



Dell™ TrueMobile™ 2300 Wireless Broadband Router *User's Guide*

Contents

- ▶ [Introduction](#)
- ▶ [Managing Your Router](#)
- ▶ [Configuration Steps for Common Scenarios](#)
- ▶ [Technical Specifications and Regulatory Information](#)
- ▶ [FAQs](#)
- ▶ [Glossary](#)
- ▶ [Online Customer Support](#)

Information in this document is subject to change without notice.

© 2003 Dell Computer Corporation. All rights reserved.

Trademarks used in this text: *Dell*, the *DELL* logo, and *TrueMobile* are trademarks of Dell Computer Corporation; *Microsoft* and *Windows* are registered trademarks of Microsoft Corporation. Other trademarks and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. Dell disclaims any proprietary interest in trademarks and trade names other than its own.

P/N M1683 Revision A00, July 2003



[Back to Contents Page](#)

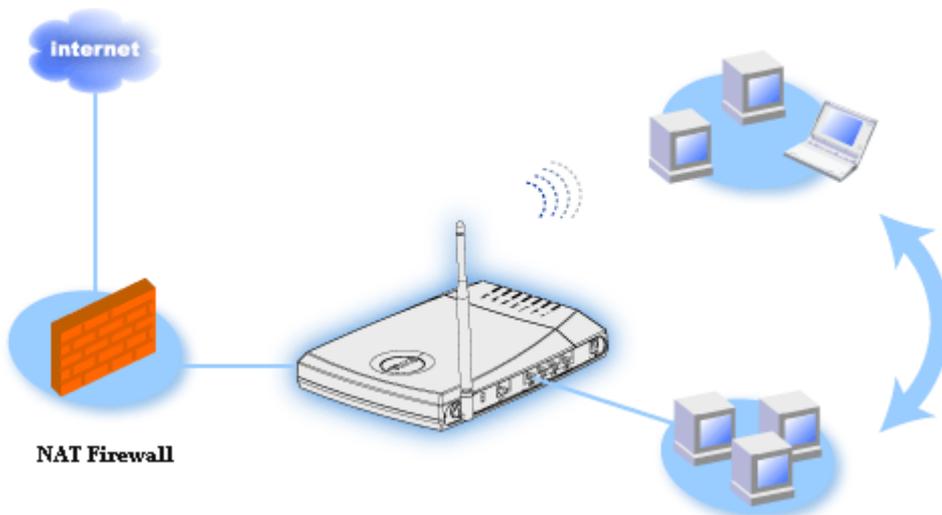
Introduction: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

- ▶ [Overview](#)
- ▶ [Wireless Networking Overview](#)
- ▶ [A Look at the Hardware](#)

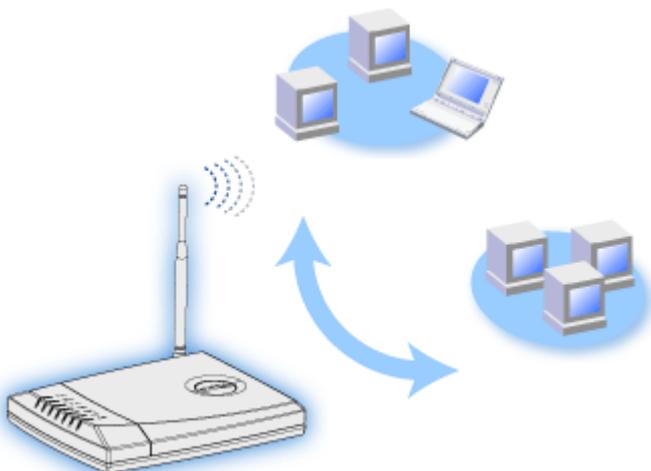
Overview

The Dell TrueMobile 2300 Wireless Broadband Router is an 802.11b/g wireless access point with a built-in Internet router. Connecting to an xDSL or cable modem, the Broadband Router can offer both wired and wireless computers simultaneous access to the Internet. The Wireless Broadband Router can be configured as:

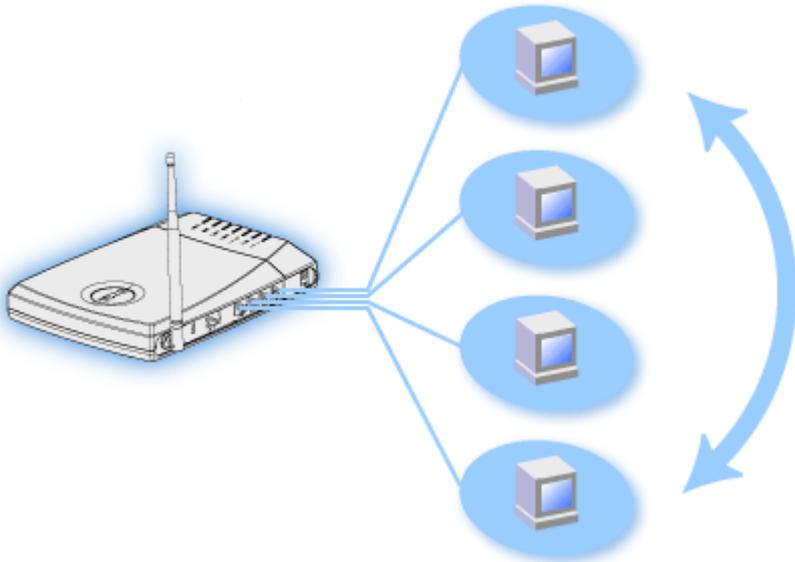
- **Internet router:** Connects to a Cable or xDSL modem providing Internet connectivity to both wired and wireless computers. The firewall features included in the router control Internet access and protect your network.



- **Wireless hub (access point):** Connects wireless computers for file and print sharing.



- **4-port Ethernet switch:** Connects four wired computers for file and print sharing.



- **Ethernet bridge:** Enables file and print sharing between wired and wireless computers. In addition, connects to an Ethernet hub, extending Internet connectivity and sharing to more wired computers.



The Wireless Broadband Router supports up to 252 clients. Up to 16 of the 252 clients can be wireless. The *Network Address Translation* (NAT) feature allows 64 clients to simultaneously communicate out to the Internet. It runs at speeds up to 54 *Megabits per second* (Mbps), and the LAN (wired) port runs at 10/100 Mbps. The maximum distance between the Broadband Router and each computer is 300 feet. This distance may be less depending on your environment.

 **NOTE:** Using the default settings, the Wireless Broadband Router can provide an IP address to 99 wired and wireless computers. The IP address uniquely identifies each computer on the network. Connections above 20 users may cause slower throughput as network traffic increases.

By default, you can use the Broadband Router as:

- a wireless access point using "wireless" as the wireless network name.
- a DHCP server that provides IP addresses to wireless and wired clients.
- a bridge to an Ethernet hub.



[Back to Contents Page](#)

Managing Your Router: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

-  [Overview](#)
-  [Setup Wizard](#)
-  [Control Utility](#)
-  [Web-based Configuration Tool](#)

Overview

Your TrueMobile 2300 Wireless Broadband Router came with factory default settings that should work for the majority of the network usage scenarios. However, there are cases where your network environment may require a different router configuration.

Setup Wizard: Setup Wizard is a Windows-based software program included on your TrueMobile 2300 CD. You can use this program to 1) install the router on your network and create an environment for multiple PCs to share Internet access, 2) add additional computers to the network, and 3) provide links to the User's Guide and the [Dell support website](#).

Control Utility: Control Utility is another Windows-based software program included on your TrueMobile 2300 CD. This utility is usually installed at the end of the router installation. It provides you useful configuration tool to manage your Wireless Broadband Router. Please refer to the section [Control Utility](#) for detailed information.

Web-based Configuration Tool: Web-Based Configuration Tool is for advanced configuration of the Wireless Broadband Router. It is a tool provided inside the router which can be accessed via the web browser on your PC. This tool includes every basic and advanced configuration option for the Wireless Broadband Router. For instance, you can allow other Internet users to access a Web server hosted on your local private network, or disable your wireless network.

 **NOTE:** *Setup Wizard or Control Utility must be run on Windows 2000, and XP computers. Microsoft Internet Explorer (4.0 or higher) or Netscape (4.0 or higher) must be used for the **web-based configuration tool***

Factory Default Settings:

Dell pre-configures the Wireless Broadband Router with the following settings:

 **NOTE:** *If you lose track of the device settings, you can reset the router by pushing the reset button to restore these settings back to your router.*

Setting	Default
User Name	admin
Password	admin
Device Name	my router
IP Address	192.168.2.1

Subnet Mask	255.255.255.0
10 Mbps Ethernet WAN IP	<obtain from ISP via DHCP>
WAN DHCP Client	Enabled
ESSID (wireless network name)	wireless
Channel	6
Encryption	No Encryption
DHCP Server	Enabled
NAT Routing	Enabled

[Back to Contents Page](#)



[Back to Contents Page](#)

Configuration Steps for Common Scenarios: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

- ▶ [Cable Modem Connection](#)
- ▶ [xDSL Modem Connection](#)
- ▶ [Installing And Configuring The Router For Non-Ethernet Cable Connections](#)
- ▶ [Configuring Your Router For The Existing Network](#)
- ▶ [Configuring Your TrueMobile 2300 Router For Gaming](#)
- ▶ [How to Set Wireless Encryption In Your Router?](#)
- ▶ [How to Turn Off Broadcast SSID?](#)
- ▶ [Setting Up As An Access Point](#)
- ▶ [Setting Up File & Printer Sharing](#)
- ▶ [How To Setup WinXP Clients Connecting To The Router?](#)

[Back to Contents Page](#)



[Back to Contents Page](#)

Technical Specifications and Regulatory Information: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

i@

 [Technical Specifications](#)

 [Regulatory Information](#)

 [Limited Warranties and Return Policy](#)

i@

Wireless interoperability

The Dell TrueMobile 2300 products are designed to be interoperable with any wireless LAN product that is based on direct sequence spread spectrum (DSSS) and orthogonal frequency division multiplexing (OFDM) radio technology and to comply with the following standards:

- IEEE Std. 802.11b. Standard on Wireless LAN.
- 802.11g Standard on Wireless LAN.
- Wireless Fidelity (WiFi) certification, as defined by the WECA (Wireless Ethernet Compatibility Alliance).

i@

Wireless 802.11 and your health

The Dell TrueMobile 2300 Wireless Broadband Router, like other radio devices, emits radio frequency electromagnetic energy. The level of energy emitted by this device, however, is less than the electromagnetic energy emitted by other wireless devices such as mobile phones. The Dell TrueMobile 2300 wireless device operates within the guidelines found in radio frequency safety standards and recommendations. These standards and recommendations reflect the consensus of the scientific community and result from deliberations of panels and committees of scientists who continually review and interpret the extensive research literature. In some situations or environments, the use of the Dell TrueMobile 2300 wireless devices may be restricted by the proprietor of the building or responsible representatives of the applicable organization. Examples of such situations include the following:

- Using the Dell TrueMobile equipment on board airplanes, or
- Using the Dell TrueMobile equipment in any other environment where the risk of interference with other devices or services is perceived or identified as being harmful.

i@

If you are uncertain of the policy that applies to the use of wireless devices in a specific organization or environment (an airport, for example), you are encouraged to ask for authorization to use the Dell TrueMobile 2300 wireless device before you turn it on.

i@

[Back to Top](#)

Technical Specifications

Standards supported

- IEEE 802.3, IEEE 802.3u, IEEE 802.11b, 802.11g

Protocols

- TCP/ IP, IPX, UDP, DHCP Client, DHCP Server

Environment

- Operating Humidity 10% to 85% (Non-Condensing)
- Storage Humidity 5% to 90% (Non-Condensing)
- Operating Temperature 0° to 40° C (32° F to 104° F)
- Storage Temperature 0° to 70° C (32° F to 158° F)

Power specification

Receive Sensitivity

- 11Mbps: 10-5 BER @ -80 dBm, typical
- 54Mbps: 10-5 BER @ -65 dBm, typical

Transmit Power

- Normal Temp Range: ±12 dBm

DC power supply

- Input: DC 100-250 50-60 Hz 1A
- Output: 5V DC 2A

Radio specification

Range: "Up to 100m" indoors and "Up to 450m" outdoors (open range)

Frequency range: 2.4 - 2.4835 GHz, direct sequence spread spectrum

Number of Channels:

- Europe: 11 (1-11)
- US: 11 (1-11)
- France: 2 (10-11)
- Japan: 11 (1-11)

Mobility: Seamless roaming across cell boundaries with handover

Specific features

Supported bit rates:

For 802.11g:

- 54 Mbps
- 48 Mbps
- 36 Mbps
- 24 Mbps
- 18 Mbps
- 12 Mbps
- 9 Mbps
- 6 Mbps

For 802.11b:

- 11 Mbps
- 5.5 Mbps
- 2 Mbps
- 1 Mbps

Data Encryption: WEP (64/128 bit) and WPA

i@

Utility Software

- Setup Wizard software
- Control Utility software

i@

[Back to Top](#)

Regulatory Information

The Dell TrueMobile 2300 wireless network device must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product. For country-specific approvals, see Radio approvals. Dell Computer Corporation is not responsible for any radio or television interference caused by unauthorized modification of the devices included with this Dell TrueMobile 2300 kit, or the substitution or attachment of connecting cables and equipment other than that specified by Dell Computer Corporation. The correction of interference caused by such unauthorized modification, substitution or attachment is the responsibility of the user. Dell Computer Corporation and its authorized resellers or distributors are not liable for any damage or violation of government regulations that may arise from the user failing to comply with these guidelines.

For the latest regulatory information, documentation, and other updates, please visit the Dell website at support.dell.com.

[Regulatory Update/Radio Approval List](#)

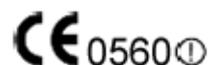
i@

Canada -- Industry Canada (IC)

This device complies with RSS210 of Industry Canada.

[Back to Top](#)

Europe -- EU Declaration of Conformity



This equipment complies with the essential requirements of the European Union directive 1999/5/EC.

Cet équipement est conforme aux principales caractéristiques définies dans la Directive européenne RTTE 1999/5/CE.

Die Geräte erfüllen die grundlegenden Anforderungen der RTTE-Richtlinie 1999/5/EG.

Questa apparecchiatura è conforme ai requisiti essenziali della Direttiva Europea R&TTE 1999/5/CE.

Este equipo cumple los requisitos principales de la Directiva 1999/5/CE de la UE, "Equipos de Terminales de Radio y Telecomunicaciones".

Este equipamento cumpre os requisitos essenciais da Directiva 1999/5/CE do Parlamento Europeu e do Conselho (Directiva RTT).

Deze apparatuur voldoet aan de noodzakelijke vereisten van EU-richtlijn betreffende radioapparatuur en telecommunicatie-eindapparatuur 1999/5/EG.

Dette udstyr opfylder de Væsentlige krav i EU's direktiv 1999/5/EC om Radio- og teleterminaludstyr.

Dette utstyret er i overensstemmelse med hovedkravene i R&TTE-direktivet (1999/5/EC) fra EU.

Utrustningen uppfyller kraven för EU-direktivet 1999/5/EC om ansluten teleutrustning och ömsesidigt erkännande av utrustningens överensstämmelse (R&TTE).

Tämä laite vastaa EU:n radio- ja telepäätelaitedirektiivin (EU R&TTE Directive 1999/5/EC) vaatimuksia.

i@

[Back to Top](#)

France

i@

Some areas of France have a restricted frequency band. The worst-case maximum authorized power indoors is:

10 mW for the entire 2.4 GHz band (2400 MHz - 2483.5 MHz)

100 mW for frequencies between 2446.5 MHz and 2483.5 MHz (NOTE - Channels 10 through 13 inclusive operate in the band 2446.6 MHz - 2483.5 MHz)

There are few possibilities for outdoor use: On private property or on the private property of public persons, use is subject to a preliminary authorization procedure by the Ministry of Defence, with maximum authorized power of 100 mW in the 2446.5 - 2483.5 MHz band. Use outdoors on public property is not permitted.

