coaXmedia®

# Series 6000
# SD200 Access Appliance
# User's Guide

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## Limited Warranty

coaXmedia guarantees that every SD-Series Access Appliance will be free from physical defects in material and workmanship under normal use for one (1) year from the date of purchase. If the product is determined to be defective during the warranty period, please call coaXmedia's or your equipment provider's Customer Support to obtain a Returned Material Authorization (RMA) number. The RMA number should be clearly marked on the outside of the package, when it is shipped. If returned product is determined to be functioning properly, a nominal processing fee may be charged to cover shipping and handling.

This product contains no end-user serviceable parts; authorized technicians should perform all service.

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coaXmedia reserves the right to revise or update its products, software, or documentation without obligation to notify any individual or entity.

**FCC Compliance**

The coaXmedia access appliance has been tested and found to comply with the limits for a Class B personal computer and peripherals, 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 unit does cause harmful interference to radio or television reception, which can be determined by turning the unit off and on, the user is encouraged to try to correct the interference by one of more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or experienced radio/TV technician for help.

*Warning*: FCC Regulations state that any unauthorized changes or modifications to this equipment not expressly approved by the manufacturer could void the user's authorization to operate this equipment.

**Canadian Compliance**

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

Cet appareil numérique de classe B est conforme à la norme NMB-003 Canada.

# Table of Contents

**Table of Contents** ..... i
**1 Contact Information** ..... 1
1.1 Support ..... 1
1.2 Sales ..... 1
1.3 The coaXmedia Web Page ..... 1
**2 Important Rules for Safe Operation** ..... 2
2.1 Service ..... 3
**3 Introduction** ..... 4
3.1 Features ..... 4
3.2 What You Have ..... 5
3.3 What You Need ..... 5
3.3.1 Building Requirements ..... 5
3.3.2 Personal Computer Requirements ..... 5
Using this Guide ..... 6
**4 About the Access Appliance** ..... 7
4.1 Front Panel ..... 7
4.2 Rear Panel ..... 8
**5 Installing the Access Appliance** ..... 9
5.1 Overview ..... 9
5.1.1 Before Installing ..... 9
5.1.2 Building Requirements ..... 9
5.1.3 PC Requirements ..... 9
5.1.4 Review the Safety Recommendations ..... 9
5.1.5 Gather Tools ..... 9
5.1.6 Select Location ..... 10
5.2 Connecting to the Access Appliance Quick Overview ..... 11
5.3 Step by Step ..... 12
**6 Configuring Your PC** ..... 14
6.1 How To Configure your PC for DHCP ..... 14
**7 Using your Access Appliance** ..... 16
7.1 Using the Connection ..... 16
7.2 Disconnecting ..... 16
**8 Troubleshooting Connection Problems** ..... 16
**9 Optional Equipment and Replacement Parts** ..... 19

**1**

# Contact Information

If after reading through the provided documentation you still have questions regarding your coaXmedia Access Appliance, use these contact points to request the information you need:

## *1.1 Support*

Phone: 877-885-COAX / 877-885-2629 (toll free)

Fax: 678-513-6112

E-mail: support@coaXmedia.com

## *1.2 Sales*

Phone: 678-513-6109

Fax: 678-513-6112

E-mail: sales@coaXmedia.com

## *1.3 The coaXmedia Web Page*

http://www.coaXmedia.com

# 2 Important Rules for Safe Operation

The Access Appliance has been engineered with both performance and safety in mind. However, safety is also your responsibility. Read and observe all these recommended safety precautions.

**Check power sources.** Plug this device only into the recommended power source indicated on the product's marking label. If you are not sure what type of power source is provided at your location, consult your local power company or other certified expert.

**Always use the provided power adapter.** Always use the power adapter provided with the product. And do not use any substitutes. If the provided adapter becomes damaged or misplaced, see page 19.

**Be careful of overloading.** Do not overload wall outlets or extension cords, as this can result in the risk of fire or electric shock. Don't use any frayed power cords. Don't stretch cords to reach the appliance or other devices: tension at the connectors is a fire hazard.

**Avoid damaging power cords.** Arrange power supply cords so that they are out of the way. Route them through areas where it is unlikely they will be walked on or objects rolled over them.

**Avoid placing the product near any heat source.** Never place this product near any heat source. This includes any kitchen appliances (ovens, toasters, etc.), heating vents, or any other heat source. This is a fire hazard.

