CME090W Cable Modem

User's Manual

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Safety Notes

For Installation

- Use only the type of power source indicated on the marking labels.
- Use only the power adapter supplied with the product.
- Do not overload wall outlet or extension cords as this may increase the risk of electric shock or file. If the power cord is frayed, replace it with a new one.
- Proper ventilation is necessary to prevent the product overheating. Do not block or cover the slots and openings on the device, which are intended for ventilation and proper operation. It is recommended to mount the product with a stack.
- Do not place the product near any source of heat or expose it to direct sunshine.
- Do not expose the product to moisture. Never spill any liquid on the product.
- Do not attempt to connect with any computer accessory or electronic product without instructions from qualified service personnel. This may result in risk of electronic shock or file.
- Do not place this product on an unstable stand or table.

For Using

- Power off and unplug this product from the wall outlet when it is not in use or before cleaning. Pay attention to the temperature of the power adapter. The temperature might be high.
- After powering off the product, power on the product at least 15 seconds later.
- Do not block the ventilating openings of this product.
- When the product is expected to be not in use for a period of time, unplug the power cord of the product to prevent it from the damage of storm or sudden increases in rating.

For Service

Do not attempt to disassemble or open covers of this unit by yourself. Nor should you attempt to service the product yourself, which may void the user's authority to operate it. Contact qualified service personnel under the following conditions:

- If the power cord or plug is damaged or frayed.
- If liquid has been spilled into the product.
- If the product has been exposed to rain or water.
- If the product does not operate normally when the operating instructions are followed.
- If the product has been dropped or the cabinet has been damaged.
- If the product exhibits a distinct change in performance.

Warning

- This equipment must be installed and operated in accordance with provided instructions and a minimum 20 cm spacing must be provided between computer mounted antenna and person's body (excluding extremities of hands, wrist and feet) during wireless modes of operation.
- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Caution

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

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Before You Use

The CME090W is a DOCSIS 1.0/1.1 and CableHome 1.0 compliant wireless cable residential gateway that provide high-speed connectivity to residential, commercial, and education subscribers on public and private networks via an existing cable infrastructure. The CME090W is equipped with 4-port Ethernet switch, USB, IEEE802.11b Wireless, HPNA interfaces. The CME090W can inter-operate with any DOCSIS and CableHome compliant headend equipment. The IP traffic can transfer between the CME090W and DOCSIS and CableHome compliant headend equipments. The data security secures upstream and downstream communications.

Features

- Up to 42.88 Mbps downstream and up to 10.24 Mbps upstream, two-way cable modem.
- F-Connector for the cable interface.
- Build-in IEEE 802.11b Wireless Access Point function
- Bridging wired & wireless segments of network
- Provide 11 / 5.5 / 2 / 1 Mbps wireless connectivity to the wireless clients
- Support Wired Equivalent Privacy Algorithm (WEP)
- Roaming by Association/Re-association/De-association
- Four ports 10/100BaseT Ethernet switch with auto-negotiation function and auto-media dependent interface crossover (MDIX).
- USB Connector for USB interface
- Home PNA 2.0 support
- NAT (Network Address Translation) to support multiple users with one IP account for routing mode.
- Transparent bridging for IP traffic for bridge mode
- Firewall function
- RSA and 56 bit DES data encryption security
- Interoperable with any DOCSIS and CableHome compatible headend equipment
- SNMP v1/v2c/v3 network management support
- Remote operating firmware downloading
- Support Web pages and private DHCP server for status monitoring
- Clear LED display
- Universal Plug and Play

System Requirements

This cable modem equips ETHERNET and USB interfaces. You can choose either one to connect to the cable modem. Before installing the EMTA, please check the following requirements with your computer.

For Ethernet Connection

- Windows98/2000/NT/ME/XP operating system or Apple Macintosh series
- 10/100 Base-T NIC(network interface card)
- Subscribe to a Cable Television Company for cable modem service

For USB Connection

- Windows98/2000/ ME/XP operating system
- Available USB port
- Subscribe to a Cable Television Company for cable modem service

For Phone Connection

- Standard touch-tone telephone and phone cord with RJ-11 connector
- Subscribe to a VoIP system company (VoIP service provider) for VoIP services

Unpacking

Check the contents of the package against the pack contents checklist below. If any of the items is missing, then contact the dealer from whom the equipment was purchased.

- Cable Modem
- Twisted Pair Ethernet Cable (CAT5/RJ-45)
- USB Cable
- Power Adapter & Power Cord
- Quick Start Guide
- Software CD

Chapter 1: Overview

Physical Outlook

Front Panel

The following illustration shows the front panel of the EMTA machine:



LED Indicators

The LEDs on the front panel are described in the table below (from left to right):