In the departments listed below, for the entire 2.4 GHz band:

Maximum authorized power indoors is 100 mW

Maximum authorized power outdoors is 10 mW

Departements in which the use of the 2400 - 2483.5 MHz band is permitted with an EIRP of less than 100 mW indoors and less than 10 mW outdoors:

i@

01 Ain Orientales	36 Indre	66 Pyrénées
02 Aisne	37 Indre et Loire	67 Bas Rhin
03 Allier	41 Loir et Cher	68 Haut Rhin
05 Hautes Alpes	42 Loire	70 Haute Saône
08 Ardennes	45 Loiret	71 Saône et Loire
09 Ariège	50 Manche	75 Paris
11 Aude	55 Meuse	82 Tarn et Garonne
12 Aveyron	58 Nièvre	84 Vaucluse
16 Charente	59 Nord	88 Vosges
24 Dordogne	60 Oise	89 Yonne
25 Doubs	61 Orne	90 Territoire de Belfort
26 Drôme	63 Puy du Dôme	94 Val de Marne
32 Gers	64 Pyrénées Atlantique	

This requirement is likely to change over time, allowing you to use your wireless LAN card in more areas within France. Please check with ART for the latest information (www.art-telecom.fr)



NOTE: Your Dell TrueMobile 2300 Wireless Broadband Router transmits less than 100 mW, but more than 10 mW.

[Back to Top](#)

i@

Italia

A license is required for indoor use. Outdoor use is prohibited.

E' necessaria la concessione ministeriale anche per l'uso interno. Verificare con i rivenditori la procedura da seguire. L'uso per installazione in esterni non e' permessa.

[Back to Top](#)

USA -- Federal Communications Commission (FCC)

This device complies with Part 15 of the FCC Rules. Operation of the device is subject to the following two conditions:

This device may not cause harmful interference.

This device must accept any interference that may cause undesired operation.

Interference statement

This equipment 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 harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy. If the equipment is not installed and used in accordance with the instructions, the equipment may cause harmful interference to radio communications. There is no guarantee, however, that such 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 taking one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the distance between the equipment and the receiver.

Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.



NOTE: This Dell TrueMobile 2300 wireless network device must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product. Any other installation or use will violate FCC Part 15 regulations.

i@

IMPORTANT NOTE

FCC RF Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Radio approvals

To determine whether you are allowed to use your wireless network device in a specific country, please check to see if the radio type number that is printed on the identification label of your device is listed on the radio approval list posted on the general Dell support site at support.dell.com.

i@

[Regulatory Update/Radio Approval List](#)

[Back to Top](#)

Limited Warranties and Return Policy

Dell-branded hardware products purchased in the U.S. or Canada come with either a 90-day (U.S. only), one-year, two-year, three-year, or four-year limited warranty. To determine which warranty you purchased, see the invoice that accompanied your hardware product(s). The following sections describe the limited warranties and return policy for the U.S., the limited warranties and return policy for Canada, and the manufacturer guarantee for Latin America and the Caribbean.

Limited Warranty for the U.S.

What is covered by this limited warranty?

This limited warranty covers defects in materials and workmanship in your - our end-user customer's - Dell-branded hardware products, including Dell-branded peripheral products.

What is not covered by this limited warranty?

This limited warranty does not cover:

- Software, including the operating system and software added to the Dell-branded hardware products through our factory-integration system, third-party software, or the reloading of software
- Non-Dell-branded products and accessories
- Problems that result from:
 - External causes such as accident, abuse, misuse, or problems with electrical power
 - Servicing not authorized by us
 - Usage that is not in accordance with product instructions

- Failure to follow the product instructions or failure to perform preventive maintenance
- Problems caused by using accessories, parts, or components not supplied by us
- Products with missing or altered service tags or serial numbers
- Products for which we have not received payment

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE (OR JURISDICTION TO JURISDICTION). DELL'S RESPONSIBILITY FOR MALFUNCTIONS AND DEFECTS IN HARDWARE IS LIMITED TO REPAIR AND REPLACEMENT AS SET FORTH IN THIS WARRANTY STATEMENT. ALL EXPRESS AND IMPLIED WARRANTIES FOR THE PRODUCT, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES AND CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN TIME TO THE TERM OF THE LIMITED WARRANTY PERIOD REFLECTED ON YOUR INVOICE. NO WARRANTIES, WHETHER EXPRESS OR IMPLIED, WILL APPLY AFTER THE LIMITED WARRANTY PERIOD HAS EXPIRED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THIS LIMITATION MAY NOT APPLY TO YOU.

WE DO NOT ACCEPT LIABILITY BEYOND THE REMEDIES PROVIDED FOR IN THIS LIMITED WARRANTY OR FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES, INCLUDING, WITHOUT LIMITATION, ANY LIABILITY FOR THIRD PARTY CLAIMS AGAINST YOU FOR DAMAGES, FOR PRODUCTS NOT BEING AVAILABLE FOR USE, OR FOR LOST DATA OR LOST SOFTWARE. OUR LIABILITY WILL BE NO MORE THAN THE AMOUNT YOU PAID FOR THE PRODUCT THAT IS THE SUBJECT OF A CLAIM. THIS IS THE MAXIMUM AMOUNT FOR WHICH WE ARE RESPONSIBLE. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

How long does this limited warranty last?

This limited warranty lasts for the time period indicated on your invoice, except that the limited warranty on Dell-branded batteries lasts only one year and the limited warranty on the lamps for Dell-branded projectors lasts only ninety days. The limited warranty begins on the date of the invoice. The warranty period is not extended if we repair or replace a warranted product or any parts. Dell may change the availability of limited warranties, at its discretion, but any changes will not be retroactive.

What do I do if I need warranty service?

Before the warranty expires, please call us at the relevant number listed in the following table. Please also have your Dell service tag number or order number available.

Individual Home Consumers:	
Technical Support	1-800-624-9896
Customer Service	1-800-624-9897
Individual Home Consumers who purchased through an Employee Purchase Program:	
Technical Support and Customer Service	1-800-822-8965
Home and Small Business Commercial Customers:	
Technical Support and Customer Service	1-800-456-3355
Medium, Large, or Global Commercial Customers, Healthcare Customers, and Value Added Resellers (VARs):	
Technical Support and Customer Service	1-800-822-8965
Government and Education Customers:	
Technical Support and Customer Service	1-800-234-1490
Dell-Branded Memory	1-888-363-5150

What will Dell do?

During the first 90 days of the 90-day limited warranty and the first year of all other limited warranties: For the first 90 days of the 90-day limited warranty and the first year of all other limited warranties, we will repair any Dell-branded hardware products returned to us that prove to be defective in materials or workmanship. If we are not able to repair the product, we will replace it with a comparable product that is new or refurbished.

When you contact us, we will issue a Return Material Authorization Number for you to include with your return. You must return the products to us in their original or equivalent packaging, prepay shipping charges, and insure the shipment or accept the risk if the product is lost or damaged in shipment. We will return the repaired or replacement products to you. We will pay to ship the repaired or replaced products to you if you use an address in the United States (excluding Puerto Rico and U.S. possessions and territories). Otherwise, we will ship the product to you freight collect.

If we determine that the product is not covered under this warranty, we will notify you and inform you of service alternatives that are available to you on a fee basis.

NOTE : Before you ship the product(s) to us, make sure to back up the data on the hard drive(s) and any other storage device(s) in the product(s). Remove any confidential, proprietary, or personal information and removable media such as floppy disks, CDs, or PC Cards. We are not responsible for any of your confidential, proprietary, or personal information; lost or corrupted data; or damaged or lost removable media.

During the remaining years: For the remaining period of the limited warranty, we will replace any defective part with new or refurbished parts, if we agree that it needs to be replaced. When you contact us, we will require a valid credit card number at the time you request a replacement part, but we will not charge you for the replacement part as long as you return the original part to us within thirty days after we ship the replacement part to you. If we do not receive the original part within thirty days, we will charge to your credit card the then-current standard price for that part.

We will pay to ship the part to you if you use an address in the United States (excluding Puerto Rico and U.S. possessions and territories). Otherwise, we will ship the part freight collect. We will also include a prepaid shipping container with each replacement part for your use in returning the replaced part to us.

NOTE : Before you replace parts, make sure to back up the data on the hard drive(s) and any other storage device(s) in the product(s). We are not responsible for lost or corrupted data.

What if I purchased a service contract?

If your on-site service contract is with Dell, on-site service will be provided to you under the terms of the on-site

service agreement. Please refer to that contract for details on how to obtain service.

If you purchased through us a service contract with one of our third-party service providers, please refer to that contract for details on how to obtain service.

How will you fix my product?

We use new and refurbished parts made by various manufacturers in performing warranty repairs and in building replacement parts and systems. Refurbished parts and systems are parts or systems that have been returned to Dell, some of which were never used by a customer. All parts and systems are inspected and tested for quality.

Replacement parts and systems are covered for the remaining period of the limited warranty for the product you bought.

What do I do if I am not satisfied?

We pride ourselves on our great customer service. If you are not satisfied with the service you receive under this limited warranty, please let us know. We have found that the best way to resolve issues regarding our limited warranty is to work together. If, after those discussions, you are still not satisfied, we believe arbitration is the most expeditious way to resolve your concerns. Therefore, **ANY CLAIM, DISPUTE, OR CONTROVERSY (WHETHER IN CONTRACT, TORT, OR OTHERWISE, WHETHER PREEXISTING, PRESENT, OR FUTURE, AND INCLUDING STATUTORY, COMMON LAW, INTENTIONAL TORT, AND EQUITABLE CLAIMS) AGAINST DELL** arising from or relating to this limited warranty, its interpretation, or the breach, termination, or validity thereof, the relationships which result from this limited warranty (including, to the full extent permitted by applicable law, relationships with third parties), Dell's advertising, or any related purchase **SHALL BE RESOLVED EXCLUSIVELY AND FINALLY BY BINDING ARBITRATION ADMINISTERED BY THE NATIONAL ARBITRATION FORUM (NAF)** under its Code of Procedure then in effect (available via the Internet at www.arb-forum.com or via telephone at 1-800-474-2371). The arbitration will be limited solely to the dispute or controversy between you and Dell. Any award of the arbitrator(s) shall be final and binding on each of the parties, and may be entered as a judgment in any court of competent jurisdiction. Information may be obtained and claims may be filed with the NAF at P.O. Box 50191, Minneapolis, MN 55405. This provision applies only to individual home consumers and consumers who purchased through an employee purchase program. It does not apply to small, medium, large, and global commercial customers or government, education, and healthcare customers.

May I transfer the limited warranty?

Limited warranties on systems may be transferred if the current owner transfers ownership of the system and records the transfer with us. The limited warranty on Dell-branded memory may not be transferred. You may record your transfer by going to Dell's website:

- If you are an Individual Home Consumer, go to www.dell.com/us/en/dhs/topics/sbtopic_015_ccare.htm
 - If you are a Small, Medium, Large, or Global Commercial Customer, go to www.dell.com/us/en/biz/topics/sbtopic_ccare_nav_015_ccare.htm
 - If you are a Government, Education, or Healthcare Customer, or an Individual Consumer who purchased through an employee purchase program, go to www.dell.com/us/en/pub/topics/sbtopic_015_ccare.htm
- If you do not have Internet access, call your customer care representative or call 1-800-624-9897.

"Total Satisfaction" Return Policy (U.S. Only)

We value our relationship with you and want to make sure that you're satisfied with your purchases. That's why we offer a "Total Satisfaction" return policy for most products that you - the end-user customer - purchase directly from Dell. Under this policy, you may return to Dell products that you purchased directly from Dell for a credit or a refund of the purchase price paid, less shipping and handling and applicable restocking fees as follows:

- **New Hardware Products and Accessories** -- All new hardware, accessories, parts, and unopened software still in its sealed package, excluding the products listed below, may be returned within thirty days from the invoice date. To return applications software or an operating system that has been installed by Dell, you must return the entire computer. A different return policy applies to non-defective products purchased through Dell's Software and Peripherals division by customers of our Small and Medium Business divisions. Those products may be returned within thirty days from the invoice date, but a fifteen percent (15%) restocking fee will be deducted from any refund or credit. The "Total Satisfaction" Return Policy and Software and Peripherals division return policy are not available for Dell | EMC storage products, EMC-branded products, or enterprise software.
- **Reconditioned or Refurbished Dell-Branded Hardware Products and Parts** -- All reconditioned or refurbished Dell-branded server and storage products may be returned within thirty days from the invoice date. All other reconditioned or refurbished Dell-branded hardware products and parts may be returned within fourteen days of the invoice date.

To return products, e-mail or call Dell customer service to receive a Credit Return Authorization Number within the return policy period applicable to the product you want to return. You must obtain a Credit Return Authorization Number in order to return the product. See "Contacting Dell" or "Getting Help" in your customer documentation (or www.dell.com/us/en/gen/contact.htm) to find the appropriate contact information for obtaining customer assistance.

You must ship the products to Dell within five days of the date that Dell issues the Credit Return Authorization Number. You must also return the products to Dell in their original packaging, in as-new condition along with any media, documentation, and all other items that were included in the original shipment, prepay shipping charges, and insure the shipment or accept the risk of loss or damage during shipment.

Limited Warranty Terms for Canada

What is covered by this limited warranty?

This limited warranty covers defects in materials and workmanship in your -- our end-user customer's -- Dell-branded hardware products, including Dell-branded peripheral products.

What is not covered by this limited warranty?

This limited warranty does not cover:

- Software, including the operating system and software added to the Dell-branded hardware products through our factory-integration system, or the reloading of the software
- Non-Dell branded products and accessories
- Problems that result from:
 - External causes such as accident, abuse, misuse, or problems with electrical power
 - Servicing not authorized by us
 - Usage that is not in accordance with product instructions

- Failure to follow the product instructions or failure to perform preventive maintenance
- Problems caused by using accessories, parts, or components not supplied by us
- Products with missing or altered service tags or serial numbers
- Products for which we have not received payment

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU MAY ALSO HAVE OTHER RIGHTS WHICH VARY FROM PROVINCE TO PROVINCE. DELL'S RESPONSIBILITY FOR MALFUNCTIONS AND DEFECTS IN PRODUCT IS LIMITED TO REPAIR AND REPLACEMENT AS SET FORTH IN THIS WARRANTY STATEMENT, FOR THE TERM OF THE WARRANTY PERIOD REFLECTED ON YOUR INVOICE. EXCEPT FOR THE EXPRESS WARRANTIES CONTAINED IN THIS WARRANTY STATEMENT, DELL DISCLAIMS ALL OTHER WARRANTIES AND CONDITIONS, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES AND CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, STATUTORY OR OTHERWISE. SOME PROVINCES DO NOT ALLOW THE EXCLUSION OF CERTAIN IMPLIED WARRANTIES OR CONDITIONS, OR LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY OR CONDITION LASTS. THEREFORE, THE FOREGOING EXCLUSIONS AND LIMITATIONS MAY NOT APPLY TO YOU.

WE DO NOT ACCEPT LIABILITY BEYOND THE REMEDIES PROVIDED FOR IN THIS WARRANTY STATEMENT OR FOR SPECIAL, INDIRECT, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, INCLUDING, WITHOUT LIMITATION, ANY LIABILITY FOR THIRD PARTY CLAIMS AGAINST YOU FOR DAMAGES, FOR PRODUCTS NOT BEING AVAILABLE FOR USE, OR FOR LOST DATA OR LOST SOFTWARE. OUR LIABILITY WILL BE NO MORE THAN THE AMOUNT YOU PAID FOR THE PRODUCT THAT IS THE SUBJECT OF A CLAIM. THIS IS THE MAXIMUM AMOUNT FOR WHICH WE ARE RESPONSIBLE.

SOME PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF SPECIAL, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

How long does this limited warranty last?

This limited warranty lasts for the time period indicated on your invoice, except that the limited warranty on Dell-branded batteries lasts only one year and the limited warranty on the lamps for Dell-branded projectors lasts only ninety days. The limited warranty begins on the date of the invoice. The warranty period is not extended if we repair or replace a warranted product or any parts. Dell may change the terms and availability of limited warranties, at its discretion, but any changes will not be retroactive (that is, the warranty terms in place at the time of purchase will apply to your purchase).

