



# DDR2200-CL Series Residential Gateway Installation and Operation Guide



# Please Read

## Important

Please read this entire guide. If this guide provides installation or operation instructions, give particular attention to all safety statements included in this guide.

# Notices

## Trademark Acknowledgments

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# Notice to Installers

The servicing instructions in this notice are for use by qualified service personnel only. To reduce the risk of electric shock, do not perform any servicing other than that contained in the operating instructions, unless you are qualified to do so.

<p><b>Note to System Installer</b></p> <p>For this apparatus, the cable shield/screen shall be grounded as close as practical to the point of entry of the cable into the building. For products sold in the US and Canada, this reminder is provided to call the system installer's attention to Article 800-93 and Article 800-100 of the NEC (or Canadian Electrical Code Part 1), which provides guidelines for proper grounding of the cable shield.</p>  <p>This symbol is intended to alert you that uninsulated voltage within this product may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this product.</p> <p>Ce symbole a pour but d'alerter toute personne qu'un contact avec une pièce interne de ce produit, sous tension et non isolée, pourrait être suffisant pour provoquer un choc électrique. Il est donc dangereux d'être en contact avec toute pièce interne de ce produit.</p>	<table border="1"><tr><td data-bbox="836 451 917 514"></td><td data-bbox="925 415 1096 562"><p><b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN</p><p><b>AVIS</b> RISQUE DE CHOC ÉLECTRIQUE NE PAS OUVRIR</p></td><td data-bbox="1104 451 1185 514"></td></tr></table> <p>CAUTION: To reduce the risk of electric shock, do not remove cover (or back). No user-serviceable parts inside. Refer servicing to qualified service personnel.</p> <p><b>WARNING</b> TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.</p>  <p>This symbol is intended to alert you of the presence of important operating and maintenance (servicing) instructions in the literature accompanying this product.</p> <p>Ce symbole a pour but de vous avertir qu'une documentation importante sur le fonctionnement et l'entretien accompagne ce produit.</p>		<p><b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN</p> <p><b>AVIS</b> RISQUE DE CHOC ÉLECTRIQUE NE PAS OUVRIR</p>	
	<p><b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN</p> <p><b>AVIS</b> RISQUE DE CHOC ÉLECTRIQUE NE PAS OUVRIR</p>			

# Notice à l'attention des installateurs de réseaux câblés

Les instructions relatives aux interventions d'entretien, fournies dans la présente notice, s'adressent exclusivement au personnel technique qualifié. Pour réduire les risques de chocs électriques, n'effectuer aucune intervention autre que celles décrites dans le mode d'emploi et les instructions relatives au fonctionnement, à moins que vous ne soyez qualifié pour ce faire.

<p><b>Remarque à l'attention de l'installateur du système</b></p> <p>Avec cet appareil, le blindage/écran du câble doit être mis à la terre aussi près que possible du point d'entrée du câble dans le bâtiment. En ce qui concerne les produits vendus aux États-Unis et au Canada, ce rappel est fourni pour attirer l'attention de l'installateur sur les articles 800-93 et 800-100 du Code national de l'électricité (ou Code de l'électricité canadien, Partie 1) qui fournissent des lignes directrices concernant la mise à la terre correcte du blindage (écran) du câble.</p>  <p>Ce symbole a pour but de vous prévenir que des tensions électriques non isolées existent à l'intérieur de ce produit, pouvant être d'une intensité suffisante pour causer des chocs électriques. Il est donc dangereux d'établir un contact quelconque avec l'une des pièces comprises à l'intérieur de ce produit.</p>	<table border="1"><tr><td data-bbox="755 1215 836 1278"></td><td data-bbox="844 1180 1015 1327"><p><b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN</p><p><b>ATTENTION</b> DANGER ÉLECTRIQUE NE PAS OUVRIR</p></td><td data-bbox="1023 1215 1104 1278"></td></tr></table> <p>ATTENTION: Pour réduire les risques de chocs électriques, ne pas enlever le couvercle (ou le panneau arrière). Ne contient aucune pièce réparable par l'utilisateur. Confier les interventions aux techniciens d'entretien qualifiés.</p> <p><b>AVERTISSEMENT</b> POUR ÉVITER LES INCENDIES OU LES CHOC ÉLECTRIQUES, NE PAS EXPOSER L'APPAREIL À LA PLUIE OU À L'HUMIDITÉ.</p>  <p>Ce symbole a pour but de vous prévenir de la présence d'instructions importantes relatives au fonctionnement ou à l'entretien (et aux réparations) dans la documentation accompagnant ce produit.</p>		<p><b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN</p> <p><b>ATTENTION</b> DANGER ÉLECTRIQUE NE PAS OUVRIR</p>	
	<p><b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN</p> <p><b>ATTENTION</b> DANGER ÉLECTRIQUE NE PAS OUVRIR</p>			

## Mitteilung für CATV-Techniker

Die in dieser Mitteilung aufgeführten Wartungsanweisungen sind ausschließlich für qualifiziertes Fachpersonal bestimmt. Um die Gefahr eines elektrischen Schlags zu reduzieren, sollten Sie keine Wartungsarbeiten durchführen, die nicht ausdrücklich in der Bedienungsanleitung aufgeführt sind, außer Sie sind zur Durchführung solcher Arbeiten qualifiziert.