**Do not use the product near water.** Never use this product anywhere near a water source or in a damp area. Don't use it near bathroom or kitchen water sources such as sinks or washing appliances. Don't use it near pools. Don't use it in a damp area such as a basement.

**Do not plug any intermediate device between the Access Appliance and the computer or share interface ports.** Plug the Access Appliance from its back panel connector directly into the desired computer port. Do not use any switch boxes, security keys, tape drives, zip drives, or other peripherals on the same port you are using to connect to the access appliance. You should also disable any applications that actively monitor the port being used with the Access Appliance.

**Avoid stacking.** Avoid stacking this item on top of or under other devices that can generate or radiate heat. Such stacking can concentrate heat sources in a small area and creates a fire hazard.

**Use caution when moving the product.** Use caution whenever moving the Access Appliance. If dropped, resulting damage could render the appliance inoperable or a fire hazard.

**Ground the cable system.** Be sure the outside cable system is grounded to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electric Code, ANSI/NFPA No. 70-1984 (section 54 of the Canadian Electrical Code, Part 1) provides information with respect to proper grounding of the cable system. Always refer to local building codes to ensure compliance with all applicable grounding requirements.

**Do not connect or disconnect the RF coax cable to or from your access appliance while it is plugged into the power source.**

**Unplug the power adaptor before cleaning.** Do not use liquid cleaner or any aerosol cleaner. Use only a damp cloth for cleaning.

**Protect from lightning.** For added protection for this product during a lightning storm, unplug the all devices from the coaxial cable and power sources when they are not in use, especially for any extended time.

**Wait at least 10 seconds after disconnecting the power adaptor before re-connecting it**.

## *2.1 Service*

**Do not remove covers from or attempt to service the product yourself.** Opening or removing covers may expose you to dangerous voltage or other hazards and void the product warranty.

Refer servicing of this product to qualified service personnel under the conditions listed here:

- When the power supply or cord is damaged.
- If liquid has been spilled onto or objects have fallen onto the product.
- If the product has been exposed to rain or water.
- If the product does not operate normally by following the operating instructions.
- If the product had been dropped or its enclosure has been damaged.
- When the product exhibits a distinct change in performance, such as the inability to perform basic functions, indicating a need for service.

# 3 Introduction

CoaXmedia welcomes you to the world of Broadband. Through the use of our SD200 Access Appliance and your PC, you can take advantage of the many Internet services available today, and will be ready with high-speed connectivity that is required for the services of tomorrow.

The SD200 Access Appliance was designed with the general computer user in mind, to insure fast, easy installation and operation. CoaXmedia has alleviated the typical concerns of installing new computer equipment, making this product's setup easier than that of a VCR. And once it's set up, using the product is as simple as double-clicking an icon.

## *3.1 Features*

- Provides access to Broadband services
- Easy to install and use
- Doesn't require opening the PC or changing existing network settings
- Unique geometric design with clearly marked status indicators
- Multiple units can operate in a single building or within a single dwelling
- Operates over existing cable TV or CATV wiring without interfering with reception or other services in any way
- Utilizes patented transmission techniques specifically designed to overcome topology issues commonly found in the on-premises cable distributions networks of Multi-Dwelling Units (MDUs)

## *3.2 What You Have*

Check the SD200 Access Appliance package. In addition to this *User's Guide,* the package should contain:

- 1 Access Appliance
- 1 Ethernet PC cable
- 2 coaxial cables
- 1 Diplex-Filter (optional – depends on SD model)
- 1 power adapter with attached power cord

If you are missing an item, please contact your service provider.

## *3.3 What You Need*

In addition the Access Appliance package, you will need the following:

- 1 Personal Computer - see requirements below
- 1 $^{7}/_{16}$" or adjustable wrench (optional) — may be needed to loosen and tighten cable connections.
- 1 CATV wall outlet

### *3.3.1 Building Requirements*

This unit will only operate in buildings utilizing coaXmedia Internet Access Solutions.