LED	Color	Status	Description
Power	Green	Off	Power off.
		On	Power on.
Receive	Green	Blinking	Indicates receiving RF DS data
Send	Green	Blinking	To indicate transmit RF US traffic.
Cable	Green	On	Modem registration completed.
		Blinking	To indicate RF link status at different speed. 1. Scanning DS 2. US ranging 3. DHCP/TFTP/Registration
Ethernet 1	Green	On	Ethernet carrier is present.
~ 4		Blinking	To indicate Ethernet data.
USB	Green	On	To indicate USB link is present.
		Blinking	To indicate USB transmitting or receiving data
HPNA	Green	On	To indicate HPNA link is present.
		Blinking	To indicate HPNA transmitting or receiving data
Wireless	Green	On	To indicate wireless link is present.
		Blinking	To indicate Wireless AP transmitting or receiving data

Rear Panel



Chapter 2: Installation

This cable modem equips USB and Ethernet interfaces. You can choose either one to connect to the cable modem. Go to the section "Installation Procedure for Ethernet Interface", if your computer has installed TCP/IP and Ethernet card with 10/100BaseT capability. Go to the section "Installation Procedure for Ethernet USB Interface", if your PC has USB port and the operating system is Microsoft Windows 98/ME/XP or Windows 2000.

Connecting the Cable Modem to Your Computer

Installation Procedure for Ethernet Interface

Follow the steps below for proper installation:

- 1. Make sure your computer meets the system requirements.
- 2. Connect a coaxial cable (supplied by the local Cable Television Company) to the CABLE connector on the modem.

Note: To speed up the registration process of cable modem, the coaxial cable should be connected to the modem prior to the power connector.

- 3. Connect the RJ-45 Ethernet cable to one of the **ETHERNET** connector on the modem, connect the other end with the 10/100BaseT Ethernet port on your computer.
- 4. Plug the power adapter into the **POWER** connector of the modem.
- 5. Plug the other end of the power adapter into a power outlet.
- 6. The cable modem will look for the proper cable modem signal in the Cable Television network and process the initial registration. The cable modem is ready for data transfer after the LED "**Power**" is in solid green.

Note: The RST button at the rear panel is for maintenance purpose only.

Installation Procedure for USB Interface

Follow the steps below for proper installation:

- 1. Make sure your computer meets the system requirements.
- 2. Connect a coaxial cable (supplied by the local Cable Television Company) to the CABLE connector on the modem.

Note: To speed up the registration process of cable modem, the coaxial cable should be connected to the modem prior to the power connector.

- 3. Connect the USB cable to the USB connector on the modem.
- 4. Plug the power adapter into the **POWER** connector of the modem.
- 5. Plug the other end of the power adapter into a power outlet.
- 6. The cable modem will look for the proper cable modem signal in the Cable Television network and process the initial registration. The cable modem is ready for data transfer after the LED "**Power**" is in solid green.

Note: The RST button at the rear panel is for maintenance purpose only.

Below shows the connection status among the cable modem and your computer.



Chapter 3: Software Installation and Configuration

USB Driver Installation

For Windows 98/ME

1. Wait for the cable modem is running in the operational state (registration O.K.). Plug the USB cable into your PC USB port. You will see the next page. Click the "Next" button.

This wizard searches for new drivers for:
USB Composite Device
A device driver is a software program that makes a hardware device work.
< Back Next> Cancel

2. Select "Search for the best drivers for your device" and click the "Next" button.

	What do you want Windows to do?
	 Search for the best driver for your device. (Recommended).
	Display a list of all the drivers in a specific location, so you can select the driver you want.
<u></u>	

3. Check "Specify a location" and browse CD-ROM:\Win9x or WinME. Click the "Next" button.

Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected locations. Click Next to start the search. Floppy disk drives CD-ROM drive Microsoft Windows Update
D:\Driver\VGACard\W9x Browse

4. Select "The updated driver..." and click the "Next" button.

Windows has found an updated driver for this device, and also some other drivers that should work with this device.
What do you want to install? What do you want to install? USB Cable Modern Adapter Que of the other drivers.
< Back Next> Cancel

5. Click the "Next" button.

	Windows driver file search for the device:
	USB Cable Modern Adapter
	Windows is now ready to install the best driver for this device. Click Back to select a different driver, or click Next to continue.
🏽 🍪 🏤 -	Location of driver:
 Image: A second sec second second sec	
	< Back Next > Cancel

6. Installation has been completed here. Click the "Finish" button.

Add New Hardware Wizard		
	USB Cable Modern Adapter	
	Windows has finished installing the software that your new hardware device requires.	
چ 🖑		
	< Back Finish Cancel	

7. The system will ask you to restart your computer. Click "Yes" to complete the installation.

System S	Settings Change		×
?	To finish setting up your new hard	ware, you mi iter now?	ust restart your computer.
	Yes	<u>N</u> o	J

For Windows 2000/XP

1. Wait for the cable modem is running in the operational state (registration O.K.). Plug the USB cable into your PC USB port.

Found New Hardware	
USB Cable Modem	
Installing	

2. You will see the next page. Click the "Next" button. Found New Hardware Wizard

Welcome to the Found New Hardware Wizard
This wizard helps you install a device driver for a hardware device.
To continue, click Next.