<p><b>Mitteilung an den Systemtechniker</b></p> <p>Für dieses Gerät muss der Kabelschutz/Schirm so nahe wie möglich am Eintrittspunkt des Kabels in das Gebäude geerdet werden. Dieser Erinnerungshinweis liegt den in den USA oder Kanada verkauften Produkten bei. Er soll den Systemtechniker auf Paragraph 800-93 und Paragraph 800-100 der US-Elektrovorschrift NEC (oder der kanadischen Elektrovorschrift Canadian Electrical Code Teil 1) aufmerksam machen, in denen die Richtlinien für die ordnungsgemäße Erdung des Kabelschirms festgehalten sind.</p>	 <p><b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN</p> <p><b>ACHTUNG</b> STROMSCHLAGEGFAHR, NICHT ÖFFNEN</p>
 <p>Dieses Symbol weist den Benutzer auf das Vorhandensein von nicht isolierten gefährlichen Spannungen im Gerät hin, die Stromschläge verursachen können. Ein Kontakt mit den internen Teilen dieses Produktes ist mit Gefahren verbunden.</p>	<p>ACHTUNG: Zur Vermeidung eines Stromschlags darf die Abdeckung (bzw. die Geräterückwand) nicht entfernt werden. Das Gerät enthält keine vom Benutzer wartbaren Teile. Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal durchgeführt werden.</p> <p><b>WARNUNG</b> DAS GERÄT NICHT REGEN ODER FEUCHTIGKEIT AUSSETZEN, UM STROMSCHLAG ODER DURCH EINEN KURZSCHLUSS VERURSACHTEN BRAND ZU VERMEIDEN.</p> 
	<p>Dieses Symbol weist den Benutzer darauf hin, dass die mit diesem Produkt gelieferte Dokumentation wichtige Betriebs- und Wartungsanweisungen für das Gerät enthält.</p>

## Aviso a los instaladores de sistemas CATV

Las instrucciones de reparación contenidas en el presente aviso son para uso exclusivo por parte de personal de mantenimiento cualificado. Con el fin de reducir el riesgo de descarga eléctrica, no realice ninguna otra operación de reparación distinta a las contenidas en las instrucciones de funcionamiento, a menos que posea la cualificación necesaria para hacerlo.

<p><b>Nota para el instalador del sistema</b></p> <p>En lo que se refiere a este aparato, el blindaje del cable debe conectarse a tierra lo más cerca posible al punto por el cual el cable entra en el edificio. En el caso de los productos vendidos en los EE. UU. y Canadá, el presente aviso se suministra para llamar la atención del instalador del sistema sobre los Artículos 800-93 y 800-100 del NEC (o Código Eléctrico de Canadá, Parte 1), que proporcionan directrices para una correcta conexión a tierra del blindaje del cable.</p>	 <p><b>CAUTION</b> RISK OF ELECTRIC SHOCK DO NOT OPEN</p> <p><b>ATENCIÓN</b> RIESGO DE DESCARGA ELÉCTRICA NO ABRIR</p>
 <p>Este símbolo tiene como fin advertirle de que una tensión sin aislamiento en el interior de este producto podría ser de una magnitud suficiente como para provocar una descarga eléctrica. Por consiguiente, resulta peligroso realizar cualquier tipo de contacto con alguno de los componentes internos de este producto.</p>	<p>ATENCIÓN: con el fin de reducir el riesgo de descarga eléctrica, no retire la tapa (ni la parte posterior). No existen en el interior componentes que puedan ser reparados por el usuario. Encargue su revisión a personal de mantenimiento cualificado.</p> <p><b>ADVERTENCIA</b> PARA EVITAR EL RIESGO DE INCENDIO O DESCARGA ELÉCTRICA, NO EXPONGA LA UNIDAD A LA LLUVIA O A LA HUMEDAD.</p> 
	<p>Este símbolo tiene como fin alertarle de la presencia de importantes instrucciones de operación y mantenimiento (revisión) contenidas en la literatura que acompaña al producto.</p>

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## IMPORTANT SAFETY INSTRUCTIONS

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding-type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12)  Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as a power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

### Power Source Warning

A label on this product indicates the correct power source for this product. Operate this product only from an electrical outlet with the voltage and frequency indicated on the product label. If you are uncertain of the type of power supply to your home or business, consult your service provider or your local power company.

The AC inlet on the unit must remain accessible and operable at all times.

### Ground the Product



**WARNING: Avoid electric shock and fire hazard! If this product connects to coaxial cable wiring, be sure the cable system is grounded (earthed). Grounding provides some protection against voltage surges and built-up static charges.**

## IMPORTANT SAFETY INSTRUCTIONS

### Protect the Product from Lightning

In addition to disconnecting the AC power from the wall outlet, disconnect the signal inputs.

### Verify the Power Source from the On/Off Power Light

When the on/off power light is not illuminated, the apparatus may still be connected to the power source. The light may go out when the apparatus is turned off, regardless of whether it is still plugged into an AC power source.

### Eliminate AC Mains Overloads



**WARNING:** Avoid electric shock and fire hazard! Do not overload AC mains, outlets, extension cords, or integral convenience receptacles. For products that require battery power or other power sources to operate them, refer to the operating instructions for those products.

### Provide Ventilation and Select a Location

- Remove all packaging material before applying power to the product.
- Do not place this apparatus on a bed, sofa, rug, or similar surface.
- Do not place this apparatus on an unstable surface.
- Do not install this apparatus in an enclosure, such as a bookcase or rack, unless the installation provides proper ventilation.
- Do not place entertainment devices (such as VCRs or DVDs), lamps, books, vases with liquids, or other objects on top of this product.
- Do not block ventilation openings.

### Protect from Exposure to Moisture and Foreign Objects



**WARNING:** Avoid electric shock and fire hazard! Do not expose this product to dripping or splashing liquids, rain, or moisture. Objects filled with liquids, such as vases, should not be placed on this apparatus.