### *3.3.2 Personal Computer Requirements*

The Personal Computer (PC) must meet the following:

- Have an available Ethernet communications port.
- Microsoft Internet Explorer 4.0 or later, or Netscape Navigator 4.0 or later

## *Using this Guide*

This *User's Guide* has been provided to assist you in the installation and operation of your Access Appliance. Throughout this guide, special icons have been used to highlight specific points. Although many of these highlights are simply informative in nature, several denote points of user safety and should be read thoroughly and understood. The icons used in this manual are defined below:

**Important Notes or Required Reading Note**

**Warnings and Safety Information**

**Stop, review before proceeding**

# 4 About the Access Appliance

## *4.1 Front Panel*

The LED indicators on the front of the Access Appliance indicate its current operation status. These five indicators are described below.

| LED | Description | Operation |
|---|---|---|
| **P** | Power | On when power is being provided by the power adapter |
| **S** | Sync | Blinks when the Access Appliance has not been activated by the central access equipment<br>On steadily when the Access Appliance has been activated by the central access equipment (making Internet connection possible) |
| **T** | Transmit Data | On when data is ready to be transmitted. (May blink fast when sending streams of data.) |
| **R** | Receive Data | On when the Access Appliance is waiting for the PC to read data. (May blink fast when receiving streams of data.) |
| **D** | Diagnostics | On when maintenance or diagnostics is being performed on the Access Appliance by the central access equipment (for example, during firmware upgrades)<br>May blink randomly if a fault is detected by the Access Appliance<br>While the light is on, the Appliance is temporarily unable to access the Internet |

## 4.2 Rear Panel

The ports at the back of the Access Appliance connect the appliance to your computer, power, and to coax network. When making these connections, the TV/VCR and computer should be unplugged from the power source as a precaution.

| Port | Description | Usage |
|---|---|---|
| **RF** | Coax Connector | Used for connecting the Appliance to the coax network via the coaxial cable. The other end of this cable connects to the diplex-filter connector labeled **X**. (The diplex-filter is in turn connected by cable to the existing TV coax cable.) |
| **PWR** | Power | Used to provide power to the unit. One end of the power cord should be attached to the Access Appliance and the transformer end plugged into a wall power outlet. |
| **USB** | USB Connector | Used to connect Access Appliance to the PC for USB operation (Future). |
| **Ethernet** | Ethernet Connector | Used to connect Access Appliance to the PC for Ethernet operation. |

# 5 Installing the Access Appliance

These sections provide step-by-step instructions on installing you Access Appliance.

## *5.1 Overview*

The SD200 Access Appliance is easy to install; taking an average of 15 minutes to setup. However, before getting started, it is important for you to read the following information.

### *5.1.1 Before Installing*

### *5.1.2 Building Requirements*

This unit will only operate in buildings utilizing coaXmedia Internet Access Solutions.

### *5.1.3 PC Requirements*

The SD200 Access Appliance requires the use of a Network Interface Card installed in your PC; if you PC does not have a Network Interface Card, one must be installed before you can use the Access Appliance. Many computer retail stores and service centers can perform this task, if you require assistance.

### *5.1.4 Review the Safety Recommendations*

It is important to review the Safety Recommendations to insure the proper installation and operation of your Access Appliance. See the Safety Recommendations Section of this User's Guide.

### *5.1.5 Gather Tools*

Although most installations do not require any special tools, it may be necessary to use a 7/16" **wrench** or **pliers** to loosen an existing coax cable connection on a TV or CATV wall outlet. It is also desirable to lightly tighten all coax cable connections associated with installing the Access Appliance to insure solid, reliable connections; this can be done with a wrench, with pliers or by hand.

### *Select Location*

The first aspect of installing your new Appliance will be selecting a CATV outlet that is located near your computer. When making your selection, consider where you use your PC/laptop and the distance between that location and the CATV outlet. Although coaxial cables are provided with your Appliance, they may not be long enough for your installation; if this is the case, longer cables can be obtained at a local store (RG-6 or RG-59 with F-type connectors).

## *5.2 Connecting to the Access Appliance Quick Overview*

This illustration diagrams the series of steps involved in connecting the parts together. Many parts have labeled connectors; those labels are in **bold** type. Two pieces of cable come packaged with the appliance; they are referred to as the "provided" cables.

*See page 16 for more on the PC connectors.*

***Turn off power to the computer and TV (or VCR)*** before connecting up the cables as a precaution. It is recommended to disconnect them from the wall power outlets.