What do I do if I need warranty service?

Before the warranty expires, please call us at the relevant number listed in the following table. Please also have your Dell service tag number or order number available.

Individual Home Consumers; Home Office and Small Business Customers:	
Technical Support and Customer Service	1-800-847-4096
Medium, Large, and Global Commercial Customers; Government, Education, and Healthcare Customers; and Value Added Resellers (VARs):	
Technical Support	1-800-387-5757
Customer Service	1-800-326-9463
Government or Education Customers, or Individual Home Consumers who purchased through an Employee Purchase Program:	
Technical Support	1-800-387-5757
Customer Service	1-800-326-9463 (Extension 8221 for Individual Consumers)
Dell-Branded Memory	1-888-363-5150

What will Dell do?

During the first year of all limited warranties: During the first year of all limited warranties, we will repair any Dell-branded hardware products returned to us that prove to be defective in materials or workmanship. If we are not able to repair the product, we will replace it with a comparable product that is new or refurbished.

When you contact us, we will issue a Return Material Authorization Number for you to include with your return. You must return the products to us in their original or equivalent packaging, prepay shipping charges, and insure the shipment or accept the risk if the product is lost or damaged in shipment. We will return the repaired or replacement products to you. We will pay to ship the repaired or replaced products to you if you use an address in Canada. Otherwise, we will ship the product to you freight collect.

If we determine that the problem is not covered under this warranty, we will notify you and inform you of service alternatives that are available to you on a fee basis.

NOTE : Before you ship the product(s) to us, make sure to back up the data on the hard drive(s) and any other storage device(s) in the product(s). Remove any confidential, proprietary or personal information, removable media, such as floppy disks, CDs, or PC Cards. We are not responsible for any of your confidential, proprietary or personal information; lost or corrupted data; or damaged or lost removable media.

During the remaining years following the first year of all limited warranties : We will replace any defective part with new or refurbished parts, if we agree that it needs to be replaced. When you contact us, we will require a valid credit card number at the time you request a replacement part, but we will not charge you for the replacement part as long as you return the original part to us within thirty days after we ship the replacement part to you. If we do not receive the original part within thirty days, we will charge to your credit card the then-current standard price for that part.

We will pay to ship the part to you if you use an address in Canada. Otherwise, we will ship the part freight collect. We will also include a prepaid shipping container with each replacement part for your use in returning the replaced part to us.

NOTE : Before you replace parts, make sure to back up the data on the hard drive(s) and any other storage device(s) in the product(s). We are not responsible for lost or corrupted data.

What if I purchased an on-site service contract?

If your service contract is with Dell, service will be provided to you under the terms of the service contract. Please

refer to that contract for details on how to obtain service. Dell's service contracts can be found online at www.dell.ca or by calling Customer Care at 1-800-847-4096. If you purchased through us a service contract with one of our third-party service providers, please refer to that contract (mailed to you with your invoice) for details on how to obtain service.

How will you fix my product?

We use new and refurbished parts made by various manufacturers in performing warranty repairs and in building replacement parts and systems. Refurbished parts and systems are parts or systems that have been returned to Dell, some of which were never used by a customer. All parts and systems are inspected and tested for quality.

Replacement parts and systems are covered for the remaining period of the limited warranty for the product you bought. Dell owns all parts removed from repaired products.

What do I do if I am not satisfied?

We pride ourselves on our great customer service. If you are not satisfied with the service you receive under this limited warranty, please let us know. We have found that the best way to resolve issues regarding our limited warranty is to work together. If, after those discussions, you are still not satisfied, we believe arbitration is the most expeditious way to resolve your concerns. Therefore, **ANY CLAIM, DISPUTE, OR CONTROVERSY (WHETHER IN CONTRACT, TORT, OR OTHERWISE, WHETHER PREEXISTING, PRESENT OR FUTURE, AND INCLUDING STATUTORY, COMMON LAW, INTENTIONAL TORT, AND EQUITABLE CLAIMS) AGAINST DELL** arising from or relating to this limited warranty, its interpretation, or the breach, termination or validity thereof, the relationships which result from this limited warranty (including, to the full extent permitted by applicable law, relationships with third parties), Dell's advertising, or any related purchase **SHALL BE RESOLVED EXCLUSIVELY AND FINALLY BY BINDING ARBITRATION ADMINISTERED BY THE NATIONAL ARBITRATION FORUM (NAF)** under its Code of Procedure then in effect (available via the Internet at www.arb-forum.com, or via telephone at 1-800-474-2371). The arbitration will be limited solely to the dispute or controversy between you and Dell. Any award of the arbitrator(s) shall be final and binding on each of the parties, and may be entered as a judgment in any court of competent jurisdiction. Information may be obtained and claims may be filed with the NAF at P.O. Box 50191, Minneapolis, MN 55405.

May I transfer the limited warranty?

Limited warranties on systems may be transferred if the current owner transfers ownership of the system and records the transfer with us. The limited warranty on Dell-branded memory may not be transferred. You may record your transfer by going to our website:

- If you are an Individual Home Consumer, go to www.dell.com/us/en/dhs/topics/sbtopic_016_ccare.htm
 - If you are a Home Office, Small, Medium, Large, or Global Commercial Customer, go to www.dell.com/us/en/biz/topics/sbtopic_ccare_nav_016_ccare.htm
 - If you are a Government, Education, or Healthcare Customer, or an Individual Home Consumer who purchased through an Employee Purchase Program, go to www.dell.com/us/en/pub/topics/sbtopic_016_ccare.htm
- If you do not have Internet access, please call Dell at 1-800-326-9463.

"Total Satisfaction" Return Policy

If you are an end-user customer who bought new products directly from Dell, you may return them to Dell up to 30 days after you receive them for a refund or credit of the product purchase price. If you are an end-user customer who bought reconditioned or refurbished products from Dell, you may return them to Dell within 14 days after the date of invoice for a refund or credit of the product purchase price. In either case, the refund or credit will not include any shipping and handling charges shown on your invoice and will be subject to a fifteen percent (15%) restocking fee, unless otherwise prohibited by law. If you are an organization that bought the products under a written agreement with Dell, the agreement may contain different terms for the return of products than specified by this policy.

To return products, you must call Dell Customer Service at 1-800-387-5759 to receive a Credit Return Authorization Number. To expedite the process of your refund or credit, Dell expects you to return the products to Dell in their original packaging within five days of the date that Dell issues the Credit Return Authorization Number. You must also prepay shipping charges and insure the shipment or accept the risk of loss or damage during shipment. You may return software for a refund or credit only if the sealed package containing the floppy disk(s) or CD(s) is unopened. Returned products must be in as-new condition, and all of the manuals, floppy disk(s), CD(s), power cables, and other items included with a product must be returned with it. For customers who want to return, for refund or credit only, either application or operating system software that has been installed by Dell, the whole system must be returned, along with any media and documentation that may have been included in the original shipment.

The "Total Satisfaction" Return Policy does not apply to Dell | EMC storage products. It also does not apply to products purchased through Dell's Software and Peripherals division. For those products, please instead refer to Dell's Software and Peripheral's then-current return policy (see the following section, "Dell Software and Peripherals (Canada Only)").

Dell Software and Peripherals (Canada Only)

Third-Party Software and Peripherals Products

Similar to other resellers of software and peripherals, Dell does not warrant third-party products. Third-party software and peripheral products are covered by the warranties provided by the original manufacturer or publisher only. Third party manufacturer warranties vary from product to product. Consult your product documentation for specific warranty information. More information may also be available from the manufacturer or publisher.

While Dell offers a wide selection of software and peripheral products, we do not specifically test or guarantee that all of the products we offer work with any or all of the various models of Dell computers, nor do we test or guarantee all of the products we sell on the hundreds of different brands of computers available today. If you have questions about compatibility, we recommend and encourage you to contact the third-party software and peripheral product manufacturer or publisher directly.

Dell-Branded Peripheral Products

Dell does provide a limited warranty for new Dell-branded peripheral products (products for which Dell is listed as the manufacturer) such as monitors, batteries, memory, docking stations, and projectors). To determine which limited warranty applies to the product you purchased, see the Dell invoice and/or the product documentation that accompanied your product. Descriptions of Dell's limited warranties are described in preceding sections.

Return Policy

If you are an end-user customer who bought Dell Software and Peripherals products directly from a Dell company, you may return Dell Software and Peripherals products that are in as-new condition to Dell up to 30 days from the date of invoice for a refund of the product purchase price if already paid. This refund will not include any shipping and handling charges shown on your invoice; you are responsible for those.

To return products, you must call Dell Customer Service at 1-800-387-5759 to receive a Credit Return Authorization Number. You must ship the Dell Software and Peripherals products back to Dell in their original manufacturer's packaging (which must be in as-new condition), prepay shipping charges, and insure the shipment or accept the risk of loss or damage during shipment.

To qualify for refund or replacement, returned products must be in as-new condition, software products must be unopened, and all of the manuals, floppy disk(s), CD(s), power cables, and other items included with a product must be returned with it.

One-Year End-User Manufacturer Guarantee (Latin America and the Caribbean Only)

Guarantee

Dell Computer Corporation ("Dell") warrants to the end user in accordance with the following provisions that its branded hardware products, purchased by the end user from a Dell company or an authorized Dell distributor in Latin America or the Caribbean, will be free from defects in materials, workmanship, and design affecting normal use, for a period of one year from the original purchase date. Products for which proper claims are made will, at Dell's option, be repaired or replaced at Dell's expense. Dell owns all parts removed from repaired products. Dell uses new and reconditioned parts made by various manufacturers in performing repairs and building replacement products.

Exclusions

This Guarantee does not apply to defects resulting from: improper or inadequate installation, use, or maintenance; actions or modifications by unauthorized third parties or the end user; accidental or willful damage; or normal wear and tear.

Making a Claim

Claims must be made in Latin America or the Caribbean by contacting the Dell point of sale within the guarantee period. The end user must always supply proof of purchase, indicating name and address of the seller, date of purchase, model and serial number, name and address of the customer, and details of symptoms and configuration at the time of malfunction, including peripherals and software used. Otherwise, Dell may refuse the guarantee claim. Upon diagnosis of a warranted defect, Dell will make arrangements and pay for ground freight and insurance to and from Dell's repair/replacement center. The end user must ensure that the defective product is available for collection properly packed in original or equally protective packaging together with the details listed above and the return number provided to the end user by Dell.

Limitation and Statutory Rights

Dell makes no other warranty, guarantee or like statement other than as explicitly stated above, and this Guarantee is given in place of all other guarantees whatsoever, to the fullest extent permitted by law. In the absence of applicable legislation, this Guarantee will be the end user's sole and exclusive remedy against Dell or any of its affiliates, and neither Dell nor any of its affiliates shall be liable for loss of profit or contracts, or any other indirect or consequential loss arising from negligence, breach of contract, or howsoever.

This Guarantee does not impair or affect mandatory statutory rights of the end user against and/or any rights resulting from other contracts concluded by the end user with Dell and/or any other seller.

Dell World Trade LP

One Dell Way, Round Rock, TX 78682, USA

Dell Computadores do Brasil Ltda (CNPJ No. 72.381.189/0001-10) /

Dell Commercial do Brasil Ltda (CNPJ No. 03 405 822/0001-40)

Avenida Industrial Belgraf, 400
92990-000 - Eldorado do Sul - RS - Brasil

Dell Computer de Chile Ltda

Coyancura 2283, Piso 3- Of.302,
Providencia, Santiago - Chile

Dell Computer de Colombia Corporation

Carrera 7 #115-33 Oficina 603
Bogota, Colombia

Dell Computer de Mexico SA de CV

Paseo de la Reforma 2620 - 11° Piso
Col. Lomas Altas
11950 México, D.F.

[Back to Top](#)

[Back to Contents Page](#)



FAQs

Hardware Installation:

- ▶ [How do I install the Dell TrueMobile 2300 Wireless Broadband Router for optimal coverage?](#)
- ▶ [What is the maximum number of wireless, wired, and Internet users for each Dell TrueMobile 2300 Wireless Broadband Router?](#)
- ▶ [Can the Dell TrueMobile 2300 Wireless Broadband Router attach to a hub, switch, or router?](#)
- ▶ [What is the physical connection from the Dell TrueMobile 2300 Wireless Broadband Router to a wired network?](#)

Software Configuration

[Internet Settings](#)

[Wireless Attributes](#)

[Supported Features](#)

[Troubleshooting](#)

[Other](#)

[Glossary](#)



How do I install the Dell™ TrueMobile™ 2300 Wireless Broadband Router for optimal coverage?

Each Dell TrueMobile 2300 Wireless Broadband Router supports up to about a 150 to 200 foot radius, depending on obstacles and interference issues. For smaller installations a little experimentation provides good placement of the Dell TrueMobile 2300 Wireless Broadband Router.

What is the maximum number of wireless, wired, and Internet users for each Dell TrueMobile 2300 Wireless Broadband Router?

The built-in DHCP server can provide IP addresses for up to 252 clients. 16 wireless clients are supported simultaneously on each unit. 32 clients can simultaneously access the Internet via the built-in NAT router.

NOTE: As the number of users on each Dell TrueMobile 2300 increases, the network performance level decreases.

Can the Dell TrueMobile 2300 Wireless Broadband Router attach to a hub, switch, or router?

Yes, via its LAN port, the Dell TrueMobile 2300 Wireless Broadband Router provides the flexibility for a wide variety of network configurations and connections.

What is the physical connection from the Dell TrueMobile 2300 Wireless Broadband Router to a wired network?

Each Dell TrueMobile 2300 Wireless Broadband Router has a 10/100 Ethernet (LAN port) connection, which allows communication with a 10 *megabit per second* (Mbps), 100 Mbps, or 10/100 Mbps hub or switch.

Access Point:

An access point is a device on the wireless network that receives and retransmits data. It allows computers with wireless network adapters to be connected, typically, to an Ethernet network.

Cable Modem:

A cable modem is a device that enables you to hook up your PC to the Internet via a local cable TV line.

Client:

A client is a computer on a network.

Domain Name System (or Service) (DNS):

DNS is an Internet service that translates domain names into [IP addresses](#). A DNS server keeps a database of host computers, their respective domain names, and IP addresses. When a domain name is requested, the DNS server uses this table to send the user to the proper IP address.

The DNS system is really its own network. If one DNS server doesn't know how to translate a particular domain name, it asks another one, and so on, until the correct IP address is returned.

Dynamic Host Configuration Protocol (DHCP):

DHCP is the process of automatically configuring the [TCP/IP](#) settings for every computer on a network.

Encryption:

Encryption is a common way of implementing security and protecting information. Encryption applies a set of instructions, called an *algorithm*, to information. The instructions combine the *plain* or *clear* text of information with a sequence of hexadecimal numbers, called an *encryption key*.

Before transmitting information over the airwaves, the wireless client or access point *encrypts* or scrambles the information. The access point or wireless client receiving the information uses the same key to *decrypt* or unscramble the information. The information is only readable to WLAN devices that have the correct encryption key. The longer the key is, the stronger the encryption. All wireless clients and access points in a WLAN must use the same encryption method and key. 802.11-compliant wireless network has *Wired Equivalent Privacy* (WEP) and *Wi-Fi Protected Access* (WPA) technologies for wireless security.

Ethernet:

Ethernet is the most widely used local area networking technology. It is an industry-wide standard originally developed by

Xerox and formalized in 1980 by DEC, Intel, and Xerox. Ethernet networks transmit data at 10/100 Mbps using a specified [protocol](#).

Ethernet Address (MAC Address):

An Ethernet address is a unique, pre-programmed address, sometimes referred to as a media access control (MAC) address. Each computer on an Ethernet network has its own Ethernet address. This 12-digit hexadecimal address is encoded into the circuitry of the computer's network adapter when it is manufactured. Other devices on the network use this address to identify the computer. This address is not the same as the [IP address](#) that is assigned to computers on [TCP/IP](#) networks. On these networks, the IP address is associated with the MAC address to enable network communication.