**WARNING:** Avoid electric shock and fire hazard! Unplug this product before cleaning. Do not use a liquid cleaner or an aerosol cleaner. Do not use a magnetic/static cleaning device (dust remover) to clean this product.



**WARNING:** Avoid electric shock and fire hazard! Never push objects through the openings in this product. Foreign objects can cause electrical shorts that can result in electric shock or fire.

### Service Warnings



**WARNING:** Avoid electric shock! Do not open the cover of this product. Opening or removing the cover may expose you to dangerous voltages. If you open the cover, your warranty will be void. This product contains no user-serviceable parts.

## **Check Product Safety**

Upon completion of any service or repairs to this product, the service technician must perform safety checks to determine that this product is in proper operating condition.

## **Protect the Product When Moving It**

Always disconnect the power source when moving the apparatus or connecting or disconnecting cables.

## **Telephone Equipment Notice**

When using your telephone equipment, basic safety precautions should always be followed to reduce the risk of fire, electric shock and injury to persons, including the following:

1. Do not use this product near water, for example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement or near a swimming pool.
2. Avoid using a telephone (other than a cordless type) during an electrical storm. There may be a remote risk of electric shock from lightning.
3. Do not use the telephone to report a gas leak in the vicinity of the leak.



**CAUTION: To reduce the risk of fire, use only No. 26 AWG or larger telecommunication line cord.**

**SAVE THESE INSTRUCTIONS**

## United States FCC Compliance

This device has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against such interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If not installed and used in accordance with the instructions, it may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment OFF and ON, the user is encouraged to try to correct the interference by one or more of the following measures:

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

Any changes or modifications not expressly approved by Cisco Systems, Inc., could void the user's authority to operate the equipment.

The information shown in the FCC Declaration of Conformity paragraph below is a requirement of the FCC and is intended to supply you with information regarding the FCC approval of this device. *The phone numbers listed are for FCC-related questions only and not intended for questions regarding the connection or operation for this device. Please contact your service provider for any questions you may have regarding the operation or installation of this device.*

### **FCC** Declaration of Conformity

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions: 1) the device may not cause harmful interference, and 2) the device must accept any interference received, including interference that may cause undesired operation.

DDR2200-CL Residential Gateway Model: DDR2200 Manufactured by: Cisco Systems, Inc. 5030 Sugarloaf Parkway Lawrenceville, Georgia 30044 USA Telephone: 770-236-1077
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### Canada EMI Regulation

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

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

### FCC Part 68

The Federal Communications Commission (FCC) of the United States restricts specific uses of modems, and places registration responsibilities on both the manufacturer and the individual user.

- 1 The modem may not be connected to a party line or to a coin-operated telephone.
- 2 Notification to the telephone company is no longer required prior to connecting registered equipment, but upon request from the telephone company, the user shall tell the telephone company which line the equipment is connected to as well as the registration number and ringer equivalence number of the registered protective circuitry. FCC information is printed on a label on the bottom of the modem.

This equipment complies with Part 68 of FCC Rules and the requirements adopted by the ACTA. On the base unit of this equipment is a label that contains, among other information, a product identifier in the format US: US:GEMDL01BDDR2200. If requested, this number must be provided to the telephone company.

The REN is useful to determine the quantity of devices you may connect to your telephone line and still have those devices ring when your telephone number is called. In most, but not all areas, the sum of the REN of all devices connected to one line should not exceed five (5.0). To be certain of the number of devices you may connect to your line, as determined by the REN, you should contact your local telephone company to determine the maximum REN for your calling area.

If your equipment causes harm to the telephone network, the telephone company may discontinue your service temporarily. If possible, they will notify you in advance. If advance notice is not practical, you will be notified as soon as possible. You will be informed of your right to file a complaint with the FCC. Your telephone company may make changes in its facilities, equipment, operations or procedures that could affect the proper functioning of your equipment. If they do, you will be notified in advance to give you an opportunity to maintain uninterrupted telephone service.

If you experience trouble with this telephone equipment, please contact the service provider for information on obtaining service or repairs.

The telephone company may ask that you disconnect this equipment from the network until the problem has been corrected or until you are sure that the equipment is not malfunctioning.

This equipment may not be used on coin service provided by the telephone company. Connection to party lines is subject to state tariffs.

## IC (Industry Canada) Notice

Notice: The Industry Canada (formerly Canadian Department of Communications) label identifies certified equipment. This certification means that the equipment meets certain telecommunications network protective, operational, and safety requirements. The department does not guarantee the equipment will operate to the user's satisfaction.

Before installing this equipment, users should ensure that it is permissible to be connected to the facilities of the local telecommunications company. The equipment must also be installed using an acceptable method of connection. In some cases, the company's inside wiring associated with a single-line individual service may be extended by means of a certified connector assembly (telephone extension cord). The customer should be aware that compliance with the above conditions may not prevent degradation of service in some situations.

## United States FCC Compliance

Repairs to certified equipment should be made by an authorized Canadian maintenance facility designated by the supplier. Any repairs or alterations made by the user may give the telecommunications company cause to request the user to disconnect the equipment. Users should ensure for their own protection that the electrical ground connections of the power utility, telephone lines and internal metallic water pipe system, if present, are connected together. This precaution may be particularly important in rural areas.



### **CAUTION:**

**Users should not attempt to make such connections themselves, but should contact the appropriate electric inspection authority, or electrician, as appropriate.**

## Radiation Exposure Statements

**Note:** This transmitter must not be co-located or operated in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 7.9 inches (20 cm) between the radiator and your body.

### **US**

This system has been evaluated for RF exposure for humans in reference to ANSI C 95.1 (American National Standards Institute) limits. The evaluation was based in accordance with FCC OET Bulletin 65C rev 01.01 in compliance with Part 2.1091 and Part 15.27. The minimum separation distance from the antenna to general bystander is 7.9 inches (20 cm) to maintain compliance.

