address like 192.168.1.200 to EW-7416APn/EW-7228APn later.

Click on Close button to close "Network Connection Details". You are back to the "Local Area Connection Status" window.

Second Step: Have your computer connect to the LAN port of EW-7416APn/EW-7228APn . We'll login to the setup page of EW-7416APn/EW-7228APn .

EW-7416APn/EW-7228APn is not a DHCP server by default which means it will not assign IP-address to computers, therefore we need to (temporarily) assign one manually IP address to the Ethernet network card.

Continue from the first step, you are in "Local Area Connection Status" window, click on "Properties" button.

Below is a screen shot from Windows 7. Go into the Internet Protocol TCP/IP v4 and select the option of "Use the following IP address".

Local Area Connection Status	Local Area Connection Properties	Internet Protocol Version 4 (TCP/IPv4) Properties
General	Networking	General
Connection IPv4 Connectivity: IPv6 Connectivity: No netwo Media State: Duration: Speed: 10 Details Activity	Connect using: VIA Rhine II Compatible Fast Ethemet Adapter Configure This connection uses the following items: Cient for Microsoft Networks Cient for Microsoft Networks Cient Fole and Printer Sharing for Microsoft Networks File and File and Printer Sharing for Microsoft Networks File and File and Printer Sharing for Microsoft Networks File and Printer Sharing for Microsoft Networks File and File and Printer Sharing for Microsoft Networks File and File and	You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.
Sent — F Bytes: 296,682 1	Install Uninstall Properties Description Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.	Use the following DNS server addresses: Preferred DNS server: Alternate DNS server: Alternate DNS server: Alternate DNS server: Advanced
	ОК Сапс	OK Cancel

We change the computer's IP address to 192.168.2.20. Only when computer has IP like 192.168.2.x can see the IP 192.168.2.1 which is the default IP address of EW-7416APn/EW-7228APn . Click OK button twice to save the setting and exit the Local Area Connection Properties.

Open Internet Explorer web browser, in the address bar, type http://192.168.2.1 and press Enter.

The default username is admin. The password is 1234. Type them in then you can get the setup page. If you can not get into the page, the default password of EW-7416APn/EW-7228APn may have been changed. In case you do not know your new login password, you can reset the EW-7416APn/EW-7228APn to factory default by pressing the Reset button on the back of EW-7416APn/EW-7228APn for 20 seconds. That will erase all the setting and restore the factory default settings. Below is the home page of EW-7416APn/EW-7228APn at http://192.168.2.1.

Access Point - Windows Internet Explor	er internet in the second	
	.asp 👻 🛃 🐓	🗙 🚼 Google 🔎 👻
Favorites Access Point		
ΣПІМАХ		
NETWORKING PEOPLE TOGETHER		
Home	Status a	and Information
Basic Setting	You can use the information to m	onitor the Access Point's MAC address, runtime code
WPS Setting	and hardware version.	
WPS Setting	System	
Advanced Setting	Uptime	0day:18h:28m:55s
Security	Hardware Version	Rev. A
Radius Server	Runtime Code Version	1.03
Radius Server	Wireless Configuration	E
MAC Filtering	Mode	AP
System Utility	ESSID	Edimax AP
	Channel Number	11
Configuration Tool	Security	Disable
Upgrade	BSSID	00:1f:1f:83:76:b8
	Associated Clients	0
Reset	LAN Configuration	
	IP Address	192.168.2.1
	Subnet Mask	255.255.255.0
	Default Gateway	

Third Step: Change the IP address of EW-7416APn/EW-7228APn to fit in IP addresses of your network. This step is optional but recommended.

You may want to change the IP address of EW-7416APn/EW-7228APn to a new IP address so it can be in the same subnet with your network. This is done under "System Utility" in the left menu.

Please be noted that if your router also uses the same IP 192.168.2.1, you'll have to change the IP address of EW-7416APn/EW-7228APn to a different address like 192.168.2.2 to avoid the IP Conflict. No two devices on the network can use the same IP address.