3. Select "Search for a suitable driver for my device" and click the "Next" button.

Found New Hardware Wizard
Install Hardware Device Drivers A device driver is a software program that enables a hardware device to work with an operating system.
This wizard will complete the installation for this device:
USB Cable Modem
A device driver is a software program that makes a hardware device work. Windows needs driver files for your new device. To locate driver files and complete the installation click Next.
What do you want the wizard to do?
Search for a suitable driver for my device (recommended)
Display a list of the known drivers for this device so that I can choose a specific driver
< <u>B</u> ack <u>N</u> ext > Cancel

4. Insert the driver CD into CD-ROM. Select "CD-ROM drive" and clicks the "Next" button.

Found New Hardware Wizard
Locate Driver Files Where do you want Windows to search for driver files?
Search for driver files for the following hardware device:
USB Cable Modem
The wizard searches for suitable drivers in its driver database on your computer and in any of the following optional search locations that you specify.
To start the search, click Next. If you are searching on a floppy disk or CD-ROM drive, insert the floppy disk or CD before clicking Next.
Optional search locations:
Floppy disk drives
CD-ROM drives
Specify a location
Microsoft Windows Update
< <u>B</u> ack <u>N</u> ext > Cancel

5. Click the "Next" button

Driver Files Search Results		
The wizard hasiinished searching it	or aniver tiles for your nardware device.	No.
The wizard found a driver for the f	following device:	
USB Cable Modem		
Windows found a driver for this de	evice. To install the driver Windows found, clic	k Next.
d:\w2k\askndis.inf		
The wizard also found other drive these drivers or install one of thes Next.	rs that are suitable for this device. To view a li se drivers, select the following check box, and	st of then clici
Specify a location		

6. A Digital Signature Not Found dialog box appears to ask you to continue the installation or stop the procedure. Please click **Yes**. Then Windows will copy the drivers from the Software Utility CD.

Digital Signature Not Fo	und X
	The Microsoft digital signature affirms that software has been tested with Windows and that the software has not been altered since it was tested. The software you are about to install does not contain a Microsoft digital signature. Therefore, there is no guarantee that this software works correctly with Windows. Scientific Atlanta USB Cable Modem If you want to search for Microsoft digitally signed software, visit the Windows Update Web site at http://windowsupdate.microsoft.com to see if one is available. Do you want to continue the installation?
	Yes No More Info

7. Installation has been completed here. Click the "Finish" button.

roding new maraware mizara	
	Completing the Found New Jardware Wizard Image: Scientific Atlanta USB Cable Modem Image: Scientific Atlanta USB Cable Mode
	< Back Finish Cancel

Uninstall USB Driver

For Windows 98/ME

- 1. Click "Start" button on your computer's taskbar, point to "Settings", and then click "Control Panel".
- 2. Select Add/Remove Programs.
- 3. On the **Install/Uninstall** tab, select **USB Cable Modem Adapter** from the list box. Click the **Add/Remove** button.
- 4. A confirmation dialog appears. Click Yes.
- 5. A dialog box appears to ask you unplug USB cable, please unplug the cable and click OK.

For Windows 2000/XP

- 1 Click on the **Start** menu, point to **Settings** and click on **Control Panel**.
- 2 Select Add/Remove Programs.
- 3 Select **USB Cable Modem Adapter** from the list box.
- 4 Click the **Change/Remove** button.
- 5 Click **Yes** button.

6 A dialog box appears to ask you unplug USB cable, please unplug the cable and click **OK**.

Setting TCP/IP on Client PC

After you successfully complete the network interface card (Ethernet card) installation task, you need to make sure the TCP/IP communications protocol used by the Ethernet card is installed and correctly configured on your system.

For Windows 98/ME

1. Click on the **Start** menu, point to **Settings** and click on **Control Panel**.



2. The Control Panel window will show up. Double-click the "Network" icon in the Control Panel window.



Windows will appear the Network dialog box. Click "Configuration" tab to bring it to the front, and on this tab, a list of installed network components appears.
 Option 1: If you have no TCP/IP protocol, click Add.
 Option 2: If you have TCP/IP protocol, go to Step 7.

Network	? ×
Configuration Identification Access Control	
The following network engineering installed	
Client for Microsoft Network's	-
Microsoft Family Logon	
B 3Com 10/100 Mini PCI Ethernet Adapter	
USB Cable Modern Adapter	
Add Remove Properties	
Primary Network Logon:	
Microsoft Family Logon]
File and Print Sharing	
Description	
OK Cance	el

4. The Select Network Component Type dialog box will show up. Click "Protocol", and then click "Add".

Client	Add
Adapter	
Protocol	Cancel
Service	

5. You will see the Select Network Protocol dialog box. Click "Microsoft" in the "Manufactures:" list, and then click "TCP/IP" in the "Network Protocols:" list. Click "OK".

Click the Netwo installation disk	ork Protocol that you want to install, then dick OK. If you have an for this device, dick Have Disk.
Manufacturers	Network Protocols
 Banyan IBM Microsoft Novell 	ATM LAN Emulation Client(Microsoft) [5-11-1998] Fast Infrared Protocol IPX/SPX-compatible Protocol Microsoft 32-bit DLC [5-11-1998] Microsoft DLC NetBEUI TCP/IP
1	BEWAN current for ATM Have Disk
	OK Cancel

- 6. You will be directed back to the Network dialog box, and on the "Configuration" tab, the entry that includes TCP/IP -> followed by the Ethernet card installed in your computer will appear in the list of installed network components.
- 7. Click TCP/IP -> followed by the Ethernet card installed in your computer, and then click "Properties". The TCP/IP Properties dialog box will appear.