### **Canada**

This system has been evaluated for RF exposure for humans in reference to ANSI C 95.1 limits. The evaluation was based on evaluation per RSS-102 Rev 2. The minimum separation distance from the antenna to general bystander is 7.9 inches (20 cm) to maintain compliance.

### **EU**

This system has been evaluated for RF exposure for humans in reference to the ICNIRP (International Commission on Non-Ionizing Radiation Protection) limits. The evaluation was based on the EN 50385 Product Standard to Demonstrate Compliance of Radio Base Stations and Fixed Terminals for Wireless Telecommunications Systems with basic restrictions or reference levels related to Human Exposure to Radio Frequency Electromagnetic Fields from 300 MHz to 40 GHz. The minimum separation distance from the antenna to general bystander is 20 cm (7.9 inches).

### **Australia**

This system has been evaluated for RF exposure for humans as referenced in the Australian Radiation Protection standard and has been evaluated to the ICNIRP (International Commission on Non-Ionizing Radiation Protection) limits. The minimum separation distance from the antenna to general bystander is 20 cm (7.9 inches).

20091016 FCC DSL\_Dom and Intl



## CE Compliance

### Declaration of Conformity with Regard to the EU Directive 1999/5/EC (R&TTE Directive)

This declaration is only valid for configurations (combinations of software, firmware and hardware) supported or provided by Cisco Systems for use within the EU. The use of software or firmware not supported or provided by Cisco Systems may result in the equipment no longer being compliant with the regulatory requirements.

Български [Bulgarian]:	Това оборудване отговаря на съществените изисквания и приложими клаузи на Директива 1999/5/EC.
Česky [Czech]:	Toto zařízení je v souladu se základními požadavky a ostatními odpovídajícími ustanoveními Směrnice 1999/5/EC.
Dansk [Danish]:	Dette udstyr er i overensstemmelse med de væsentlige krav og andre relevante bestemmelser i Direktiv 1999/5/EF.
Deutsch [German]:	Dieses Gerät entspricht den grundlegenden Anforderungen und den weiteren entsprechenden Vorgaben der Richtlinie 1999/5/EU.
Eesti [Estonian]:	See seade vastab direktiivi 1999/5/EU olulistele nõuetele ja teistele asjakohastele sätetele.
English:	This equipment is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.
Español [Spanish]:	Este equipo cumple con los requisitos esenciales así como con otras disposiciones de la Directiva 1999/5/CE.
Ελληνική [Greek]:	Αυτός ο εξοπλισμός είναι σε συμμόρφωση με τις ουσιαστικές απαιτήσεις και άλλες σχετικές διατάξεις της Οδηγίας 1999/5/EC.
Français [French]:	Cet appareil est conforme aux exigences essentielles et aux autres dispositions pertinentes de la Directive 1999/5/EC.
Íslenska [Icelandic]:	Þetta tæki er samkvæmt grunnkröfum og öðrum viðeigandi ákvæðum Tilskipunar 1999/5/EC.
Italiano [Italian]:	Questo apparato è conforme ai requisiti essenziali ed agli altri principi sanciti dalla Direttiva 1999/5/CE.
Latviski [Latvian]:	Šī iekārta atbilst Direktīvas 1999/5/EK būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.
Lietuvių [Lithuanian]:	Šis įrenginys tenkina 1999/5/EB Direktyvos esminius reikalavimus ir kitas šios direktyvos nuostatas.
Nederlands [Dutch]:	Dit apparaat voldoet aan de essentiële eisen en andere van toepassing zijnde bepalingen van de Richtlijn 1999/5/EC.
Malta [Maltese]:	Dan l-apparat huwa konformi mal-ftigiet essenzjali u l-provedimenti l-oħra rilevanti tad-Direttiva 1999/5/EC.
Magyar [Hungarian]:	Ez a készülék teljesíti az alapvető követelményeket és más 1999/5/EK irányelvben meghatározott vonatkozó rendelkezéseket.
Norsk [Norwegian]:	Dette utstyret er i samsvar med de grunnleggende krav og andre relevante bestemmelser i EU-direktiv 1999/5/EF.
Polski [Polish]:	Urządzenie jest zgodne z ogólnymi wymaganiami oraz szczególnymi warunkami określonymi Dyrektywą UE: 1999/5/EC.
Português [Portuguese]:	Este equipamento está em conformidade com os requisitos essenciais e outras provisões relevantes da Directiva 1999/5/EC.
Română [Romanian]:	Acest echipament este în conformitate cu cerințele esențiale și cu alte prevederi relevante ale Directivei 1999/5/EC.
Slovensko [Slovenian]:	Ta naprava je skladna z bistvenimi zahtevami in ostalimi relevantnimi pogoji Direktive 1999/5/EC.
Slovensky [Slovak]:	Toto zariadenie je v zhode so základnými požiadavkami a inými príslušnými nariadeniami direktív: 1999/5/EC.
Suomi [Finnish]:	Tämä laite täyttää direktiivin 1999/5/EY olennaiset vaatimukset ja on siinä asetettujen muiden laitetta koskevien määräysten mukainen.
Svenska [Swedish]:	Denna utrustning är i överensstämmelse med de väsentliga kraven och andra relevanta bestämmelser i Direktiv 1999/5/EC.

## CE Compliance

**Note:** The full declaration of conformity for this product can be found in the Declarations of Conformity and Regulatory Information section of the appropriate product hardware installation guide, which is available on Cisco.com.