In our example, the existing network uses 192.168.1.x IP address. We make EW-7416APn/EW-7228APn have new IP 192.168.1.20. Please make a note about the new IP address that you assign to the EW-7416APn/EW-7228APn. You will need to use the new IP address of EW-7416APn/EW-7228APn to login and do configuration in the future.

C Home		System Utility	
Basic Setting	Enter the IP Address of the Access Point. If you want to use DHCP server should enter a unique IP for the Access Point.		
WPS Setting			
Advanced Setting	Password Settings		
Security	Current Password		
Radius Server	New Password		
MAC Filtering	Re-Enter Password		
System Utility	Management IP		
Configuration Tool	IP Address	192.168.1.200	
Upgrade	Subnet Mask	255.255.255.0	
Reset	Gateway Address	0.0.0.0	
	DHCP Server	Disabled 👻	
	DHCP Server		
	•	III	

After you type in the new IP address/subnet mask/default gateway, click Apply. Here comes a reminding that EW-7416APn/EW-7228APn has a new IP address. Use the new IP address to login the configuration page later. Click OK.

Message f	rom webpage
4	IP address was modified, you have to re-connect the WebServer with the new address.
	ОК

Next page will ask you select either Continue or Apply. Click on *Continue* for more setup. (If you happen click on Apply for EW-7416APn/EW-7228APn to save settings and reboot, you will need to change the TCP/IP protocol of your computer to be in 192.168.1.x in order to access the new IP address of EW-7416APn/EW-7228APn)



Fourth Step: Configure EW-7416APn/EW-7228APn to use Universal Repeater mode.

- 1. Go to Basic Settings. There are several mode available for EW-7416APn/EW-7228APn
- 2. Select the option "Universal Repeater". Click on "Select Site Survey" button.
- 3. "Wireless Site Survey" window displays all available wireless networks. Pay attention on the Encryption, Authentication, and Signal of your Wireless Network. If the signal is not good, adjust the direction of the antenna of EW-7416APn/EW-7228APn or put the EW-7416APn/EW-7228APn to a higher place.
- 4. Select your wireless network. Click on Connection button. The "Wireless Site Survey" window will be closed.

W	ireless Settings		
page allows you to define ESSID, and Channel for the wireless connection. These neters are used for the wireless stations to connect to the Access Point.		ess Site Survey ge provides tool to scan the wireless network. If any Access Point or IBSS is found, Id choose to connect it manually when client mode is enabled.	
Mode	Universal Repeater		
Band	2.4 GHz (B+G+N) ▼		
MAIN ESSID	Edimax AP Multiple ESSID	Select Channel SSID BSSID Encryption Authentication Signal N	
Channel Number	11 -	= 11 mainNetwork 00:1F:1F:68:1E:20 AES WPA2PSK 100 1	
Associated Clients	Show Active Clients	Refresh Connection	
Root AP SSID		-	
Site Survey	Select Site Survey		

5. The Root AP SSID is the SSID name of your existing wireless network. The MAIN ESSID is the SSID of EW-7416APn/EW-7228APn. It should be a different name with the Root AP SSID. Click on Apply.

ers are used for the v	vireless stations to connect to	the Access Point.	
Mode	Universal Repeater		
Band	2.4 GHz (B+G+N) ▼		
MAIN ESSID	Edimax AP Multiple ESSID		
Channel Number	11 -		
ssociated Clients	Show Active Clients		
Root AP SSID	mainNetwork		
Site Survey	Select Site Survey		

6. **If your existing wireless network has no wireless security**, you can click on <u>Apply</u> button to save settings and restart EW-7416APn/EW-7228APn .

If your existing wireless network has wireless security like WEP or WPA, click on "<u>Continue</u>" so you can setup the security in EW-7416APn/EW-7228APn .

Save setting	js successfully!
	NTINUE button to continue configuring other settings or on to restart the system to make the changes take effect.
CONTINUE	APPLY

Here is a example for WPA2-PSK AES. Type in your WPA2 pre-share key into the field. Click on Apply.