Network ? ×
Configuration Identification Access Control
The following network components are installed:
Elient for Microsoft Networks
📇 Microsoft Family Logon
🕎 3Com 10/100 Mini PCI Ethernet Adapter
B USB Cable Modern Adapter
GT TCP/IP -> 3Com 10/100 Mini PCI Ethernet Adapter
TCP/IP -> USB Cable Modem Adapter
Add R <u>e</u> move P <u>r</u> operties
Primary Network Logon:
Microsoft Family Logon
Eile and Print Sharing
TCP/IP is the protocol you use to connect to the Internet and
wide-area networks.
OK Cancel

8. In the TCP/IP Properties dialog box, please follow the directions below: Click "IP Address" tab to bring it to the front, and then click "Obtain an IP address automatically" on the tab.



9. Click "Gateway" to bring it to the front. On this tab, leave the "New gateway:" blank. If there is the entry in the "Installed gateway:" list, click it and then click "Remove" to remove all installed gateways.

Bindings Adv Gateway	nced NetBIOS DNS Configuration WINS Configuration IP Address
The first gateway in address order in the are used.	the Installed Gateway list will be the default. I list will be the order in which these machines
New gateway:	
· ·	. <u>A</u> dd
-Installed gateway	1
Installed gateway	Bemove
Installed gateway	Bemove
- Installed gateway	Eemove
- Installed gateway	Eemove
- Installed gateways	(Bernove

10. Click "DNS Configuration" tabs to bring it to the front, and click "Disable DNS", then click "OK" to close the dialog box.

Gateway	WINS (Configuration	IP Address
Bindings Ad	vanced	NetBIOS	DNS Configuration
Disable DNS			
C Enable DNS			
Host		Domein	
TONC		(D) (maining	
DNS Server Sea	rch Order	-	
			Add
			Removie
			Activity
1			
Domain Suffix Se	erch Order		
			Add
			Remove
1			

11. The Copying Files dialog box will pop up and the system will start copying files from Windows. At the first time you will be asked to insert the Windows 98 CD-ROM into the CD-ROM drive during the files copying, and follow the instructions when they show up, then click "OK". It will prompt another Copying Files dialog box. Please type the command line that Windows files located in the dialog box (For example, D:\win98). Click "OK" to continue the files copying.

Copying Files	
Source Windows 98 CD-ROM Destination: Scanning	
58%	
Cancel	

12. Windows will appear the System Settings Change dialog box and ask you if you would like to restart your computer. Click "Yes".

System Settings Change
You must restart your computer before the new settings will take effect. Do you want to restart your computer now?
<u>Y</u> es <u>N</u> o

For Windows 2000/XP

1. Click "Start" button on your computer's taskbar, point to "Settings", and then click "Network and Dial-up Connections".



2. The Network and Dial-up Connections window will show up. Double-click "Local Area Connection" icon in the Network and Dial-up Connections window.

Network and Dial-up Connections	<u>_ </u>
File Edit View Favorites Tools Advanced Help	
⊨ Back - → - 🔄 📿 Search 🖓 Folders 🥶 History 🖓 🥸 🗙 🖄 🖽 -	
Address 🔁 Network and Dial-up Connections	• 🗟 GO
I I I I I I I I I I I I I I I I I I I	
Make New Local Area Connection Connection	
2 object(s)	1.

3. The Local Area Connection status window will show up. Click the "Properties" button.

Local Area Connection Status		<u>?</u> ×
General		
Connection Status Duration: Speed:	Connected 00:01:40 100.0 Mbps	
Activity Sent — Paskets:	- Received	
Properties Disable	11	
	Clos	se

4. Click "Internet Protocol (TCP/IP)" and then click "Properties".

Local Area Connection	2 Properties		? ×
General Sharing			
Connect using:			
USB Cable Mode	em Adapter		
Components checked	are used by this conne	<u>C</u> onfigu	ure
Internet Protoc	of (TCP/IP)	Deserter	
Install	Uninstall	Properties	
Transmission Control wide area network p across diverse interc	Protocol/Internet Pro rotocol that provides o connected networks. ar when connected	tocol. The defaul communication	t
		DK Са	incel

5. The Internet Protocol (TCP/IP) Properties dialog box appears. Click "Obtain an IP address automatically". Click "Obtain DNS server address automatically". Click "OK" to close the dialog box.

Internet Protocol (TCP/IP) Prope	rties					? ×
General						
You can get IP settings assigned at this capability. Otherwise, you need the appropriate IP settings.	utomatical I to ask yo	ly if yo ur nel	our net work a	work st adminis	upports trator fo	r
Obtain an IP address automat	tically					
C Use the following IP address:						
IP address:					1	
Subnet mask:]	
Default gateway:]	
Obtain DNS server address a	utomatical	ly				
☐ Use the following DNS server	r addresse	s:				
Preferred DNS server:		•		•		
Alternate DNS server:						
				Adv	anced.	
			OK		Can	cel

6. Windows will appear the System Settings Change dialog box and ask you if you would like to restart your computer. Click "Yes".