The following standards were applied during the assessment of the product against the requirements of the Directive 1999/5/EC:

- Radio: EN 300 328
- EMC: EN 301 489-1 and EN 301 489-17
- Safety: EN 60950 and EN 50385

The CE mark and class-2 identifier are affixed to the product and its packaging. This product conforms to the following European directives:



## National Restrictions

This product is for indoor use only.

### France

For 2.4 GHz, the output power is restricted to 10 mW EIRP when the product is used outdoors in the band 2454 - 2483,5 MHz. There are no restrictions when used in other parts of the 2,4 GHz band. Check <http://www.arcep.fr/> for more details.

Pour la bande 2,4 GHz, la puissance est limitée à 10 mW en p.i.r.e. pour les équipements utilisés en extérieur dans la bande 2454 - 2483,5 MHz. Il n'y a pas de restrictions pour des utilisations dans d'autres parties de la bande 2,4 GHz. Consultez <http://www.arcep.fr/> pour de plus amples détails.

### Italy

This product meets the National Radio Interface and the requirements specified in the National Frequency Allocation Table for Italy. Unless this wireless LAN product is operating within the boundaries of the owner's property, its use requires a "general authorization." Please check <http://www.comunicazioni.it/it/> for more details.

Questo prodotto è conforme alle specifiche di Interfaccia Radio Nazionali e rispetta il Piano Nazionale di ripartizione delle frequenze in Italia. Se non viene installato all'interno del proprio fondo, l'utilizzo di prodotti Wireless LAN richiede una "Autorizzazione Generale". Consultare <http://www.comunicazioni.it/it/> per maggiori dettagli.

### Latvia

The outdoor usage of the 2.4 GHz band requires an authorization from the Electronic Communications Office. Please check <http://www.esd.lv> for more details.

2,4 GHz frekvenču joslas izmantošanai ārpus telpām nepieciešama atļauja no Elektronisko sakaru direkcijas. Vairāk informācijas: <http://www.esd.lv>.

**Note:** The regulatory limits for maximum output power are specified in EIRP. The EIRP level of a device can be calculated by adding the gain of the antenna used (specified in dBi) to the output power available at the connector (specified in dBm).

## Antennas

Use only the antenna supplied with the product.

20090312 CE\_Gateway



# About This Guide

## Introduction

This installation and operation guide applies to the DDR2200 series residential gateway. The DDR2200 series residential gateway connects to the DSL network in your home to deliver data, video, voice, and wired (Ethernet) or wireless gateway capabilities all from one device. Use this guide to install the residential gateway in your home.

## Purpose

This document provides the information you need to install and operate the DDR2200 series residential gateway.

## Audience

This guide is written for two audiences. Subscribers who have purchased a residential gateway and want to experience high-speed Internet and high-quality digital telephone service can use this guide for background information and basic operation. This guide is also written for the service provider's installers who initially set up and configure residential gateway in the subscriber's home. Most subscribers will not want to use the more advanced functionality, and future releases of this software will prevent subscriber access to these screens.

## Document Version

This is the first formal release of this document.



# 1

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## Introducing the DDR2200 Series Residential Gateway

### Introduction

Imagine walking through your home and accessing the Internet from nearly any room. The DDR2200 series residential gateway connects to the DSL line in your home and to your home network to deliver data, video, voice, and wired (Ethernet) or wireless gateway capabilities all from one device. You can use your residential gateway to connect to a variety of devices in the home or small office. The residential gateway supports high-speed data access, VoIP services, and features that support Internet Protocol TV (IPTV) deployment. Use this chapter to learn about your residential gateway.

### In This Chapter

- Benefits and Features ..... 2
- What's On the Front Panel? ..... 4
- What's On the Back Panel? ..... 6

## Benefits and Features

Your residential gateway offers the following benefits and features:

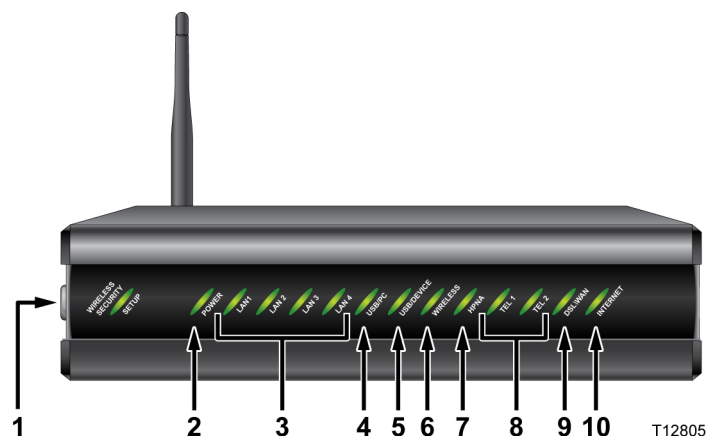
- **Full routing functionality.** The gateway router provides broadband transfer speeds available between your home network and the service provider's network for multi-user sharing. The high-performance router distributes data seamlessly to all devices in the network without a noticeable effect to performance or speed.
- **True firewall capability.** The gateway firewall includes both standard NAT/PAT security and Stateful Packet inspection to defend against external attacks.
- **High-quality data, voice, and IPTV services.** The gateway combines an ADSL2+ bonded modem, 4-port Ethernet switch, Home Phoneline Networking Alliance (HPNA™) 3.0 bridge and router functionality with optional VoIP and WiFi into one integrated platform.
- **Compact design.** The gateway is compact enough to sit on a desktop and versatile enough to be wall mounted in an out of the way location. The residential gateway can also stand vertically.
- **Flexible networking.** The gateway combines a variety of home networking technologies in one box: Ethernet, USB, 802.11g wireless, and HPNA.
  - **Ethernet.** Ethernet is a network standard for data transmission using either coaxial or twisted pair cable over a LAN (local area network). The information can be transmitted at speeds of 10 to 100 Mbps. If the home or office is wired for Ethernet, use one of the four LAN interfaces on the gateway to create a broadband network.
  - **USB.** The USB port allows you to directly connect a computer or other network capable device.
  - **802.11g Wireless.** The gateway includes an integrated wireless access point that allows you to roam wirelessly throughout your home or office. With the high-power wireless technology of the DDR2200, wireless "coldspots" are virtually eliminated in the home.
  - **HPNA.** The HPNA interface allows you to easily share digital services throughout the home using the existing coaxial cable to distribute content such as video, music, and games. HPNA offers the following benefits:
    - **Multi-room DVR.** Subscribers can record and share digital services simultaneously in every room.
    - **Multi-room gaming.** Subscribers can access games from various locations in the home and play simultaneously.
    - **PC to TV.** Subscribers can access data and video services over the HPNA coaxial network throughout the home.