Home	Security		
Basic Setting		ss security. Turn on WEP or WPA by using nauthorized access to your wireless network.	
WPS Setting	Select SSID		
Advanced Setting	SSID choice	Edimax AP 👻	
• Security	Security Settings		
Radius Server	Encryption	WPA pre-shared key 🔻	
MAC Filtering	WPA Unicast Cipher Suite	© WPA(TKIP)	
System Utility	Pre-shared Key Format	Passphrase -	
Configuration Tool	Pre-shared Key	••••••	
Upgrade		Apply Cancel	
Reset			

Click on <u>Apply</u> again to save the settings and reboot. Wait 30 seconds for EW-7416APn/EW-7228APn reboot.

Save setting	js success	fully!
		o continue configuring other settings or system to make the changes take effect.
CONTINUE	APPLY	

Final Step:

Make your computer obtain IP address automatically Do this in the Network Connection windows. You may refer the first step to get into "Network Connection Window".

Right click on Local Area Connection -> Properties. Go to the Internet Protocol TCP/IP -> Properties -> select the option of "Obtain IP address automatically" and select the option "Obtain DNS server address automatically". Hit OK. Hit OK again. Wait for 1 minute.

Should your local area connection become as "connected", then you should be able to get on Internet because the EW-7416APn/EW-7228APn repeater is working.

After the repeater is confirmed working, you can have your wireless computer connect to EW-7416APn/EW-7228APn repeater to get on Internet.

Trouble Shooting tips:

If your Local Area Connection can not get an IP address from your wireless router, please assign a manual IP like 192.168.1.201, subnet mask 255.255.255.0, default gateway 192.168.1.1 to your computer.

Login to the EW-7416APn/EW-7228APn (remember use the new IP address). Check the Status and Information page. The mode should be "Universal Repeater". The Security should be the correct security used in your wireless network.

Home	Status	and Information		
Basic Setting	You can use the information to monitor the Access Point's MAC address, runtime cod and hardware version.			
WPS Setting				
Advanced Setting	System			
Advanced Setting	Uptime	0day:19h:10m:28s		
Security	Hardware Version	Rev. A		
	Runtime Code Version	1.03		
Radius Server	Wireless Configuration			
MAC Filtering	Mode	Universal Repeater		
Curta - Uklika	ESSID	Edimax AP		
System Utility	Channel Number	11		
Configuration Tool	Security	WPA-shared key		
Upgrade	BSSID	00:1f:1f:83:76:b8		
opyraue				

Go to Command Prompt window. For Windows XP, click on Start -> Run -> Enter "cmd" hit OK. For Windows 7/Vista, click on Start -> in the field of "Search programs and files", enter "cmd" hit the Enter key. You will get into the command prompt window. Enter the PING command to ping the IP address of your wireless router and see if you can get replies.

Administrator: C:\Windows\syste	em32\cmd.exe
C:\Windows\system32>ping	192.168.1.1
_	

If you does not get replies from your wireless router, please make sure the wireless security password used in your wireless router and make sure the Wireless MAC filter authentication is disabled. For further trouble shooting, you may want to temporarily disable the wireless security in the wireless router. Then turn the security back on after the repeater of EW-7416APn/EW-7228APn confirmed work properly.

Below is a command to ping <u>www.google.com</u> which replies 4 times successfully. The computer is located on the LAN port of EW-7416APn/EW-7228APn has Internet. The repeater is working.

Administrator: C:\Windows\system32\cmd.exe	
C:\Windows\system32>ping www.google.com	Â
Pinging www.l.google.com [74.125.19.103] with 32 bytes of data: Reply from 74.125.19.103: bytes=32 time=55ms TTL=54 Reply from 74.125.19.103: bytes=32 time=49ms TTL=54 Reply from 74.125.19.103: bytes=32 time=47ms TTL=54 Reply from 74.125.19.103: bytes=32 time=48ms TTL=54	
Ping statistics for 74.125.19.103: Packets: Sent = 4, Received = 4, Lost = 0 (0% loss), Approximate round trip times in milli-seconds: Minimum = 47ms, Maximum = 55ms, Average = 49ms C:\Windown\punctum22\	
C:\Windows\system32>_	Ŧ
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