Local Net	work				×
	You must shut dow Do you want to res	n and restart your com tart your computer nov	puter before the new se /?	ttings will take effect.	
		Yes	No		

DHCP Server

PC connected to the cable modem can automatically get a private IP address from the DHCP server of cable modem before cable modem is on line. The following steps will show you how to get an IP address.

For Windows 98/ME

1. Click "Start", point to "Run", and click to open the "Run" windows.

Programs	•
E Favorites	
Documents	
Settings	
[™] Eind	
<u> </u>	
<u> Run</u>	
Log Off Amely	
Shut Down	
Start	

2. Enter "winipcfg" in the "Open" field. Click "OK" to execute the winipcfg and show the "IP Configuration" window.

Run				? ×
2	Type the n resource, a	ame of a prog and Windows v	ram, folder, docume vill open it for you.	ent, or Internet
<u>O</u> pen:	winipcfg			
		ОК	Cancel	Browse

3. Select the "Ethernet adapter" to show the IP address. Press "Release" and "Renew" if the PC is not accessing the Internet. After the cable modem is on line, you need to press the "Release" and "Renew" to get a new IP address from your ISP's server.

P Configuration				
Ethernet Adapter Information	n			
	[Intel 82595	-Based Ethernet	•
Adapter Ada	dress	00-8	0-C8-EF-67-9F	
IP Add	dress	19	2.168.100.2	
Subnet M	ask	25	5.255.255.0	
Default Gatev	way	19	2.168.100.1	
ОК	Re	lea <u>s</u> e	Renew	
Rele <u>a</u> se All	Rer	ne <u>w</u> All	More Info >>	

For Windows NT/2000/XP

1. Click "Start", point to "Run", and click to open the "Run" windows.



2. The Run dialog box appears. Type "cmd" in the "Open" field, and then click "OK" to execute the command.



3. You will enter the dos mode, type "ipconfig", press "Enter" on your keyboard, and you will see the IP address your computer get from the cable modem.



4. If PC is not access Internet, type "ipconfig /release", and press "Enter" on your keyboard to release the IP.



5. Type "ipconfig /renew", and press "Enter" on your keyboard to renew the IP. You can repeat the steps until your computer gets the correct IP.



For Apple Macintosh

1. Click "Apple menu", point to "Control Panels", and click "TCP/IP" to open the "TCP/IP" window.



2. If the iMac gets an invalid IP, select "Using DHCP Server" in "Configure" field. Click the "Close box" at the upper left corner to close the "TCP/IP" window.

	TCP/IP (Air	Port4)		E
Connect via:	Ethernet built-in			
Configure:	Using DHCP Server	:		
DHCP Client ID:	[
IP Address:	169.254.121.33			
Subnet mask:	255.255.0.0			
Router address:	< not available >			
			Serach domains:	
Name server addr.:	239.255.255.251			
2)				

3. Click the "Save" in the prompted message box.

Save changes to th	e current configura	ntion?
Don't Save	Cancel	Save

4. You need to wait about 2 minutes and open "TCP/IP" window to see the new TCP/IP status.

Renew PC IP Address

There is a chance that your PC does not renew its IP address after cable modem is on line and the PC cannot access the Internet. Please follow the procedures below to renew PC's IP address after the cable modem is on line.

1. Click "Start", point to "Run", and click to open the "Run" windows.

☐Programs
Favorites
☐ Documents
bettings
SEind ▶
22 <u>R</u> un
Log Off Amely
Shut Down
Start .

2. Enter winipcfg in the "Open" field. Click "OK" to execute the winipcfg and show the "IP Configuration" window.

Run				? ×
	Type the n resource, a	ame of a progrand Windows v	ram, folder, docum vill open it for you.	ent, or Internet
<u>O</u> pen: <mark>winipcfg</mark>				
		ОК	Cancel	<u>B</u> rowse

3. Select the "Ethernet adapter" to show the IP address. Press "Release" and "Renew" to get a new IP address

IP Configuration			_ 🗆
	Intel 82595-	-Based Ethernet	
Adapter Address	00-80)-C8-EF-67-9F	
IP Address	192.168.100.2 255.255.255.0 192.168.100.1		
Subnet Mask			
Default Gateway			
OK Re	elea <u>s</u> e	Renew	
Belease All Be	new All	More Info >>	

4. Select the "OK" to close the IP Configuration window.

Chapter 4: Web Configuration

Usin4g Web-Based Manager

Once your host PC is properly configured, please proceed as follows:

Start your web browser and type the private IP address of the cable modem in the URL field: 192.168.100.1.

After connecting to the device, you will be prompted to enter username and password. By default, the username is **empty** and the password is **SA**. See the following example for running under Windows XP.

Status

This page shows the basic information of your cable modem such as name of your modem, serial number, MAC address, hardware version, software version, receive power level, transmit power level, cable modem status and so on.