- **ADSL2+**. Asymmetric Digital Subscriber Line (ADSL) provides high-access transmission speeds for delivery of video, voice, and data services to homes over ordinary copper telephone wire.

## What's On the Front Panel?

The front panel of your residential gateway provides LED status indicators that indicate the operational state of your gateway. Refer to the following diagram for a description of the front panel.



- 1 **wifi-sec** – Allows you to automatically configure the wireless device in the home. The WIRELESS SECURITY SETUP LED shows whether automatic wireless security is on or off
- 2 **POWER** – Illuminates solid green to indicate that AC power is being applied to the residential gateway
- 3 **LAN1 - LAN4** – Illuminates solid green to indicate that an Ethernet carrier is present and blinks to indicate that Ethernet data is being transferred between the PC and the residential gateway
- 4 **USB/PC** – Illuminates solid green to indicate that a USB carrier is present and blinks to indicate that USB data is being transferred between the PC and the residential gateway
- 5 **USB/DEVICE** – Illuminates solid green to indicate that a USB carrier is present and blinks to indicate that USB data is being transferred between the connected USB device and the residential gateway
- 6 **WIRELESS** – Illuminates solid green when the wireless access point is enabled and operational and blinks to indicate that wireless data is being transferred between the PC and the residential gateway. The LED is off when the wireless access point is disabled by the user
- 7 **HPNA** – Illuminates solid when linked to another HPNA device and blinks when HPNA activity occurs
- 8 **TEL 1 and TEL 2** – TEL 1 illuminates solid green when telephony service is enabled. Blinks when line 1 is in use. TEL2 illuminates solid green when telephony service is enabled. Blinks when line 2 is in use

9 **DSL/WAN** – Indicates whether a DSL signal is acquired (or trained). The LED indicators mean the following status:

- Off. Not trained.
- Blinking. In training.
- Solid. Trained.

In addition, once the DSL/WAN LED is solid, if any pair drops, the DSL/WAN LED will blink differently to provide additional status as follows:

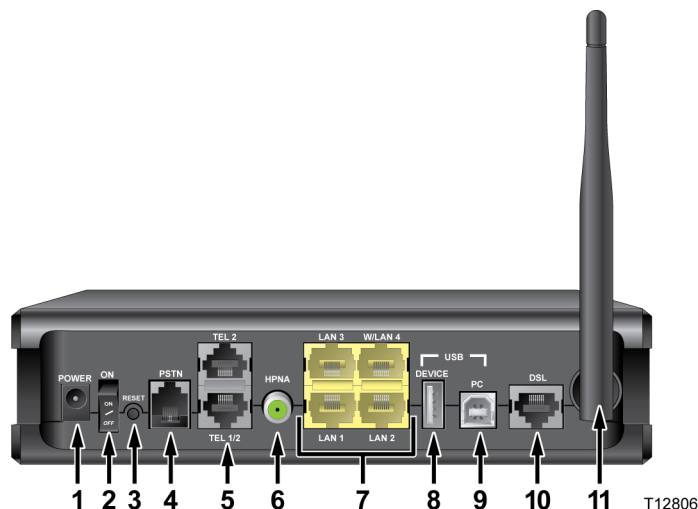
- If the outer pair drops, the LED blinks slowly (about 1 blink every second).
- When the inner pair drops, the LED blinks faster (about 4 blinks every second).

10 **INTERNET** – Indicates wide area network (WAN) traffic. The LED indicators mean the following status:

- Solid. IP is connected.
- Blinking. WAN interface has activity.
- Off. No Internet connection.

## What's On the Back Panel?

Refer to the following diagram for a description of the back panel components.



**Important!** Do not connect your PC to both the Ethernet and USB ports at the same time. Your gateway will not function properly if both the Ethernet and USB ports are connected to your PC at the same time.

- 1 **POWER** – Connects the residential gateway to the AC power plug that is provided with your residential gateway
- 2 **On and Off Switch** – Powers the residential gateway on and off
- 3 **RESET** – Activating this switch resets the residential gateway. Pressing this switch for more than 10 seconds resets the device to factory default values and resets the residential gateway
- 4 **PSTN** – Connects to the home telephone wiring and is used as a backup to voice over IP (VoIP) service in the event of a power outage to the residential gateway
- 5 **TEL 1 and TEL 2** – RJ-11 telephone ports connect to home telephone wiring to conventional telephones or fax machines
- 6 **HPNA** – Connects to the coaxial cable wiring in the house for data and video distribution
- 7 **LAN 1-LAN 3 W/LAN 4** – Four RJ-45 Ethernet ports connect as follows:
  - LAN 1 through 3 connect to the Ethernet port on your PC or your home network
  - W/LAN 4 connects to the Ethernet port on your PC if used as a LAN port or optionally as an Ethernet wide area network (WAN) port that connects to the service provider network
- 8 **USB DEVICE** – 12 Mbps USB port connects to the USB port on your device such as a flash drive or digital camera

## What's On the Back Panel?

- 9 **USB PC** – 12 Mbps USB port connects to the USB port on your PC
- 10 **DSL** – RJ-11 port connects to the DSL line from the service provider
- 11 **ANTENNA** – Receives and transmits data packets to wireless devices



# 2

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## Installing the Residential Gateway

You can install the residential gateway in your home office and access the Internet from your kitchen computer to get your favorite recipe. Use this chapter to properly install your residential gateway and to connect the residential gateway to your computer and other devices in your home.