Host:

A host is any device that is connected to the network, for example, a computer, network printer, or router. Each host has a unique name (called "Host Name") or IP address (called "Host IP") for identifying on the network.

Internet Protocol (IP):

IP is the protocol used to send data from one computer to another over the Internet. The IP protocol describes how Internet computers keep track of the [IP address](#) of each computer on the network and route packets of data from one IP address to another.

Internet Service Provider (ISP):

An ISP is a company that provides individuals and other companies access to the Internet and other related services such as website building and virtual hosting. An ISP has the equipment and the telecommunication line access required to have POP on the Internet for the geographic area served. The larger ISPs have their own high-speed leased lines so that they are less dependent on the telecommunication providers and can provide better service to their customers.

IP Address:

An IP address provides unique identification for each computer on the Internet or on a local network. IP addresses are usually expressed as a group of four numbers separated by periods, for example, 169.254.10.2. None of the numbers can be greater than 255. Each Ethernet interface has an IP address. For the Dell TrueMobile 2300 Wireless Broadband Router, there is a [LAN](#) Ethernet interface and a [WAN](#) Ethernet interface; hence, there is a LAN IP address and a WAN IP address.

Link Light:

A link light is a light on a network device that indicates a good network connection. Hubs typically have a link light for each port; although, they may not be labeled as such, and the lights may show other information. These lights often blink for network activity. Some hubs display different colored lights for 10 Mbps and 100 Mbps. For more information, see the documentation accompanying your product.

Local Area Network (LAN):

A LAN is a network in one location. The network lets users at that location share files, printers and other services. [See WAN](#).

Network Adapter:

A network adapter is a device expansion card that provides the physical connection between a computer and the network. There are many types of adapters. They include PC cards for laptops, a card that fits into a slot on your computer, just like you install a sound card or modem card, and embedded cards, embedded USB adapters, USB dongle adapters, and USB desktop adapters. Some newer computers have a network adapter already built into the system. PC cards or cards that fit into a slot in the desktop are sometimes referred to as network interface cards, or NICs.

Network Address Translation (NAT):

NAT occurs when multiple [IP addresses](#) on a private [LAN](#) are converted to one public address. This public address is sent out to the Internet. NAT adds a level of security because the IP address for a PC connected to the private LAN is never transmitted to the Internet. NAT also allows xDSL/cable routers to be used with low-cost Internet accounts, where only one [TCP/IP](#) address is provided by the [Internet service provider](#). The user may have many private addresses masked by the single address provided by the ISP. NAT prevents denial of service (DoS) from external networks on internal hosts.

Network Name (SSID):

[Access points](#) are grouped together by an identifier called an ESSID. The ESSID is also referred to as a Net ID. This identifier is a combination of any letters or numbers that are appropriate for the network environment. ESSID is specifically for access points. When you talk about peer-to-peer networks, you cannot use the term ESSID.

Service Set Identifier (SSID) is more generic and is a 32-character name that uniquely identifies all the computers and equipments that make up a wireless network. A type of SSID is ESSID. Another type of SSID is Basic Service Set Identifier (BSSID). The BSSID is the [MAC address](#) of a wireless [adapter](#) or access point.

Point to Point Protocol over Ethernet (PPPoE):

PPPoE is the methodology of authenticating or validating a user or equipment to an [Internet service provider](#), usually via a username and/or password. It is a selection or action that reconfigures a device to the default parameters, as it was originally manufactured.

Port:

A port is a connector on a networking device, used to attach the network cable. Hubs and switches have numerous ports that connect to computers on the network.

Protocol:

Protocol refers to a set of rules for sending and receiving information on a network. The rules determine the format of the data that is transmitted and other aspects of networking, such as how errors are detected and corrected. The protocol driver in each computer is software that adheres to these rules when sending and receiving information. These drivers are also often called protocols.

Transmission Control Protocol/Internet Protocol (TCP/IP):

TCP/IP refers to the [protocol](#) that computers use to communicate over the Internet. TCP determines how a computer breaks up

data into small units, called "packets," to be sent to another computer and how the receiving computer reassembles the packets into a single file. IP determines how the packets are routed across the Internet. [See Internet Protocol.](#)

Virtual Local Area Network (VLAN):

A VLAN is a network of computers that behave as if they are connected to the same wire, even though they may be physically located on different segments of a LAN. VLANs are configured through software rather than hardware, which makes them extremely flexible. When a computer on a VLAN is physically moved to another location, it can stay on the same VLAN without any hardware reconfigurations.

Virtual Server:

A virtual server is a device that performs Internet protocol (IP) mapping. IP mapping allows remote client access to your network via the Internet.

Wide Area Network (WAN):

A WAN is a communications network that uses devices such as telephone lines, satellite dishes, or radio waves to span a larger geographic area than can be covered by a [LAN](#).

Wireless Local Area Network (WLAN):

A WLAN is a type of [Local Area Network \(LAN\)](#) that uses high frequency radio waves rather than wires to communicate and transmit data among the network clients and devices. It is a flexible data communication system implemented as an extension to, or as an alternative for, a wired LAN. Just like a LAN, the network lets users at that location share files, printers and other services.

xDSL Modem:

DSL is a type of service that allows people to access the Internet via their telephone lines. This service is typically available via a telephone company or service provider.

An xDSL connection is a high-speed digital connection to the Internet using standard copper twisted pair telephone wires. There are several kinds of DSL; the x refers to all of them.





Dell™ TrueMobile™ 2300 Wireless Broadband Router *User's Guide*

Contents

- ▶ [Introduction](#)
- ▶ [Managing Your Router](#)
- ▶ [Configuration Steps for Common Scenarios](#)
- ▶ [Technical Specifications and Regulatory Information](#)
- ▶ [FAQs](#)
- ▶ [Glossary](#)
- ▶ [Online Customer Support](#)

Information in this document is subject to change without notice.

© 2003 Dell Computer Corporation. All rights reserved.

Trademarks used in this text: *Dell*, the *DELL* logo, and *TrueMobile* are trademarks of Dell Computer Corporation; *Microsoft* and *Windows* are registered trademarks of Microsoft Corporation. Other trademarks and trade names may be used in this document to refer to either the entities claiming the marks and names or their products. Dell disclaims any proprietary interest in trademarks and trade names other than its own.

P/N M1683 Revision A00, July 2003



[Back to Contents Page](#)

Wireless Networking Overview: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

- ▶ [Wireless Local Area Network \(WLAN\)](#)
- ▶ [Identifying a WLAN](#)
- ▶ [Encryption](#)
- ▶ [Automatic Rate Selection and Rate Scaling](#)

Wireless Local Area Network (WLAN)

A *Local Area Network* (LAN) is a network in one location. Users at that location can share files, printers, and other services. In a LAN, a networked computer that requests services is called a client. A *Wireless Local Area Network* (WLAN) is a type of LAN that uses high frequency radio waves rather than wires to communicate and transmit data among the network clients and devices. It is a flexible data communication system implemented as an extension to, or as an alternative for, a wired LAN.

In a WLAN, wireless adapters are installed in clients, also called wireless clients. The adapter allows the wireless client to communicate with the WLAN without cables. Instead, wireless clients send and receive information through a path in the air called a channel.

The standards for a WLAN are based on the IEEE 802.11b standard and proposed 802.11g standard. All Dell 802.11b/g-compliant devices interoperate with other 802.11b/g-compliant wireless devices from other vendors. The WiFi certification logo indicates that the wireless device has been tested by an independent organization.

A wireless client operates in either infrastructure mode or peer-to-peer mode.

[Back to Top](#)

Identifying a WLAN

An ESSID and BSSID are both *Service Set Identifiers* (SSID) that identify and control the wireless client's access to a given WLAN. The SSID is sometimes referred to as the network name. The SSID indicates what WLAN you are referring to. In most cases, the user interface displays the SSID.

When installing an access point or wireless adapter in a wireless client, the installation program asks you to enter the SSID. Dell cannot provide you with this information, as it is specific to your network; although, you may choose to use the default SSID, "wireless", for your Wireless Broadband Router. All wireless clients and access points in a WLAN must use the same network name.

[Back to Top](#)

Encryption

In a WLAN, wireless clients and access points send and receive information through the air. Without implementing security, it is possible for an unauthorized person to intercept the information.

A common way of implementing security and protecting information is *encryption*. Encryption applies a set of instructions, called an *algorithm*, to information. The instructions combine the *plain* or *clear* text of information with a sequence of hexadecimal

numbers, called an *encryption key*.

Before transmitting information over the airwaves, the wireless client or access point *encrypts* or scrambles the information. The access point or wireless client receiving the information uses the same key to *decrypt* or unscramble the information. The information is only readable to WLAN devices that have the correct encryption key. The longer the key is, the stronger the encryption.

TrueMobile 2300 supports both WEP (Wired Equivalent Privacy) and WPA (Wi-Fi Protected Access).

WEP

WEP provides a way of creating an encrypted key that is shared between a wireless client (such as a notebook with a wireless PC card) and the router. In Wireless Broadband Router, WEP is an optional feature that can be enabled or disabled. When WEP encryption is enabled, you must set the WEP key in the client to match the WEP key used by the access point because you can ONLY connect to access points that have a matching WEP Key.



Note: It is better to change keys frequently. The same algorithm is used for all the communications that should be protected. If the same key is used, the same message will give exactly the same cipher text. Then, it will be possible for an eavesdropper to break the encrypted data. For this reason, it is strongly recommended to change keys often.

There are two WEP encryption methods:

- 40(64)-bit Encryption
- 104(128)-bit Encryption

40-bit and 64-bit encryption are identical. Some vendors use the term 40-bit; others use 64-bit. A wireless device that claims to have 40-bit encryption interoperates with a device that claims to have 64-bit encryption, and vice versa. A 40(64)-bit key consists of 10 hexadecimal numbers, arrayed as follows:

Key #1: 1011121314

Key #2: 2021222324

Key #3: 3031323334

Key #4: 4041424344

A 104(128)-bit key has several trillion times as many possible combinations than a 40(64)-bit key. It consists of 26 hexadecimal numbers, arrayed as follows:

Key (#1): 101112131415161718191A1B1C

All wireless clients and access points in a WLAN must use the same encryption method and key. The following two examples stress how important this point is.

Example 1

The encryption method for an access point is 40(64)-bit. The method for a wireless client is 104(128)-bit encryption. The client and access point cannot communicate with each other, even though the selected key is the same. To resolve this problem, set the access point to use 104(128)-bit encryption.

Example 2

The encryption method is the same for the access point and wireless client. You select key 1 for the access point and key 2 for the wireless client. The wireless client cannot communicate with the WLAN. To resolve this problem, select key 1 for the wireless client.



CAUTION: Use the same key and encryption method for the wireless devices in the WLAN. Otherwise, they cannot communicate with each other.

The Wireless Broadband Router uses either hexadecimal digits or ASCII characters to create encryption keys. Hexadecimal digits include the numbers 0 to 9 and the letters A to F. For example, the decimal number 15 is represented as F in the hexadecimal numbering system.

ASCII is the acronym for the *American Standard Code for Information Interchange*. Pronounced *ask-ee*, ASCII is a code for representing English characters as numbers, with each letter assigned a number from 0 to 127. For example, the ASCII code for uppercase *M* is 77. Most computers use ASCII codes to represent text, which makes it possible to transfer data from one computer to another.

WPA

WPA is an upgrade to the WEP (Wired Equivalent Privacy) standard for securing your wireless network. WPA is derived from and will be forward-compatible with the future IEEE 802.11i standard. It provides improved data encryption and user authentication.

To enhance the level of security, WPA uses TKIP (Temporal Key Integrity Protocol) encryption to address the vulnerabilities of the static keys used in WEP (Wired Equivalent Privacy). TKIP includes four algorithms: MIC (message integrity check), to protect packets from tampering; PPK (Per-Packet Key) hashing, to prevent weak key attacks; extended IV (initialization vector), to reduce IV reuse and the possibility that a hacker will collect sufficient packets to crack the encryption; and a re-keying mechanism, to change the temporal key dynamically. TKIP is the most commonly used encryption method; however, if your wireless clients do not support TKIP, TrueMobile 2300 also supports AES (Advanced Encryption Security) encryption. AES will replace 802.11's RC4-based encryption under 802.11i specification. AES, the gold-standard encryption algorithm, provides maximum security for wireless network.

For user authentication, WPA adopts an authentication scheme -- via 802.1x. 802.1x provides a framework for user authentication and a key distribution management method. 802.1x consists of three main elements: an Authentication Server (typically a RADIUS server), WPA-enabled router or AP (called "*Authenticator*"), and a WPA-enabled client (called "*Supplicant*"). 802.1x ensures only authorized users can access the network.

In enterprises, WPA will be used in conjunction with both wireless router and authentication server. In Small Office/ Home Office (SOHO) environment, where there are no authentication server, users can use pre-shared key (PSK) mode in place of the authentication server. TrueMobile 2300 offers you WPA running in PSK mode. The mutual authentication and improved encryption technology of WPA allows wireless communication to achieve greater security.

[Back to Top](#)

Automatic Rate Selection and Rate Scaling

In 802.11g, wireless network adapters and access points can transmit data at one of the following rates: 54, 48, 36, 24, 18, 12, 9, or 6 Mbps. In 802.11b, the data can be transmitted at a rate of 11, 5.5, 2, or 1 Mbps. As the distance between an adapter and access point increases or decreases, the data rate automatically changes. Other factors, like interference, also affect the data rate. The Wireless Broadband Router uses automatic rate selection and rate scaling to determine the most efficient rate of communication. Rate scaling maintains optimal communication between wireless clients and the WLAN.