Software

This page shows the basic software information such as software version for your reference.

WebST	Status				
Scientific Atlanta	Software Build Version This page displays information on the current software.				
	Information				
tatus					
Software	Standard Specification Co	ompiiant	DOCSIS 1.0/1.1		
Connection	Hardware Version		e000		
Coguritu	Software Version		1.0.1r1		
security	Cable Modem MAC Addre	ess	00:90:00:02:00:a	0	
treiess	Cable Modem Serial Num	ber	sm1173294		
	CM certificate		Installed		
	Status				
	System Up Time	0 days 0	0h:03m:21s		
	Network Access	Allowed			
	Cable Modem IP Address	10.0.50.	112		

Connection

The page shows the connection information about the access point in the status of WAN connection.

WebST	Status							
Scientific Atlanta	Connection This page displa	ys inforr	nation or	n the status o	f WAN conr	nection.		
Status	Startup Procedure							
Goftwara	Procedure		Status	Comment				
Generation	Acquire Downstream	Channel		Locked				
Connection	Connectivity State		OK	Operational				
security	Boot State		OK	Operational				
Wireless	Configuration File							
	Security		Disabled	Disabled				
	Downstream Channel Lock Status	Locke	d Modu	lation	QAM64			
	Channel ID	1	Symbo	ol rate	5056941			
	Downstream Frequen	cy	Downs	stream Powe	r -3.8 dBmV			
	SNR	37.9 c	зв					
	Upstream Channel							
	Lock Status	_ocked N	/lodulatio	on QPSł	<			
	Channel ID	1 5	iymbol ra	i te 2560	Ksym/sec			
	Upstream Frequency Upstream Power 36.75 dBmV							
	CM IP Address Duration	>n M: S	Expi 3:	res				
	Current System Time:	THU SE	.r 19 15:(10:00 2002				

Security

If you are not satisfied with the password that the system gave you, you can change the password in this web page.

Please enter the new one on the right box to the Password. Then re-enter the password below that one for confirmation. Finally, click **Apply** to invoke this setting for the next time using.

If you don't want to use the password that you set and want to restore the factory default one, please click on the Yes radio button and click **Apply**.

WebST	Status
Scientific Atlanta	Security This page allows you to change access priviledges and restore factory defaults.
Status	
Software	
Connection	Re-Enter Password **
Security	
Wireless	Restore Factory Defaults 🔿 Yes 💿 No
	Apply

Wireless

To configure the wireless setting for the Access Point, please open this web page.

Basic	
(WebST☆R	Wireless
Scientific Atlanta	802.11b Basic This page allows configuration of the Access Point parameters, including SSID and channel number.
Status Wireless Basic Privacy Advanced	Service Set Identifier (SSID) SA New Channel: 1 Current Channel: 1 Encryption Mode: No Encryption Firmware Version: 1.00.05
Service Set Identifier	(SSID):Type in the SSID for your service provider.

 New Channel:
 Select the channel that you need.

Current Channel: The current channel that your access point is in.

Encryption Mode: It shows the encryption mode that you set on the Privacy web page.

Firmware version: It shows the firmware version that you have for your access point.

Privacy

To configure the WEP encryption, please open this web page

WebSTAR Scientific Atlanta	Wireless 302.11b Privacy This page allows configuration of WEP encryption.	
Status Wireless Basic Privacy Advanced	Encryption Mode No Encryption Authentication Open System or Shared Key Default Key 1 64-Bit Keys 128-Bit Key Key 1 01 23 45 67 89 00 00 00 00 00 00 00 00 00 00 00 00 00	
Encryption Mode:	Choose the encryption mode for your necessity.	
Authentication:	The access point supports three authentication types: Open System , Shared key and Both . This should be considered with the WEP (Wired Equivalent Privacy) mechanism.	
Default Key:	Select the number as the default key for WEP encryption.	
Key 1 ~ Key 4:	Please type in the number that you want to set for the WEP encryption.	

After you do any change in this page, please remember to click the **Apply** button to the bottom of the web page for invoke the settings to your system.

Advanced

This page allows you to have further configuration for the wireless settings.

WebST	Wireless
Scientific Atlanta	802.11b Advanced This page allows configuration of data rates and WIFI thresholds.
Status Wireless Basic Privacy Advanced	Basic Data Rates1, 2 MbpsControl Tx Rates1, 2, 5.5, 11 MbpsBeacon Interval100 ms (0-65535)DTIM Interval3 ms (1-255)Fragmentation Threshold1536 bytes (256-2346)RTS Threshold1536 (0-3000)Apply

Basic Data Rates:	It decides the speed of the management packet transmission.
Control Tx Rates:	It decides the speed of the data packet transmission.
Beacon Interval:	Type in the beacon interval number. The range is from 0 to 65535.
DTIM Interval:	Type in the DTIM interval number. The range is from 1 to 255.
Fragmentation Threshold:	It decides the packet size. If the packet size is over the number that you typed here, it will be fragmented automatically. The maximum number is 2346 that means no packet size will be fragmented.
RTS Threshold:	If the packet size is over the value that you type here, system will use RTS (Request To Send) mechanism to transmit the data.