### In This Chapter

- Mounting the Residential Gateway Vertically ..... 10
- Mounting the Residential Gateway to the Wall ..... 11
- Connecting Your Computer to the Residential Gateway..... 12
- Connecting the DSL Interface ..... 14
- Connecting an IP Set-Top to the Gateway ..... 15

## Mounting the Residential Gateway Vertically

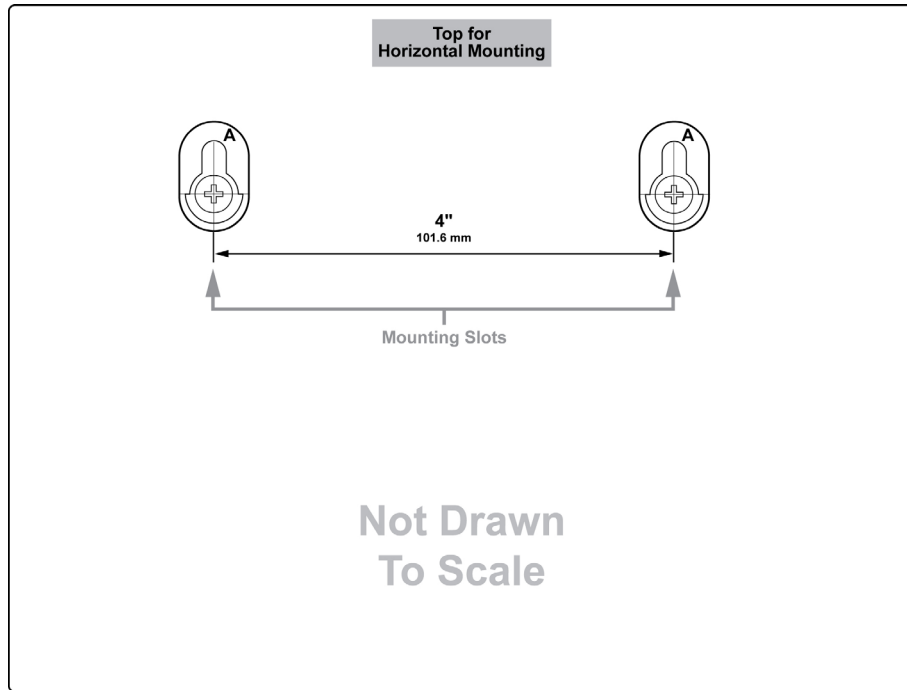
Some installations may require that you place the residential gateway in a vertical position. Use proper care when installing the residential gateway in a vertical position. Be sure that the housing of the residential gateway is vertical and that the stand is extended as shown in the following illustration:





## Mounting the Residential Gateway to the Wall

The following illustration shows the location and dimensions of the wall-mounting slots on the bottom of the residential gateway. Use the information on this page as a guide for mounting your residential gateway to the wall.



T12804

## Connecting Your Computer to the Residential Gateway

You can connect a computer to the residential gateway using one of the following methods:

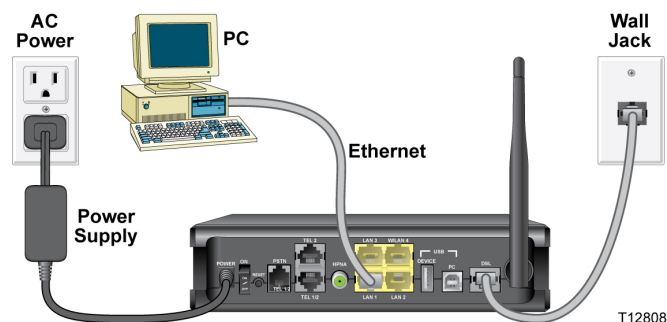
- Ethernet Connection
- Wireless Connection

**Note:** These instructions describe a PC connection. You could also connect another type of device with a wireless interface. See the owner's manual that came with the device for instructions.

### Connecting the Computer with an Ethernet Connection

Complete these steps to connect the computer with an Ethernet connection.

- 1 Connect the power adapter that came with the residential gateway to the POWER port on the residential gateway and to an electrical outlet.
- 2 Power on the residential gateway. After the residential gateway has completed its startup process, the POWER LED on the front panel of the residential gateway should be green.
- 3 Connect the Ethernet cable provided with the residential gateway from any available Ethernet port (LAN 1 through LAN 4) on the gateway to the Ethernet port on the computer.
- 4 Connect the gray cable provided with the residential gateway from the DSL port on the gateway to a telephone wall jack. See *Connecting the DSL Interface* (on page 14) for more information.



## Connecting the Computer with a Wireless Connection

A wireless connection requires a wireless-enabled notebook or a computer with an 802.11b/g wireless network adapter installed.