[Back to Top](#)

[Back to Contents Page](#)



[Back to Contents Page](#)

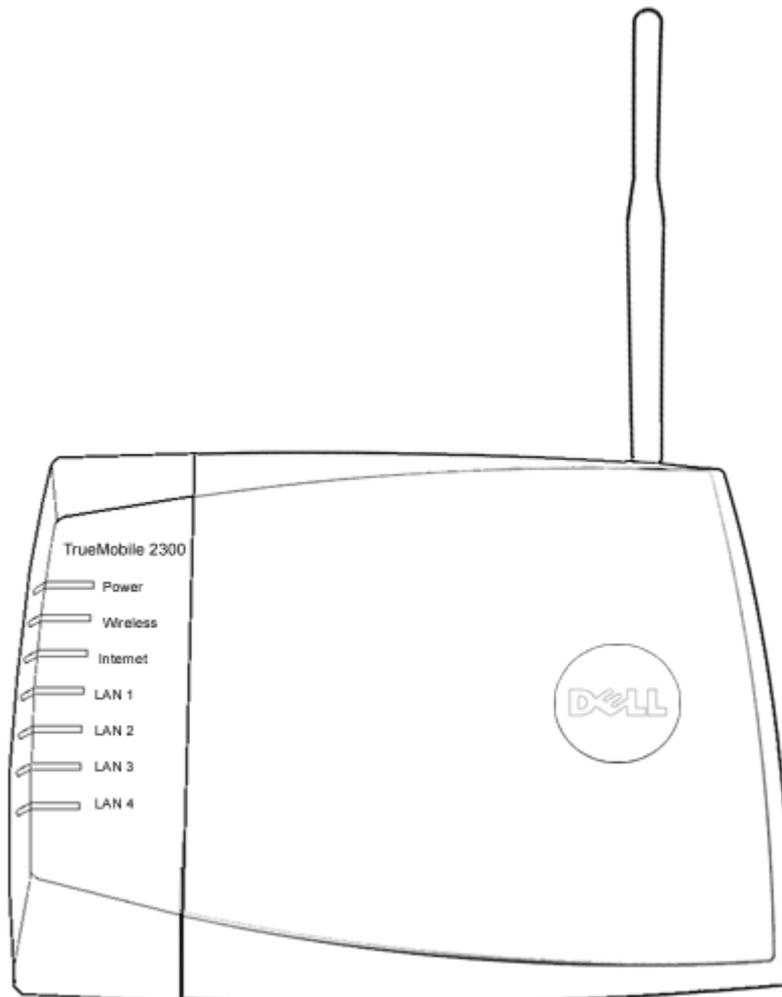
A Look at the Hardware: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

▶ [Front Panel](#)

▶ [Back Panel](#)

Front Panel

The Dell TrueMobile 2300 Wireless Broadband Router has seven *Light Emitting Diodes* (LEDs), or link lights, on its front side. The following table defines the behavior for each LED:



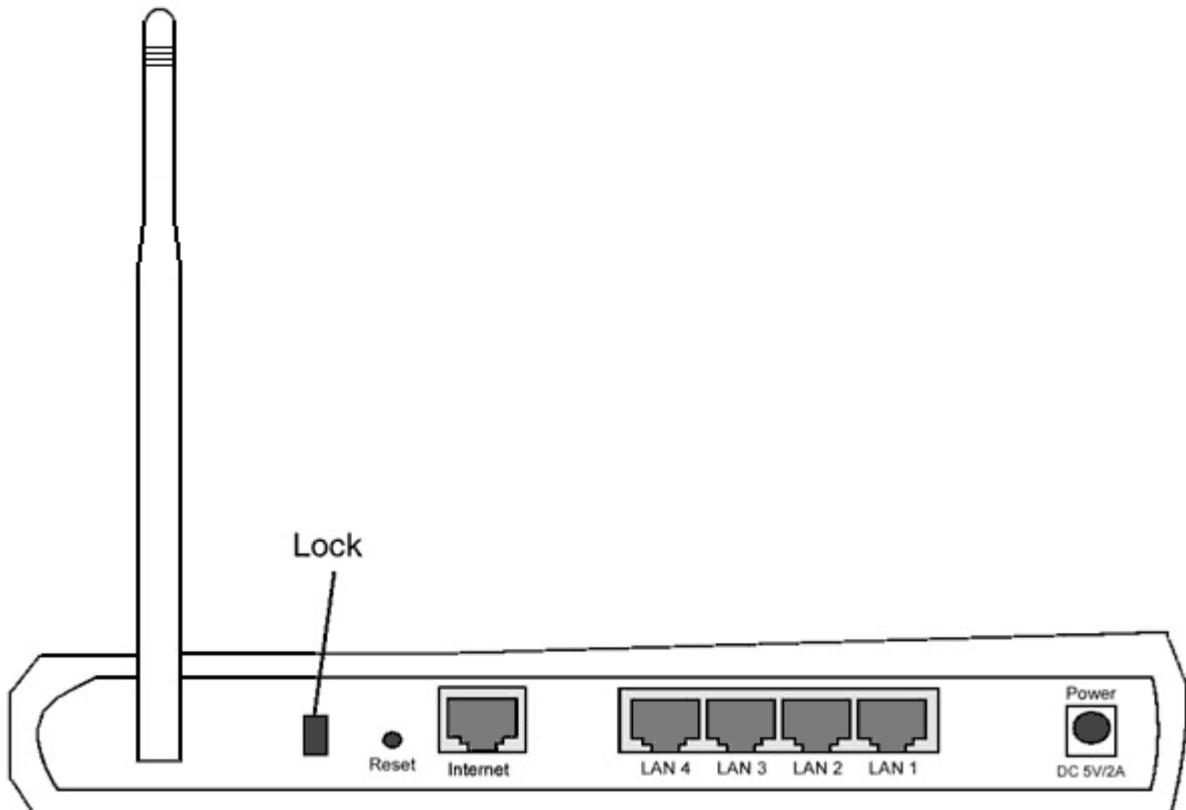
LED	Represents	Activity
Power	Power	The Power LED will light up when the device is powered on. It will blink when the device is reset.
Wireless	Wireless LAN	Steady on when there is at least one wireless link connecting to the unit.
Internet	DSL or	Steady green light indicates the connection is active, blinks with data activity.

	cable modem	Steady amber light indicates data collision.
LAN 1 LAN 2 LAN 3 LAN 4	Local Area Network	Steady green light indicates the connection is active and transfer rate is at 100Mbps. Steady greenish amber light indicates the connection is active and transfer rate is at 10Mbps.

Table 1. Dell TrueMobile 2300 Wireless Broadband Router LEDs

[Back to Top](#)

Back Panel



Connector	Description
Lock	Accept locking devices for protecting the device from theft.
Reset	Use an object, such as a stretched paper clip, to press the button for at least 3 seconds. Power LED will be off for a short time and then light up again. You can release the button now to to reset the device to its factory-default settings.
Internet	Accept an RJ-45 connector for network cabling.
LAN 1 LAN 2 LAN 3 LAN 4	Accept an RJ-45 connectors for connecting up to 4 PCs to the gateway's 4-port switch.
Power	Connect the power adapter to this Power port, and then plug the other end of the power cable into a power outlet.

[Back to Top](#)

[Back to Contents Page](#)

[Back to Contents Page](#)

Setup Wizard: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

- ▶ [Introduction](#)
 - ▶ [Launch the Setup Wizard](#)
 - ▶ [Setup Wizard Screens](#)
-

Introduction

Setup Wizard is an easy-to-use program included on your TrueMobile 2300 CD. It provides simplified configuration procedures for establishing Internet connectivity on the Wireless Broadband Router. The Setup Wizard first extracts the connection settings from your active ISP connection on your PC with Cable/DSL modem. It then displays a series of graphical illustrations on how to connect the router to the network. Finally it applies the extracted settings on your router and validate its installation. If the installation cannot be completed successfully, the Setup Wizard will display troubleshooting instructions to guide you through the installation process.

In addition, the Setup Wizard also provides links to the User's Guide on the TrueMobile 2300 CD and also the Dell support website.

[Back to Top](#)

Launch the Setup Wizard

To run the setup wizard, complete the following steps.

1. Insert the *TrueMobile 2300 Wireless Broadband Router Setup Wizard and User Guide CD* that came with the package into the CD-ROM drive on your computer. Your CD should automatically launch the **Setup Wizard** program. If it does not, complete the following steps to start the **Wizard**.
 - a. On your computer, go to **Start > Run**.
 - b. Type `x:\setup.exe` (where "x" is the drive letter of your CD-ROM drive)

Once the Setup Wizard has been launched, you will be guided through a series of windows. These windows are illustrated below along with an explanation on their functionalities.

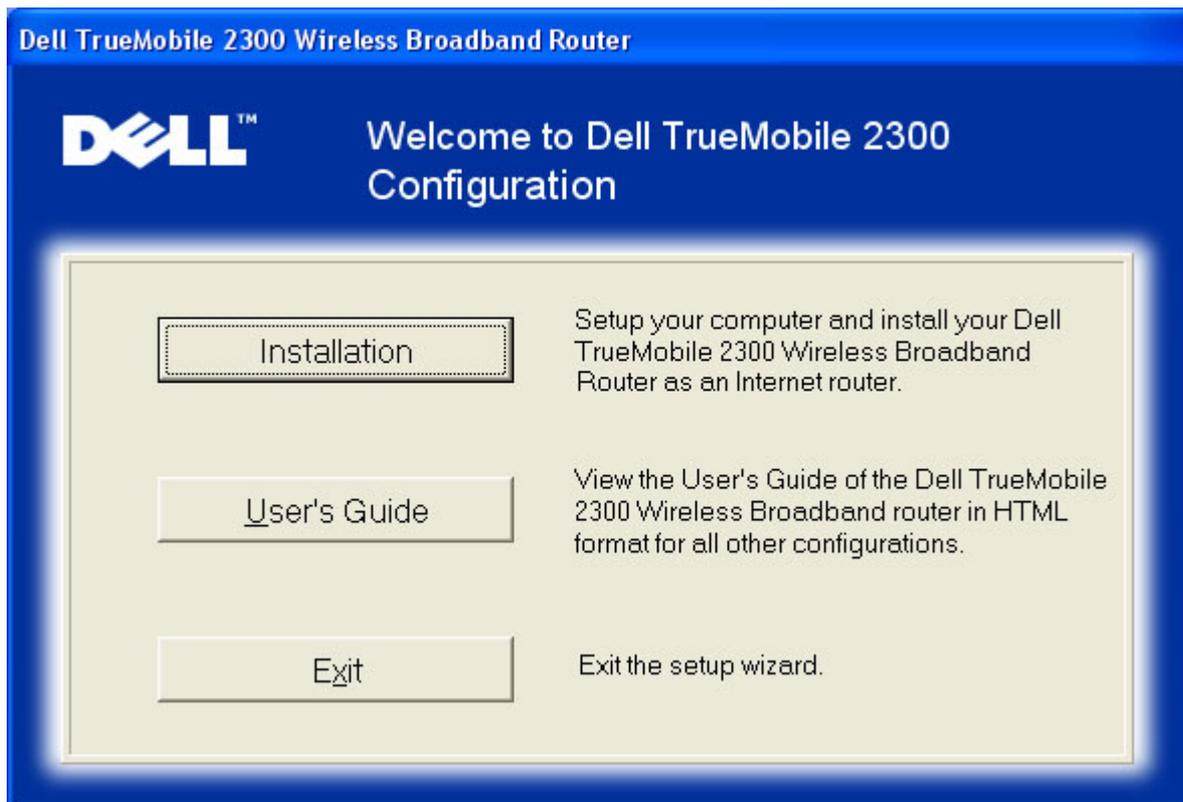
[Back to Top](#)

Setup Wizard Screens

Welcome Menu

This menu offers several options to select from.

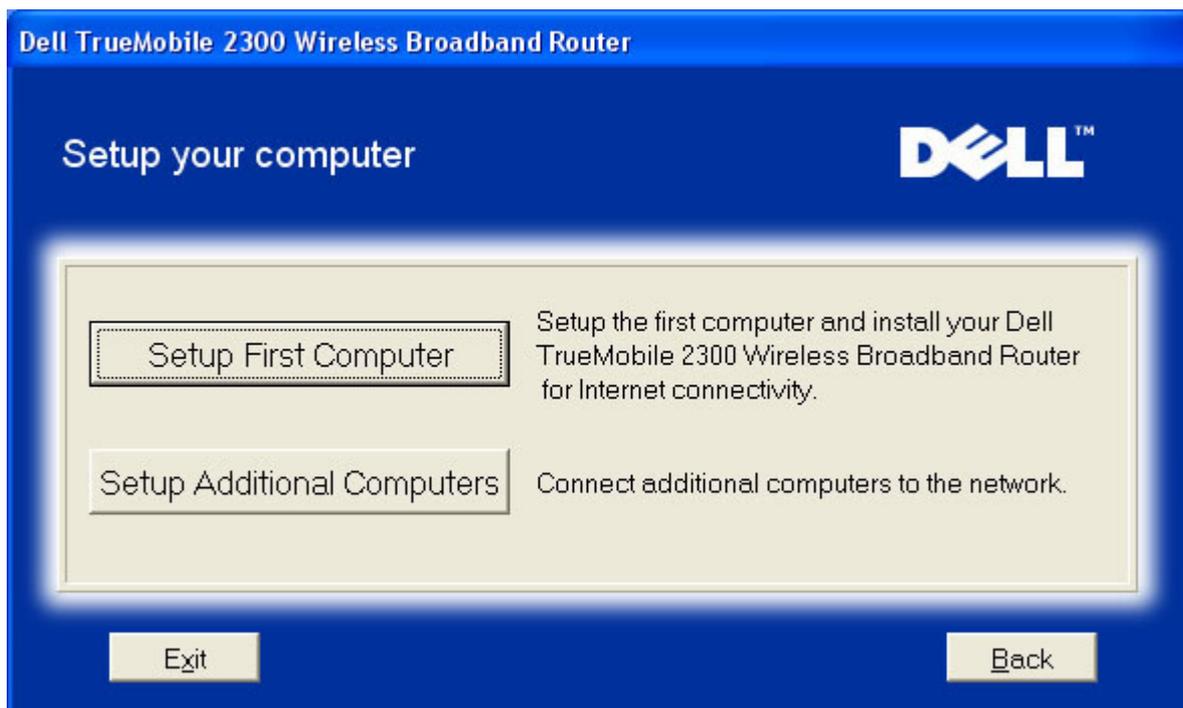
- **Installation** -- to begin installing your router and configure computers for Internet connectivity.
- **User's Guide** -- to allow you view the User's Guide (this document).
- **Exit** -- to end the Setup Wizard.



Installation > Setup your computer

After you select **Installation** from the main menu, the figure below will display.

- Click **Setup First Computer** if you want to install the router on a computer that is used to connect to Internet with Cable or DSL modem.
- Click **Setup Additional Computers** to connect additional computers to the network after you have successfully install the router using the **Setup First Computer** option.



Installation > Setup your computer > Setup First Computer

After you select **Setup First Computer** from the **Setup your computer**, the first following figure will display.

Installation Overview

Display the general steps required for the configuration process.



1. Verify Internet connection on your computer with DSL/Cable modem

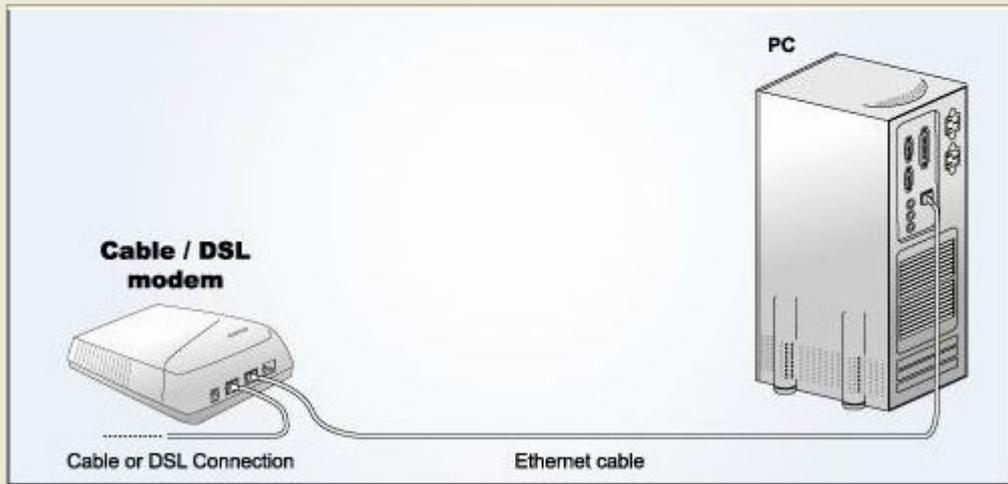
Remind you to establish an active Internet connection before taking the next step.

1. Verify Internet connection on your computer with DSL/Cable modem



If you are not connected to the Internet through Cable or DSL modem, you must do so now. Click **Next** to continue once Internet connectivity has been established.

Note: If you don't have Internet access or do not know how to connect to Internet from this computer, call your local Internet (Cable or DSL) service provider for help before returning to this point.



Exit

Back

Next

If you are using a PPPoE connection, your computer will need to reboot. Click **Next** and then click **OK** to reboot.

Congratulations



Setup wizard has confirmed the Internet connection.

Note: Your computer needs to reboot. After the reboot, the Setup Wizard will guide you through the rest of the setup process. Do **NOT** dial up the DSL connection after rebooting.

Click **Next** to reboot.

Exit

Next

The first Setup Wizard window after reboot.



Welcome to Dell TrueMobile 2300 Configuration



Reboot is successful!

Click **Next** to continue.

NOTE: If there is a DSL session dialup box pops at this point, click **Cancel** or another appropriate key to dismiss the dialup box.