## *5.3 Step by Step*

**1 Disconnect the TV from the CATV Outlet**

Locate the cable connecting your TV (or VCR) to the wall cable TV/CATV outlet. Unscrew the end from the wall connector. Leave the other end connected to the TV/VCR. If you aren't using a TV in the room, just skip this step.

**2 Connect the TV to the Diplex-Filter**

Connect the end of the coaxial cable that was unscrewed from the TV/CATV outlet to **TV** port of the included diplex-filter. If a TV or other device is not being used, leave the **TV** port unconnected.

***Do not substitute a generic cable splitter for the provided diplex-filter;*** although doing so will not damage the TV or Access Appliance, the diplex-filter improves the Appliance's operational reliability

***If you are not connecting to a TV in the room***, you should use the provided diplex-filter, leaving the **TV** connector unconnected.

***If you use one or more cable splitters*** in the room, you may continue to use them; however, you should install the diplex-filter so that it is the first device connected to the TV/CATV outlet.

**3 Connect the Diplex-Filter to the CATV Outlet**

a) Locate the shortest coaxial cable included with the Access Appliance and connect one end to the **IN** port of the diplex-filter.

b) Connect the loose end of that coaxial cable to the CATV wall Outlet.

**4 Connect the Access Appliance to the Diplexer**

a) Locate the remaining coaxial cable included with the Access Appliance and connect one end to the **X** port of the diplex-filter.

b) Connect the loose end of that coaxial cable to the **RF** port of the Access Appliance.

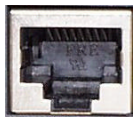
Make sure are all connections are secure; if necessary, use a wrench or pliers to lightly tighten the connections.

### 5 Connect PC Cable

a) Locate the Ethernet PC cable included with the Access Appliance and connect it to the Access Appliance's **Ethernet** port.

b) Connect the loose end of that cable into an active Ethernet port on your PC. If you PC does not have a Network Interface Card, one must be installed before you can use the Access Appliance. Many computer retail stores and service centers can perform this task, if you require assistance.

**PC Ethernet Port**



***Do not attempt to insert the supplied Ethernet cable into a dial-up modem.*** Doing so could damge your modem port and/or the Ethernet cable.

### 6 Connect the Power Adapter to the Appliance

Locate the included power adapter and connect the appropriate end to the **PWR** port on the Access Appliance.

### 7 Apply Power to the Access Appliance

Before plugging the adapter into the power outlet, consult these important notes:

***Please check the voltage requirements printed on the power adapter before plugging it into an AC power outlet.*** If the power adapter's input voltage specification does not match what is being provided at your AC outlet, contact your service provider or coaXmedia for a replacement.

Power can now be applied to the Appliance by plugging the power adapter into a unused AC power outlet (on a wall, power strip, surge protector, or UPS).

The **P** indicator on the Appliance front panel should light up when power is applied. (See also a description of the front panel lights on page 17.)

Now that the Access Appliance setup has been completed, you can set up your computer to use the connection.

# 6 Configuring Your PC

Now that all the necessary hardware connections have been made, your computer's network configuration may need to be adjusted. Often when using the Ethernet connection, Internet Service Providers require your Ethernet card to be configured to obtain an IP address automatically (DHCP). Instructions for making the necessary adjustment can be found below, however your Internet service provider may supply you with additional instructions that should take precedence. Please refer to these instructions if supplied.

## *6.1 How To Configure your PC for DHCP*

The following DHCP configuration procedure applies to the following Operating Systems:

| | |
|---|---|
| Windows 98 | Windows 2000 |
| Windows Me | Windows XP |

### For Windows 98:

1. Click on ***Start***, ***Settings***, then ***Control Panel***.
2. Double-click on the ***Network*** icon.
3. Double-click on ***TCPIP***. Select the ***IP Address*** tab. * ***See note below.***
4. At the ***IP Address*** tab, place a check in the ***Obtain an IP Address automatically*** circle.

5. Click ***OK,*** then on ***OK*** once more. If the computer prompts you to reboot, please do so now.

### For Windows 2000 and Windows ME:

1. Click on ***Start***, ***Settings***, then ***Control Panel.***
2. Double-click on the ***Network and Dial-Up Connections*** icon.
3. Right-click on the ***Local Area Connection*** icon and select ***Properties***.
4. Double-click on ***Internet Protocol (TCP/IP).*** ****See note below.***
5. At the ***General*** tab, place a check in the ***Obtain an IP Address automatically*** circle.
6. Place a check in the ***Obtain DNS server address automatically*** circle.
7. Click ***Apply***, and then click ***OK.*** If the computer prompts you to reboot, please do so now.