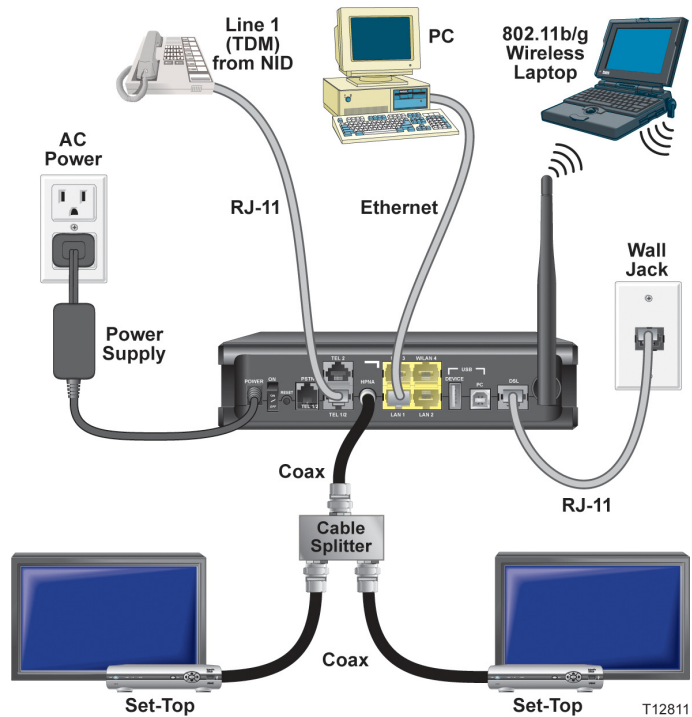
Complete these steps to connect the computer with a wireless connection.

- 1 Connect the power adapter that came with the residential gateway to the POWER port on the residential gateway and to an electrical outlet.
- 2 Power on the residential gateway. After the residential gateway has completed its startup process, the POWER light on the front panel of the residential gateway should be green.
- 3 Connect the gray cable provided with the residential gateway from the DSL port on the residential gateway to a telephone wall jack. See *Connecting the DSL Interface* (on page 14) for more information.
- 4 Follow the instructions in your owner's manual for your PC or laptop to activate the wireless connection.



## Connecting the DSL Interface

Now that you have connected the gateway to power and you have made the LAN connections, you can connect the DSL interface (connection to the wall jack) as shown in the following illustration. This illustration shows all of the attached devices connected to the residential gateway.



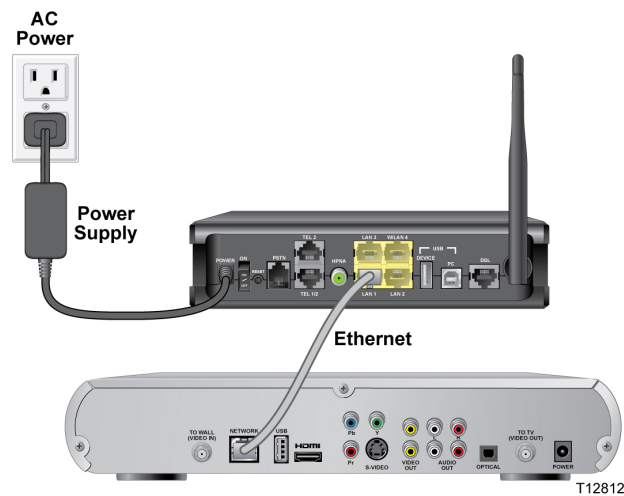
## Connecting an IP Set-Top to the Gateway

For IPTV service, you must connect the residential gateway to an IP set-top. You can connect to an IP set-top using an Ethernet or coaxial connection.

### Ethernet Connection

Complete the following steps to connect the residential gateway to an IP set-top through Ethernet for IPTV service.

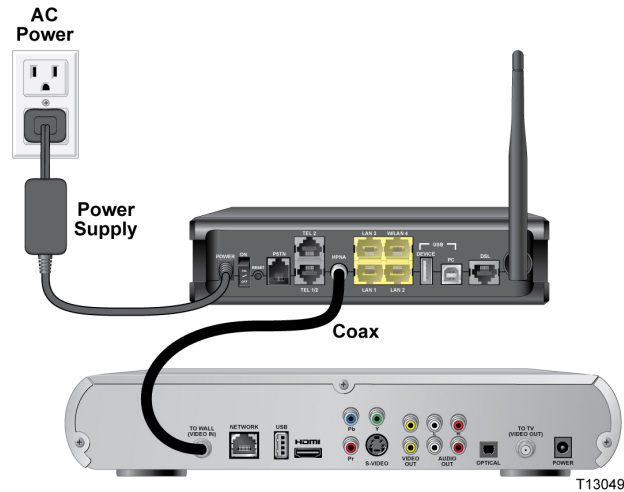
- 1 Ensure that the residential gateway is powered on.
- 2 Connect an Ethernet cable from the Ethernet port (LAN 1 through LAN 4) on the gateway to the Network port on the set-top.
- 3 Power on the IP set-top.



### Coaxial Connection

Complete the following steps to connect the residential gateway to an IP set-top with coaxial cable for IPTV service.

- 1 Ensure that the residential gateway is powered on.
- 2 Connect a coaxial cable from the HPNA port on the gateway to the TO WALL (Video In) port on the set-top.
- 3 Power on the IP set-top.



# 3

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## Configuration and Operation

The DDR2200 residential gateway contains web pages that show the current status of the residential gateway and that allow you to configure the device. Advanced users can configure parameters such as DHCP (Dynamic Host Configuration Protocol), wireless network settings, port forwarding, parental control, and so forth. This section provides information that you can use to configure and interact with the residential gateway through the user interface. The screens shown in this guide represent the default values for the device.

Use this chapter to help you check the status of the residential gateway and to configure the device.