Next

2. Connect Dell TrueMobile 2300 Wireless Broadband Router to your network

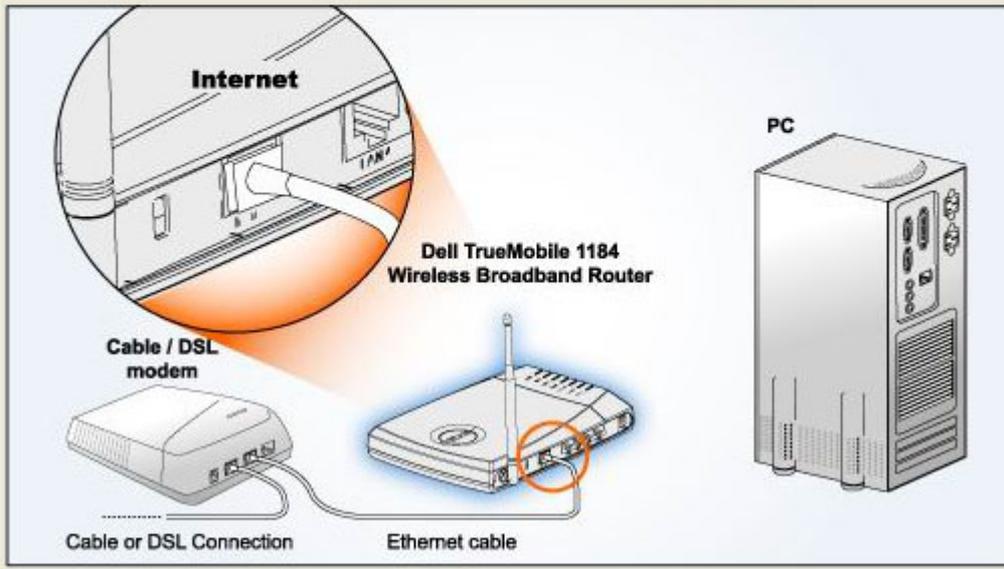
Step 1: Illustrate how one connects the Cable or DSL modem to the router..

2. Connect Dell TrueMobile 2300 Wireless Broadband Router to your network



Step 1

Unplug the Ethernet cable from the computer and plug into the Internet port of the Dell TrueMobile 2300 Wireless Broadband Router. Click **Next** to continue.



Exit

Back

Next

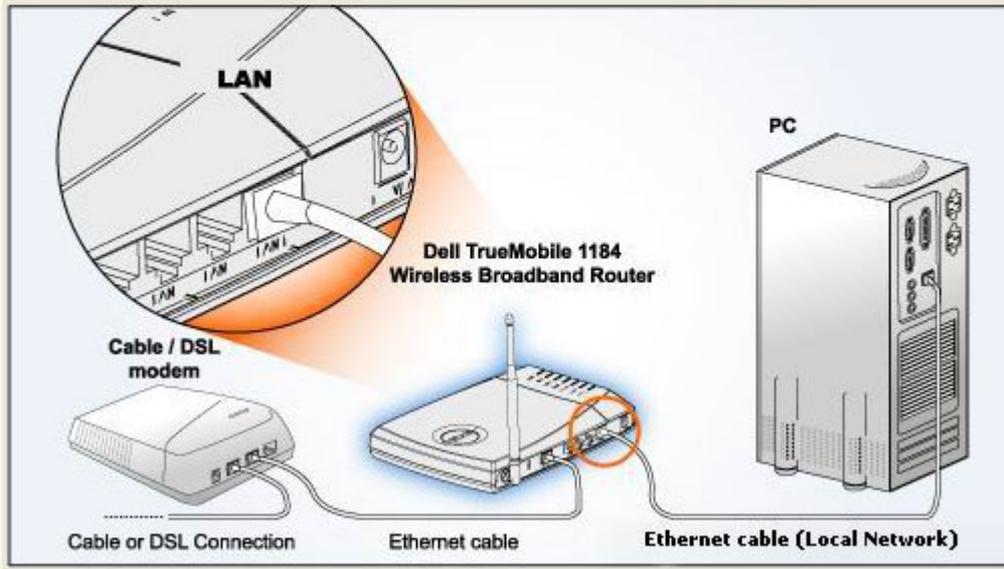
Step 2: Illustrate how one connects the router to the PC.

2. Connect Dell TrueMobile 2300 Wireless Broadband Router to your network



Step 2

Plug the Ethernet cable that came with the Dell TrueMobile 2300 Wireless Broadband Router to any one of the four LAN ports of the router. Plug other end of the cable to the LAN port of the computer. Click **Next** to continue.



Exit

Back

Next

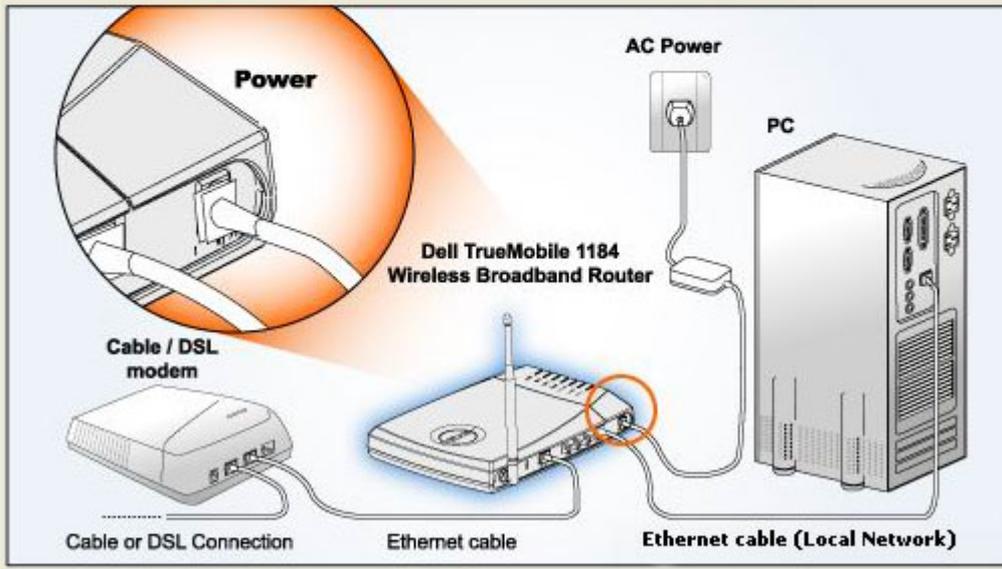
Step 3: Illustrate how one connects the power supply to the router.

2. Connect Dell TrueMobile 2300 Wireless Broadband Router to your network



Step 3

Plug the Power Adapter into the Wall. Plug the other end into the Dell TrueMobile 2300 Wireless Broadband Router.
Click **Next** to continue.



Exit

Back

Next

3. Configure the Dell TrueMobile 2300 Wireless Broadband Router

If you are using a PPPoE connection, type your PPPoE username and password in the box.

3. Configure the Dell TrueMobile 2300 Wireless Broadband Router



The Setup Wizard has detected a DSL connection and will apply its settings to the Dell TrueMobile 2300 Wireless Broadband Router.

Note: If your ISP connection requires additional information, change the appropriate entries below and click **Next** to proceed.

DSL Dialup information

User name:	<input type="text"/>
Password:	<input type="password"/>
Retype Password:	<input type="password"/>

Exit

Back

Next

Setup Wizard will apply the Internet connection settings to your router after clicking **Next**.

3. Configure the Dell TrueMobile 2300 Wireless Broadband Router



The Setup Wizard is going to configure the Dell TrueMobile 2300 Wireless Broadband router to access the Internet. Click **Next** to continue.

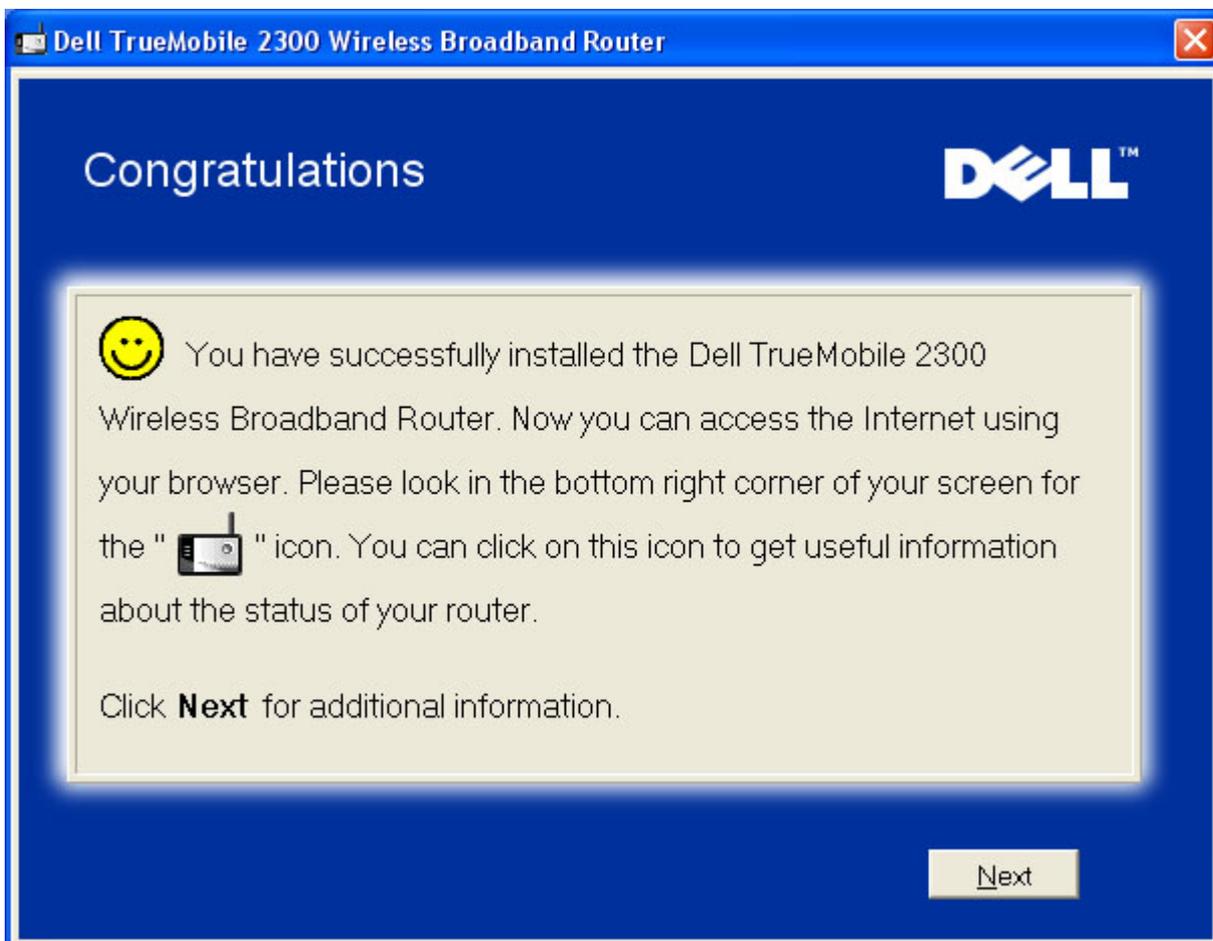
Exit

Back

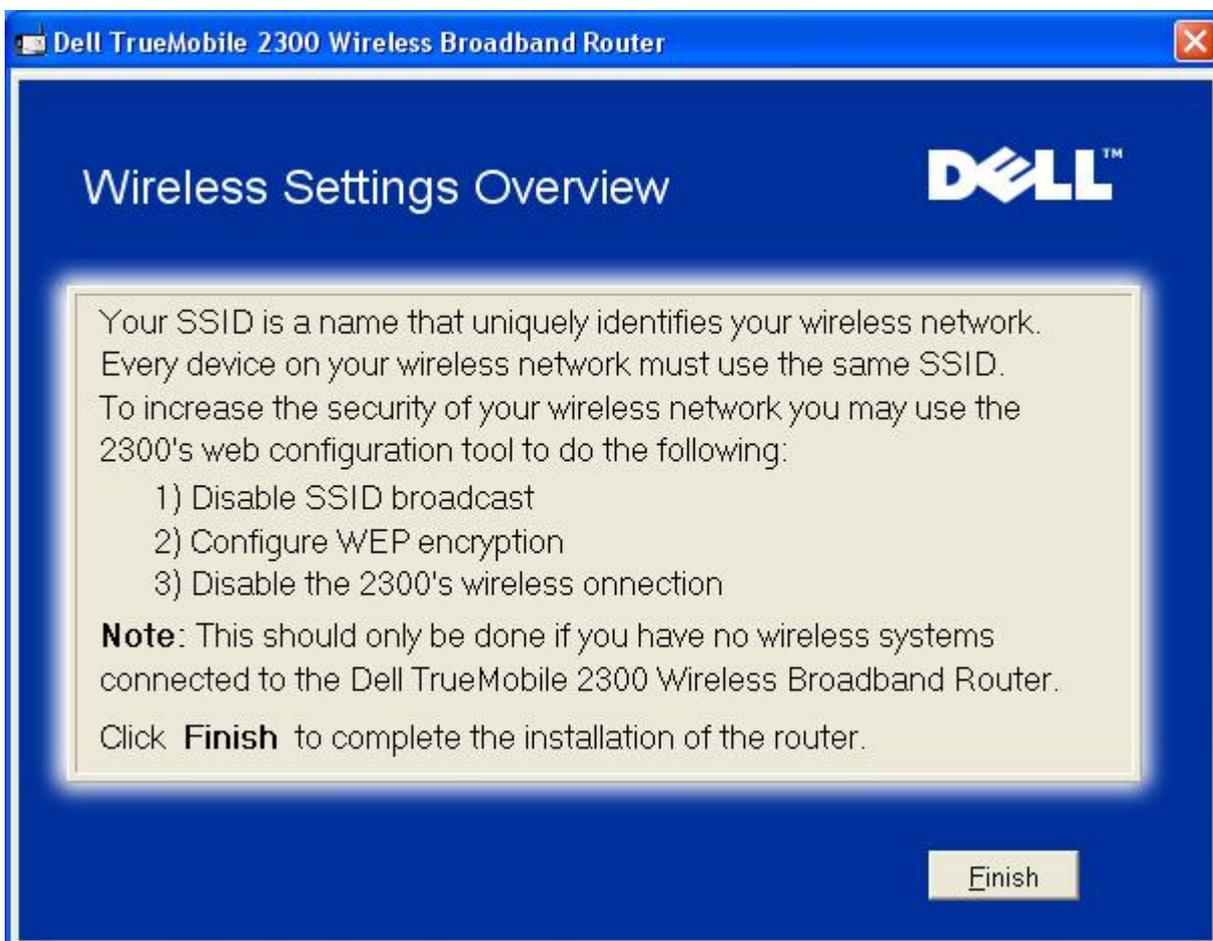
Next

Congratulations

You have successfully installed the router and configure the first PC for Internet access.



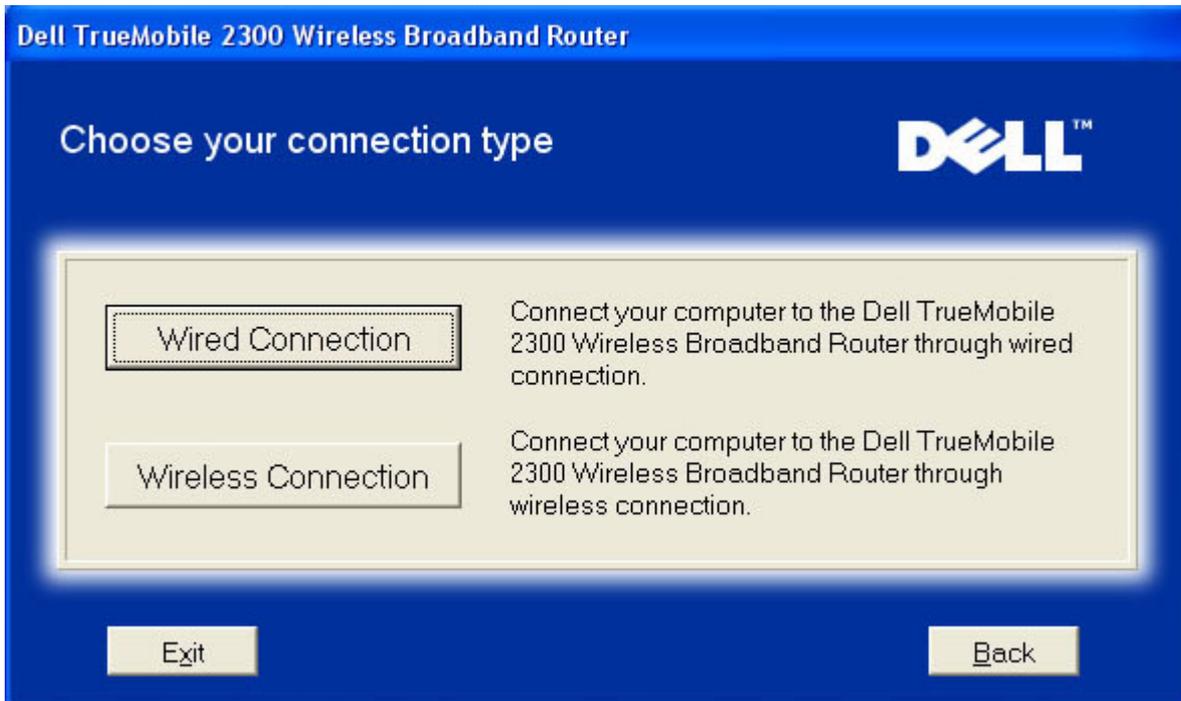
This window explains the information on wireless settings and how to enhance the security of your router.