After you do any change in this page, please remember to click the **Apply** button to the bottom of the web page for invoke the settings to your system.

Chapter 5: Access Internet through Cable Modem

For making sure that you can get into Internet successfully, please make sure the following first.

- 1. Make sure the connection (through Ethernet or USB) between the cable modem and your computer is OK.
- 2. Make sure the TCP/IP protocol is set properly.
- 3. Subscribe to Cable Television Company.

Accessing Internet

When you are sure all above is Ok, you can open the Browser (such as I.E.) to open the homepage for the browser. See the following example.

🗿 Yahoo! - Microsoft Internet Explorer			_ B _
備案 (E) 編輯 (E) 檢視 (Y) 我的最愛 (▲) 工具 (I)	說明田		
網址① 🛃 http://www.yahoo.com/			▼ 28至
Personaliza <u>Personaliza</u> <u>Parsonaliza</u> <u>Pinance</u> <u>Yahoo! Tra</u>	Vel - Reserve: Flights, Hotels, Cars, Vacat	O. Email Second Help	*
[Search • advanced search • most popular	Yahoo! Finance In today's stock market, invest in <u>real</u>	
New! Play Fantasy Foot	ball, Pro Pick'em 👘 🙄 <u>Y! Messenger 5.5</u>		
Shop Auctions, Autos, C Find Careers, Maps, Pe Connect Chat, GeoCities, G	Classifieds, Real Estate, Shopping, Travel pople Search, Personals, Yellow Pages Greetings, Groups, Mail, Messenger, Mobile	Personal Assistant <u>Sign In</u> Sign up to personalize Yahool - <u>learn more</u>	
Organize Addresses, Briefca Fun <u>Games, Horoscop</u> Info <u>Finance, News, Sp</u>	ase, Calendar, My Yahool, PayDirect, Photo es, Kids, Movies, Music, TV vorts, Weather More Yahoo!	In The News S:10pm, Tue Aug 20 • Israel withdraws troops from Bethlehem • Source: Iraq lab may be linked to al-Qaida • Nigerian woman loses appeal, faces stoning	
Enter Keywo Job Seekers: Search Employees: PortJo Career Tools: Compa FIND TH	Service Find a Job Job Nov Port a Resume bogening Find Great Candidates re Your Salary Resume Tools E ROLE OF YOUR LIFE	Scientists attempt to poison snakehead fish Julia Child unveils kitchen at Smithsonian Baseball · NFL preseason · NCAA football News · Weather · Sports · Stock Ouotes Shopping Palm Price Drop - Save up to \$100 on Palm handhelds	
Web Site Direct	ory - Sites organized by subject	Loan Center - <u>auto loans, mortgages, credit</u> <u>reports</u>	
Business & Economy B2B, Finance, Shopping, Jobs	Regional Countries, Regions, US States	<u>Shopping</u> - <u>Auctions</u> - <u>Classifieds</u> - <u>Travel</u> Entertainment	
Computers & Internet Internet, WWW, Software, Games	Society & Culture People, Environment, Religion	Yahoo! Movies - New Trailers & Clips Exclusive! Samuel L. Jackson stars	
<u>News & Media</u> <u>Newspapers, TV, Radio</u>	Education College and University, K-12	Yahaal Games 54 225 people playing part	
Entertainment	Arts & Humanities	Collanse, Pool, Literati, Euchre,	-

Chapter 6: Troubleshooting

If the suggested solutions in this section do not resolve your issue, contact your system administrator or Internet service provider.

Can I use the same cable line for TV and cable modem?

A. Yes, the TV and cable modem uses the cable line. You need a splitter to use them at the same time. Ask Cable Company to install the splitter for you to avoid signal degradation.

My cable modem cannot get a solid green light on the Status LED when I connect the cable back.

A. The cable modem lost the signal during the disconnection period and it will keeps scanning other available signal. When you connect the cable back, it might take a while to find the correct channel. You can power cycle the modem to speedup the process since modem will remember the channel last time and it will start from that channel at startup.

Which port of the Ethernet hub should I connect to the modem if I need to connect multiple PC to the modem?

A. You should connect the modem to the up-link port of the hub. The link LED of the hub will be on.

How do I see my IP address?

A. If you are using Windows 95/98/ME, the winipcfg command will show you to IP address of the PC connected to the cable modem. Notice that even though you seem get the same address all the time, it may still be a dynamic address.

Can I just connect the cable modem and two computers to a hub?

A. Yes. You need to make sure you can get two IP addresses from your cable modem service provider. Connect the modem to the up-link port of the hub.

I have a cable modem. How can I make it work?

A. Basically, modem is plug and play. You can just connect the modem and you are ready to go if you have the subscription. For ensure good signal for your cable modem, you should ask your cable provider to install the cable modem for you.

Can I switch between a notebook and PC using the same cable modem? Will there be a problem to obtain a DHCP IP address?