### For Windows XP:

1. For Windows XP, click on ***Start***, ***Settings***, then ***Control Panel***.
2. Click on ***Network and Internet Connections*** then click on ***Network Connection***.
3. Right-click on the ***Local Area Connection*** icon and select ***Properties***.
4. Double-click on ***Internet Protocol (TCP/IP).*** ****See note below.***
5. At the ***General*** tab, place a check in the ***Obtain an IP Address automatically*** circle.
6. Place a check in the ***Obtain DNS server address automatically*** circle.
7. Click ***Apply***, and then click ***OK.*** If the computer prompts you to reboot, please do so now.

***Note:*** *If information is already entered in these fields, be sure to write down all this information before making any changes. You will need to reenter this after you're done using the coaXmedia SD200. Under Windows 2000, you must be logged in using an account with administrators' rights in order to make the necessary changes. For Macintosh and Linux operating systems, please refer to the Operating System's documentation for instructions on how to enable DHCP.*

# 7 Using your Access Appliance

## *7.1 Using the Connection*

Your Access Appliance provides you with an "Always-On" connection to the Internet so simply start up your e-mail client, Web browser, newsgroup reader, or other Internet applications and use them as usual.

Note: If you are concerned that someone may attempt to access your computer via the Internet, you can use any number of firewall or Internet security software tools to prevent remote access. Another solution is to disconnect the computer cable or disconnect power from your Access Appliance.

## *7.2 Disconnecting*

If you have any security concerns leaving your PC connected while not in use, simply unplug the Ethernet cable from the PC or purchase firewall software.

# 8 Troubleshooting Connection Problems

The **P** (Power) and **S** (Sync) LEDs should be ON; and you should see the T (Transmit) and R (Receive) LEDs flash when you attempt to browse the Internet.

If the **S** or **D** LED is blinking or no LEDs are on, check all the hardware connections and cables (refer to *Connecting to the Access Appliance*).

If this problem persists, contact your service provider for assistance. (See also page 17 for a description of the Front Panel status LEDs.)

Specifications

| **Client Interface** | |
|---|---|
| Ethernet transfer speed | Up to 10Mb/s |
| Indicators | Front panel LEDs |
| Cable Connectivity | RJ-45-Ethernet |

# Specifications (continued)

## Electrical Specifications

| | |
|---|---|
| AC Adaptor | Option 1 |
| | Inputs: 120VAC 50/60 Hz |
| | Operating Ranges: 108-132 VAC |
| | Output: 5VDC, 1A |
| | Option 2 |
| | Inputs: 240VAC 50/60 Hz |
| | Operating Ranges: 220-240 VAC |
| | Output: 5VDC, 1A |

## Environmental Specifications

| | |
|---|---|
| Operating temperature | 0° to +40° C |
| Storage temperature | -40° to +75° C |
| Humidity | 10% to 90% non-condensing |

## Physical Specifications

| | |
|---|---|
| Dimensions | 7.125”wide, 7.875” deep, 1.875” height |

## Agency and Regulatory Compliance

| | |
|---|---|
| Certifications | FCC<br>Canadian<br>UL / ULc |

# 9 Optional Equipment and Replacement Parts

Many optional and replacement parts are available for the SD200 access appliance.

If you need to replace or add a part, consult the service provider from whom you obtained this product.

These appliance options and replacements are available. Specify the part number(s) as well as description(s) of any part when ordering to ensure correct identification of the item.

| Sales Part # | Description |
|---|---|
| CB201-001 | Ethernet Cable – 10ft |
| PS200-001 | SD200 AC Power Adaptor – Plug Type: North America |
| PS200-002 | SD200 AC Power Adaptor – Plug Type: Australia |
| PS200-003 | SD200 AC Power Adaptor – Plug Type: Europe |
| PS200-004 | SD200 AC Power Adaptor – Plug Type: UK |
| PS200-005 | SD200 AC Power Adaptor – Plug Type: Japan |
| MK200-001 | SD200 Wall Security Bracket Kit |
| UD200-001 | SD200 Access Appliance User's Guide |