Installation > Setup your computer > Setup Additional Computers

After you select **Setup Additional Computers** from the **Setup your computer**, the first following figure will display.

Select **Wired Connection** or **Wireless Connection** between your computer and the router.



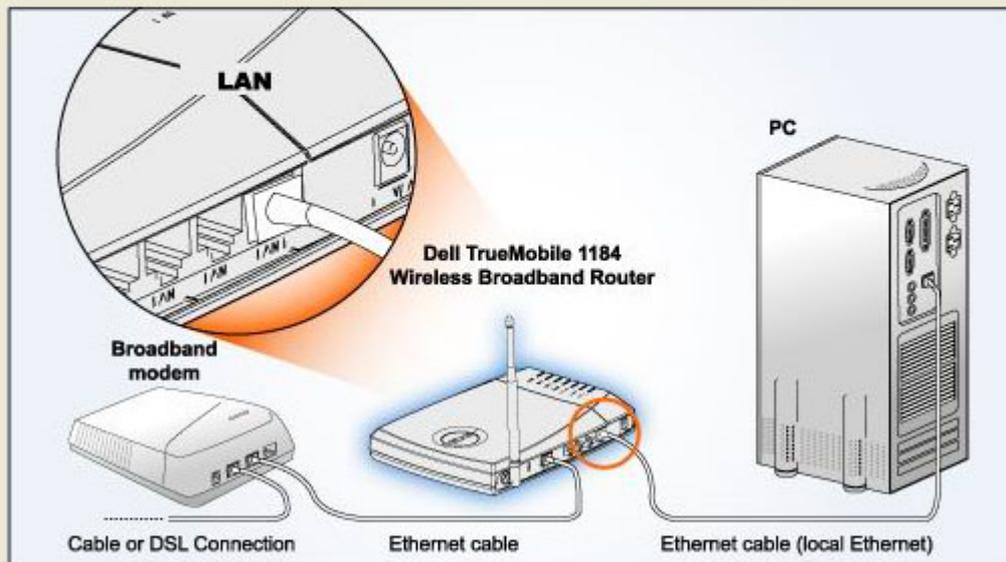
Add Other Computer to Your Network: Wired Connection

Display instruction to connect the computers to the network via Ethernet cable.

Add Other Computer to Your Network



Insert one end of a new Ethernet cable to any one of the four LAN ports on the router, and insert the other end of this cable to the Ethernet card of this PC.



Click **Next** to continue.

Exit

Back

Next

Add Other Computer to Your Network: Wired Connection

Display instruction to connect the computer to the network via wireless channel.

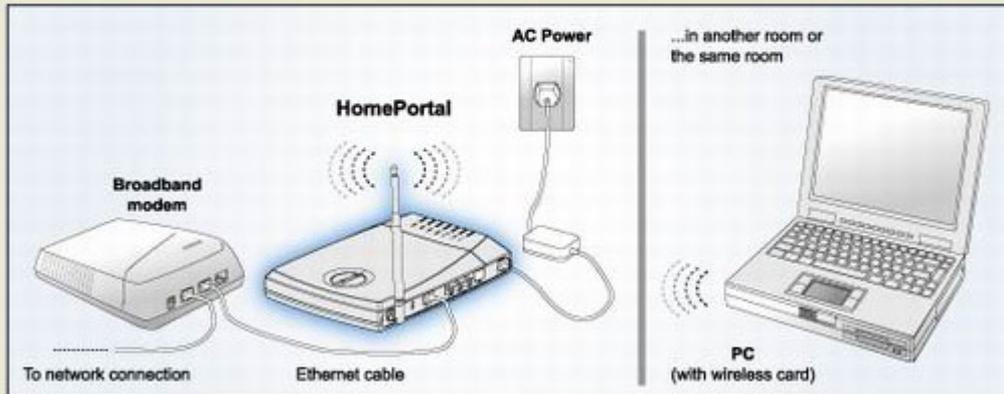
Add Other Computer to Your Network



To establish wireless connection with your router, you have to configure the wireless client card on your computer with the same network name (SSID) and wireless security information of your router.

For instructions on configuring your wireless client, click

[How To Configure](#)



Click **Next** to continue.

[Exit](#)

[Back](#)

[Next](#)

Congratulations

You have successfully connected the PC to the network.



Congratulations



You have successfully installed the Dell TrueMobile 2300 Wireless Broadband Router. Now you can access the Internet using your browser. Please look in the bottom right corner of your screen for the "" icon. You can click on this icon to get useful information about the status of your router.

Click **Next** for additional information.

Next

[Back to Top](#)

[Back to Contents Page](#)

[Back to Contents Page](#)

Control Utility: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

The *Control Utility* is a Windows-based software that allows you to configure your router and monitor the status of the connection from your computer to the Wireless Broadband Router and to Internet.

- ▶ [Install the Control Utility](#)
- ▶ [Uninstall the Control Utility](#)
- ▶ [Start the Control Utility](#)
- ▶ [Exit the Control Utility](#)
- ▶ [How to Configure the Router by the Control Utility?](#)

Install the Control Utility

You can install the control utility on your PC when you step through the setup process using the Setup Wizard.

1. Insert the *TrueMobile 2300 Wireless Broadband Router Setup Wizard and User Guide CD* into the CD drive. Your CD should automatically launch the **Setup Wizard** program. **If it does not, complete the following steps to start the Wizard.**
 - a. Go to **Start > Run**.
 - b. Type `x:\setup.exe` (where "x" is the driver letter of your CD-ROM drive.)
2. From the main menu, click **Installation**, and then click either **Setup First Computer** or **Setup Additional Computers**.
3. Follow the instruction on the screen until you have successfully completed the installation process.

[Back to Top](#)

Uninstall the Control Utility

1. If the router icon is displayed in the system tray, right click the router icon and select **Exit**.
2. Click **Start > Control Panel > Add/Remove Program**.
3. Select the **Control Utility** from the program list and remove it as instructed.

[Back to Top](#)

Start the Control Utility

The control utility program is by default set up to run automatically upon each system startup. If the utility does not start automatically, click **Start -> Programs -> Dell TrueMobile 2300 Wireless Broadband Router -> Dell Control Utility** to invoke the utility program.

Once running, a router icon is created in the system tray. If you have a good connection to the Internet, the system tray icon looks like this . You can Double-click the router icon to open the utility panel.

 *Note: If the icon is in yellow , it indicates that the Internet connection is not active. If the icon is in red , it indicates that the connection to the router has failed.*

[Back to Top](#)

Exit the Control Utility

When you start the control utility program, it will place a small icon like this  to the system tray. If you want to exit the program, right-click the utility icon docked in the system tray to open a menu. Select **Exit** from the menu to quit the program.

 *Note: If you click close button on the window title bar, it only hides Control Utility panel, not really exiting the program.*

[Back to Top](#)

[Back to Contents Page](#)



[Back to Contents Page](#)

Web-based Configuration Tool: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

- ▶ [Overview](#)
 - ▶ [Basic Settings](#)
 - ▶ [Device Status](#)
 - ▶ [System Tools](#)
 - ▶ [Advanced Settings](#)
 - ▶ [Log Off](#)
-

Overview

The web-based configuration tool enables you to set up every possible network configuration for your Dell TrueMobile 2300 Wireless Broadband Router. Follow the instructions below to gain access to the web tool.

 **NOTE:** Microsoft Internet Explorer (4.0 or higher) or Netscape (4.0 or higher) must be used for the web-based configuration tool.

1. On a Windows-based computer, Click **Start** and **Run**, and then type the following to bring up the configuration screen of the router:

<http://my.router> (or the default address <http://192.168.2.1>.)

2. If this is the first time configuring your Wireless Broadband Router, or if the username and password have not been changed, type "admin" both in the **User Name** and **Password** boxes, and then click **OK**.
3. After you have successfully opened the configuration screen as illustrated below, select a topic such **Basic Settings** and click the corresponding tab on the top navigation bar to manage your router.

 **NOTE:** Dell technical support representatives do not support the configuration options in the **Advanced Settings** portion of the configuration program. These options are provided for your convenience only; however, the advanced settings are fully documented and explained in this guide.



Dell TrueMobile 2300 Wireless Broadband Router

Basic Settings

Use the basic settings to change the mode of your router, Wireless network name and channel, wireless security, and internet connection settings.

Advanced Settings

Use the advanced settings to change the IP address of the router, DHCP server options, Time zone, Advanced wireless settings, Parental control options, Access control options, and Administration options.

Device Status

Use the device status to check the status for each connection to your router.

System Tools

Use System tools to check the intruder log, display the routing table, perform system diagnostics, load default settings, upgrade firmware, and reset the router.

Help

Use the Help link to get on-screen help with the features of the router.

Log Off

Exit the Dell TrueMobile 2300 Wireless Broadband router configuration.

[Back to Top](#)

Log Off

To prevent confusion when multiple people try to configure the Wireless Broadband Router simultaneously, the web-based configuration tool allows one user at most to access the configuration screen of the router at any time. However, there is a five minute default timeout period after the current administrator discontinues his usage of the web-based configuration tool, before the others are allowed to access the tool again.

To minimize the impact of the five minute timeout, click the **Log Off** tab to relinquish control of the web based configuration tool. This will allow other legitimate users to access the tool.

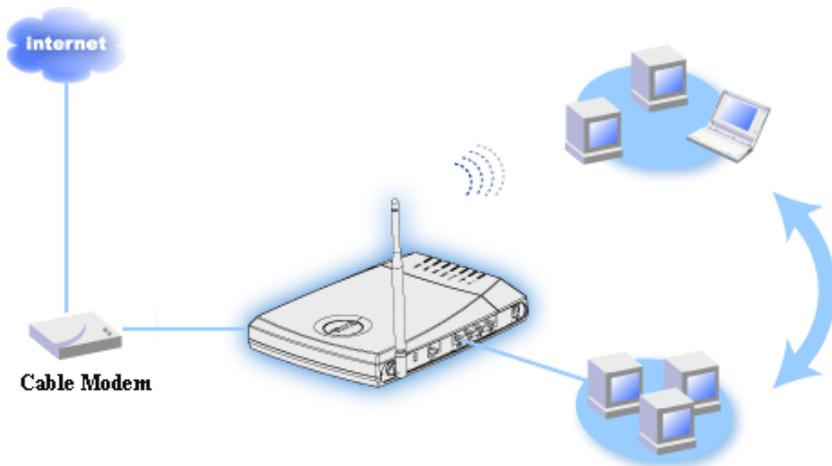
[Back to Top](#)

[Back to Contents Page](#)



[Back to Contents Page](#)

Cable Modem Connection



NOTE: It's recommended that you install the router for Internet connectivity with the Setup Wizard provided on the TrueMobile 2300 CD. Perform the below installation steps only when you are unable to install the router with the Setup Wizard for Internet connectivity.

[Cable Modem - Standard Setup](#)

Use this setup when your Cable service provider does not require you to enter any information for your Internet Broadband connection.

[Cable Modem with name settings](#)

Use this setup when your Cable service provider requires you to enter **Host Name** and **Domain Name** for your Internet Broadband connection.

[Cable Modem with other settings](#)

Use this setup when your Cable service provider requires you to enter other information.

Cable Modem - Standard Setup

1. Connect the Ethernet port on the Cable modem to the **Internet** port on the router via an Ethernet cable.
2. Connect any one of the four **LAN** port on the router to the Ethernet port on your computer via another Ethernet cable. (Connect to the router from your PC with a wireless network adapter.)
3. Power on the router.
4. The setup should work on the router with factory default settings.

NOTE: If the installation is not successful because you have modified any setting or due to other factors, you can restore the default settings by pushing the **Reset** button at the side of the router for at least 2 seconds. The router will reboot with the default settings and the setup should complete at this point.

Information: The Wireless Broadband Router is configured by default with the following settings:

- o The Cable/xDSL interface is configured with the DHCP client enabled.
- o The Local Area Network and Wireless interfaces are configured with the DHCP server enabled.
- o No user name, password, computer name, or workgroup name are enabled.

This configuration will work properly with a cable modem provider that does not require authentication.

[Back to Top](#)

Cable Modem with name settings

1. Connect the Ethernet port on the Cable modem to the **Internet** port on the router via an Ethernet cable.
2. Connect any one of the four **LAN** port on the router to the Ethernet port on your computer via another Ethernet cable. (Connect to the router from your PC with a wireless network adapter.)
3. Power on the router
4. Open your web browser and go to <http://my.router>, (or the default address <http://192.168.2.1>.)
5. Click the **Basic Settings** tab on the top navigation bar.
6. Click the **CABLE/xDSL ISP Settings** tab on the left navigation bar.
7. Check the **Your ISP requires you to input Host Computer Name or Domain Name** box.
8. Enter the Host Name and Computer Name assigned to you into the appropriate boxes.
9. Click the **Next** button.
10. Click the **Save & Restart** button to store the new settings.
11. Note the status bar at the bottom of the screen.
12. While the Wireless Broadband Router resets, the **Power** light on the front of the unit blinks.
13. When your web browser returns to the main page of the Wireless Broadband Route, the device has successfully restarted with the new settings.

[Back to Top](#)

Cable Modem with other settings

If your Cable service provider requires you to enter other settings for your Internet Broadband connection, reference the steps in [Cable Modem with name settings](#) to go to the **CABLE/xDSL ISP Settings** page and check only the appropriate field box and enter the required values by your ISP.

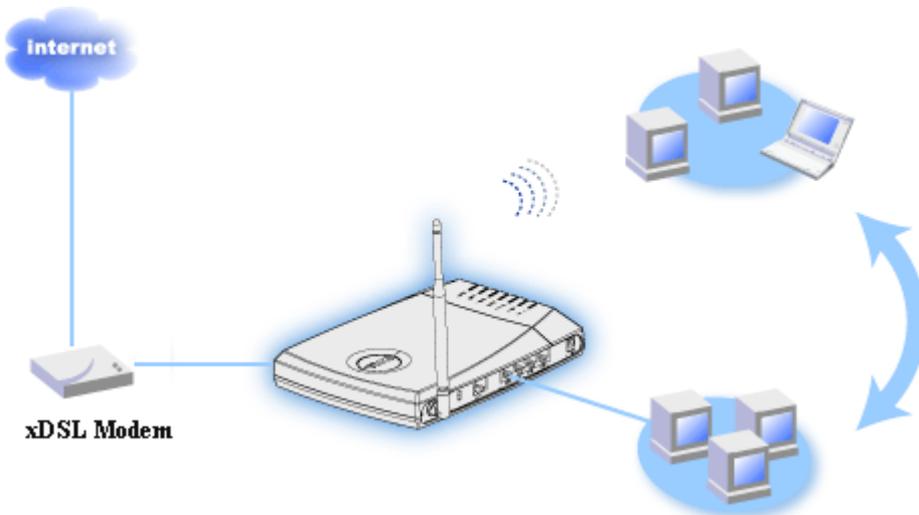
[Back to Top](#)

[Back to Contents Page](#)



[Back to Contents Page](#)

xDSL Modem Connection



NOTE: It's recommended that you install the router for Internet connectivity with the Setup Wizard provided on the TrueMobile 2300 CD. Perform the below installation steps only when you are unable to install the router with the Setup Wizard for Internet connectivity.