A. This issue depends on how your cable modem service provider manages the modems. If you are using one of the cable modem service providers that register your PC based on the MAC address of the Ethernet card in the PC, then you will have to call them and have them change that entry every time you switch between the two. Ask them if you have problem on this issue.

Appendix: Specifications

RF Specifications(US)

		<u>Downstream</u>	<u>Upstream</u>		
	Operating Frequency Range	88-860MHz	5-42MHz		
	Frequency Channel	HRC, IRC, STD			
	Frequency Selection	Auto Scanning	Controlled by Head end		
	Bandwidth	6MHz	Programmable (200*N KHz)		
			N=1, 2, 4, 8, 16		
	Characteristic Impedance	75Ω Nominal	75Ω Nominal		
	Signal Level Range	-15 to +15dBmV/64QAM	+8 to +58dBmV/QPSK		
		-15 to +15dBmV/256QAM	+8 to +55dBmV/16QAM		
	Modulation	64QAM/256QAM	QPSK/16QAM		
	Symbol Rate	5.056941/5.360537	160/320/640/1280/2560		
		Msym/sec	Ksym/sec		
	Maximum Bit Rate	42.88Mbps/256QAM	10.24Mbps/16QAM		
		30.34Mbps/64QAM	5.12Mbps/QPSK		
	Forward Error Correction (FEC)	RS (128,122)/Trellis	Reed Solomon		
	Bit Error Rate (BER)	1×10 ⁻⁸ @ C/N=23.5dB, 64QAM wit	th FEC		
		1×10 ⁻⁸ @ C/N=30dB, 256QAM with +15dBmV	h FEC, received power $=$ -6dBmV to		
		1x10 ⁻⁸ @ C/N=33dB, 256QAM with 6dBmV	h FEC, received power = -15 dBmV to $-$		
W	ireless LAN				
	Data Encryption	64/128 bit WEP			
	Standard Compliance	IEEE 802.11b			
•	Operating Frequency Range	2.4GHz (2400-2483.5MHz) ISM B N.America/FCC: 2.412~2.462GHz Europe CE/ETSI: 2.412~2.472GHz Japan : 2.412~2.484GHz (14Channe	and (11Channels) (13Channels) els)		
	Modulation	2.4 GHz Direct Sequence Spread Sp CCK(11Mbps)	pectrum (DSSS),		
	Regulation Domain	FCC / ETSI / IC / Spain / France / Telec			
	Numbers of selectable channels	Up to 14 (depend on Regulation I	Domain)		
	Antenna	2 internal PCB antenna			
•	Media Access Protocol	CSMA/CA with ACK for uni-cast data frame CSMA/CA for multi-cast/broadcast data frame			
	Tx Data Rate	11 Mbps, Auto Fall-Back			
	Range in Open Space	11Mb/100m			
	Range in Closed Office	11Mb/35m			

■ Receiver Sensitivity -80 dbm @ 11Mbps

	Output Power	Average 15 dbm
	Interface	PCMCIA Type II (PCMCIA v2.1, 3.3V)
Ne	etwork	
	Network Protocol	IP/TCP/UDP/ARP/ICMP/DHCP/TP/TFTP/SNMP/HTTP
	Packet Filtering	Up to 253 CPE MAC filters, 32 LLC filters, 32 IP filters
_		
Se	Construction	V 500 Cartificato/56 Dit DES
2	Wireless LAN Authentication	A.509 Certificate/50-Bit DES
2	Wineless LAN Authentication	DC4 with 64 / 128 bit Key L anoth
	WITCHESS LAIN WEP	RC4 with 64 / 128-bit Key Length
St	andard Compliance	
•	Functional	DOCSIS v1.0/v1.1, CableHome 1.0, Ethernet/IEEE 802.3U, USB v1.1, HPNA 2.0
•	Network Management	SNMP v1/v2c/v3, RFC1907 (System group and SNMP MIB), RFC2233 (Interface group), RFC2011 (ICMP group and IP group), RFC2013 (UDP group), RFC2665 (Ethernet MIB), RFC1493 (Bridge MIB), RFC2670 (RF MIB), RFC2669 (Cable Device MIB), RFC3083 (BPI-MIB), RFC2012 (TCP-MIB), USB MIB
Ph	nysical Interface	
•	То СРЕ	Four ports Ethernet switch USB Type B HPNA RJ-11 connector IEEE 802.11b Wireless LAN
	To CATV network	Female F-Connector
•	LEDs	Power, Receive, Send, Cable, Ethernet 1, Ethernet 2, Ethernet 3, Ethernet 4, USB, HPNA, Wireless
Ph	ysical Specifications	
	Dimensions	W210 x D155 x H40 mm
	Weight:	?g
Ele	ectrical Specifications	
	Input Power	12VDC +/- 10%
	Power Consumption	10W(Maximum) (?) @ operating
En	vironmental Specification	15
	Operating Temperature	0° C to 40° C (32° F to 104° F)
	Storage Temperature	-20° C to 70° C (-4° F to 158° F)
	Humidity	up to 90% non-condensing

Regulatory Approvals and Compliance

Agency & Regulatory	FCC Part 15, Class B
	CE, Class B
Safety Approvals	UL 1950