[xDSL without PPPoE - Standard Setup](#)

Use this setup when your DSL service provider does not ask you to enter any information for your Internet Broadband connection.

[xDSL with PPPoE](#)

Use this setup if your ISP has given you a username and password for your Internet Broadband connection.

xDSL without PPPoE - Standard Setup

1. Connect the Ethernet port on the DSL modem to the **Internet** port on the router via an Ethernet cable.
2. Connect any one of the four **LAN** port on the router to the Ethernet port on your computer via another Ethernet cable. (Connect to the router from your PC with a wireless network adapter.)
3. Power on the router.
4. The setup should work on the router with factory default settings.

NOTE: If the installation is not successful because you have modified any setting or due to other factors, you can restore the default settings by push the **Reset** button at the side of the router for at least 2 seconds. The router

will reboot with the default settings and the setup should complete at this point.



Information: The Wireless Broadband Router is configured by default with the following settings:

- o The Cable/xDSL interface is configured with the DHCP client enabled.
- o The Local Area Network and Wireless interfaces are configured with the DHCP server enabled.
- o No user name, password, computer name, or workgroup name are enabled.
- o This configuration will work properly with a cable modem provider that does not require authentication.

[Back to Top](#)

xDSL with PPPoE

1. Connect the Ethernet port on the DSL modem to the **Internet** port on the router via an Ethernet cable.
2. Connect any one of the four **LAN** port on the router to the Ethernet port on your computer via another Ethernet cable. (Connect to the router from your PC with a wireless network adapter.)
3. Power on the router.
4. Open your web browser and go to <http://my.router>, (or the default address <http://192.168.2.1>.)
5. Click the **Basic Settings** tab on the top navigation bar.
6. Click the **CABLE/xDSL ISP Settings** tab on the left navigation bar.
7. Check the **Your ISP requires you to input username/password (PPPoE Settings)** box.
8. Enter the user name provided to you by your ISP in the **User Name** box.
9. Enter your password in the **Password** and **Retype Password** boxes.
10. If your ISP requires you to provide a **MAC** address, check the **Your ISP requires you to input WAN Ethernet Mac** box.
11. Enter the address in the appropriate box.
12. Click the **Next** button.
13. Click the **Save & Restart** button.
14. Note the status bar at the bottom of the screen.
15. While the Wireless Broadband Router resets, the **Power** light on the front of the unit blinks.
16. When your web browser returns to the main page of the Wireless Broadband, the device has successfully restarted with the new settings.

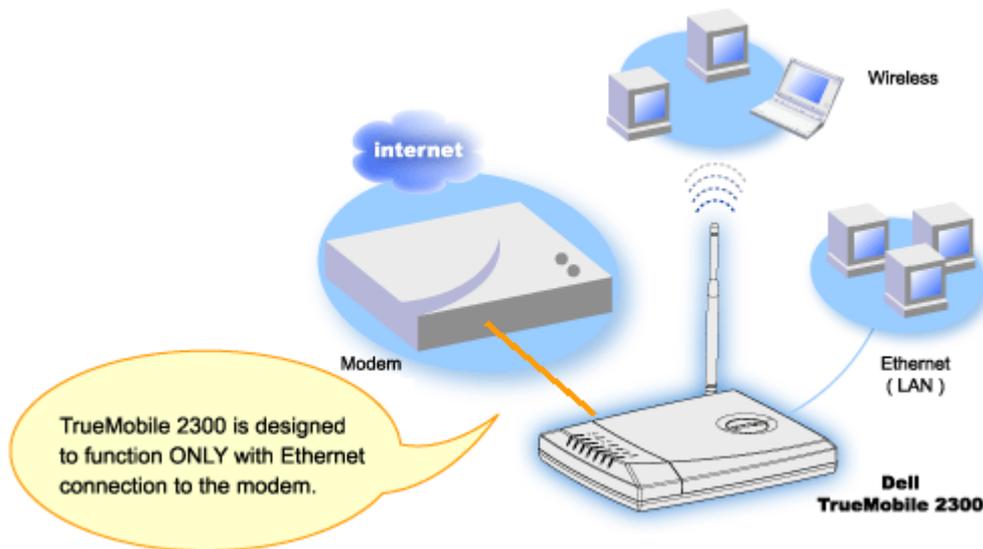
[Back to Top](#)

[Back to Contents Page](#)

A solid blue horizontal bar spanning the width of the page.

[Back to Contents Page](#)

Installing and Configuring the Router for non-Ethernet Cable Connections



A cable modem may support only Ethernet connection, only USB connection, or both types of connections.

Cable modem with only USB Connection

Your TrueMobile 2300 router is designed to function with only Ethernet connection on its Broadband interface. If your cable modem supports only USB connection, you need to replace it with a model with at least one Ethernet connection.

Cable modem with both USB and Ethernet Connections

If your cable modem supports both USB and Ethernet connections, but is connected to your computer via USB cable, follow the instructions below to switch to the Ethernet connection.

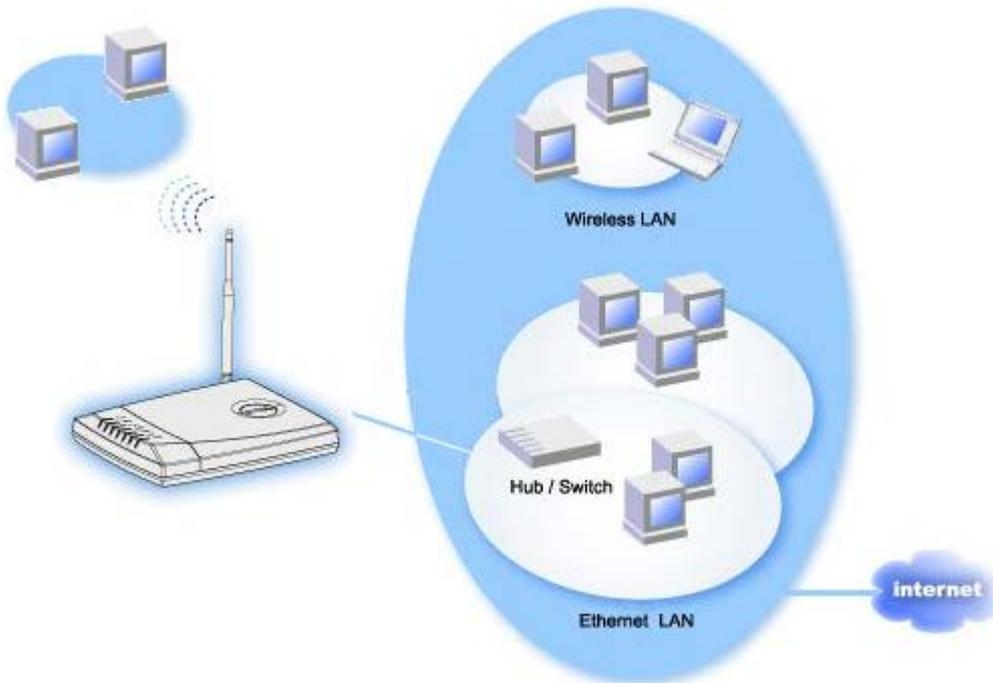
1. Make sure that your cable modem is powered off.
2. Disconnect the USB cable from your computer and the cable modem.
3. Connect one end of a standard Ethernet cable into the Ethernet port of the Ethernet card on your computer
4. Insert the other end of the cable into the Ethernet port on your cable modem.
5. Turn on cable modem. The modem may need several minutes to initialize.
6. Insert the TrueMobile 2300 CD into the CDROM drive on the computer to start the Setup Wizard and select "Installation" and "Setup First Computer" to begin the installation of the router.

[Back to Top](#)

[Back to Contents Page](#)

[Back to Contents Page](#)

Configuring Your Router for the Existing Network



If you have an existing network, chances are you have already configured network services on the network. In this case, you would use the router as a pure Access Point to extend the range of your network by allowing more attachment of wireless and wired computers. You **MUST** also turn off the DHCP server on the router if there is a DHCP server running to avoid IP address conflict.

To configure the router as an Access Point with the DHCP server disabled:

1. Open your web browser and go to <http://my.router>, (or the default address <http://192.168.2.1>.)
2. Click the **Basic Settings** tab on the top navigation bar.
3. Select **Access Point Mode**.
4. Click the **Next** button.
5. Click **OK** to dismiss the DHCP disabled message box (The DHCP server will be disabled in Access Point Mode by default).
6. Click the **Advanced Settings** tab on the top navigation bar.
7. Click the **Advanced IP Settings** tab on the left navigation bar.
8. Assign an IP address to the Wireless Broadband Router.

 **NOTE:** The IP address should be reserved by the DHCP server. The Wireless Broadband Router cannot act as a DHCP client, therefore, it needs a static IP address for its LAN interface.

9. Click the **Submit** button.
10. Click the **Save & Restart** button.

11. Note the status bar at the bottom of the screen.
12. While the Wireless Broadband Router resets, the **Power** light on the front of the unit blinks.
13. When your web browser returns to the main page of the Wireless Broadband Router, the device has successfully restarted with the new settings.

 **NOTE:** The main page may not return if you have changed IP address of the router in Step 8. To view the main page, type the new IP address of the router in the web browser to access it.

14. Plug an Ethernet cable from the existing local network into any **LAN** port on the Wireless Broadband Router.
-

[Back to Contents Page](#)



[Back to Contents Page](#)

Configuring Your Dell™ TrueMobile™ 2300 Router for Gaming

This section will assist in configuring the Dell TrueMobile 2300 Router for gaming. In some cases, the firewall feature of the router will cause a game not to function as intended. This document will not provide details for each game, but will discuss how to open TCP/IP ports for one or more system.



WARNING: Operating any client systems on the Internet without firewall protection may allow un-authorized access to a system. This may lead to data loss.

Follow below steps to set up the router for gaming:

1. Select the system or systems to be used as game systems.
2. Locate the MAC address.

For Windows 2000 and XP

- a. Click **Start -> Run**.
 - b. Type **cmd**, and click **OK**.
 - c. On the command prompt, type **ipconfig /all**
 - d. Write down the MAC (Physical) address of your computer to configure for gaming.
3. Open the web browser, and type <http://my.router> (or <http://192.168.2.1>)
 4. Click the **Advanced Settings** tab.
 5. Click the **DHCP Server Settings** tab on the left navigation bar.
 6. Click **Add** button in **IP Address Reservation**,
 - a. Enter the MAC address of the system you wish to use for gaming in **MAC Address** field.
 - b. Enter an **IP address** for the system (select a number between 101 and 254)
 7. Click **Submit**.
 8. Click the **Port Forwarding Settings** tab on the left navigation bar.
 - a. To set a single computer for gaming, check the **Enable DMZ Host** box.
 - b. Enter the IP address of the system at **DMZ IP Address** field.
 - c. Click **Submit**.



NOTE: Only a single computer can be set for DMZ service. To set multiple computers for gaming, please refer to the [Custom Port Forwarding Settings](#) under the **Port Forwarding Settings**.

9. Reboot the client system. The client system will use the newly assigned IP and will not have any TCP/IP ports blocked by the firewall feature of the router.

[Back to Contents Page](#)

[Back to Contents Page](#)

How to set Wireless Encryption in Your Router

Without wireless security options configured in your network, an eavesdropper within your wireless range may be able to access the network and the data that is being transmitted over it. TrueMobile 2300 provides WEP and WPA encryption for wireless security.

WPA is an upgrade to the WEP (Wired Equivalent Privacy) standard for securing your wireless network. If you would like to secure your wireless network using WPA, you will need the following:

- WPA enabled on your Dell TrueMobile 2300 Wireless Broadband Router
- WPA support for your wireless clients. If you are using a Dell TrueMobile wireless client, you can check for the availability of WPA enabled software update for your wireless client at <http://support.dell.com>.

1. Log into the Web configuration of your router at <http://my.router> (or the default address <http://192.168.2.1>)
2. Click on **Basic Settings**.
3. Click on **Wireless Security**.
4. Click on the **Enable Wireless Security** checkbox.
5. Select either **WEP** or **WPA** in the Network Authentication list.

To setup WEP

6. Select hexadecimal or ASCII characters as the **Key Format**. You can use either as a string of hexadecimal digits (character 0 ~ 9 and A ~F) or as ASCII characters (any key on the keyboard).
7. Select desired encryption level from the **Key Length** list. It could be either **40(64)-bit** or **104(128)-bit** key length.
8. Enter four different keys in the **Key1**, **Key2**, **Key3**, and **Key4** fields to store on your Router. For 40(64)-bit encryption, enter a 5-character (or 10 hexadecimal digits). For 104(128)-bit encryption, enter a 13-character (or 26 hexadecimal digits) WEP key.
9. Select only one key out of the four keys as the **Default Key** for encryption.
10. Click **NEXT**, then **Save and Restart** to apply the changes.
11. Setup the WEP on your wireless clients. Refer to the documentation that accompanied your wireless clients, or your wireless clients on-line help system for information on how to setup WEP.

To setup WPA

6. Enter your pre-shared key. This key must match the key that is used by each wireless client computer associated to your router.
7. Choose a key format. This can be **hexadecimal** digits (0-9, A-F) or **ASCII** characters (any key on the keyboard).
8. **WPA Group Rekey Interval** specifies how often the key "rotates" or changes.
9. WPA Encryption allows you to select 1 of 2 possible encryption methods (**TKIP** and **AES**) - choose one that your wireless clients supports.
10. Click **NEXT**, then **Save and Restart** to apply the changes.
11. Setup the WPA on your wireless clients. Refer to the documentation that accompanied your wireless clients, or your wireless clients on-line help system for information on how to setup WPA.



NOTE: The TrueMobile 2300 router offers 2 ways to set the wireless encryption in your router. One is Wireless Security feature in web configuration tool mentioned here. The other is through the Windows-based software program - [control utility](#). To learn more about this utility, click on the aforementioned link.

[Back to Contents Page](#)

How to turn off Broadcast SSID?

1. Open your web browser and go to <http://my.router>, (or the default address <http://192.168.2.1>.)
2. Click on the "**Advanced Settings**" tab on the top navigation bar.
3. Click on "**Advanced Wireless**" on the left navigation bar.
4. Clear the "**Enable SSID Broadcast function**" checkbox.
5. Click **Submit**.
6. Click **Save & Restart**.

[Back to Contents Page](#)



[Back to Contents Page](#)

Setting up as an Access Point

1. Open your web browser and go to <http://my.router>, (or the default address <http://192.168.2.1>.)
2. Click the **Basic Settings** tab on the top navigation bar.
3. Select **Access Point Mode**.
4. Click the **Next** button.
5. Click the **Save & Apply** tab on the left navigation bar.
6. Click **Save & Restart**.

[Back to Contents Page](#)



[Back to Contents Page](#)

Setting Up File & Printer Sharing

- ▶ [Introduction](#)
 - ▶ [Installing File and Printer Sharing](#)
 - ▶ [Sharing a printer](#)
 - ▶ [Sharing files](#)
 - ▶ [Security Note](#)
-

Introduction

Now that you have completed the setup of your network with the TrueMobile 2300 router, you can start sharing files and printers. This is helpful if, for example, your home has 3 computers and only one printer. You can configure your network so that all 3 computers can share the same printer.

To enable File and Printer Sharing you will need to do the following:

- Install **File and printer sharing for Microsoft Networks** on each computer on the network ([Installing File & Printer Sharing](#))
 - Enable sharing on the printer you wish to share ([Sharing a printer](#))
 - Enable sharing on the files you wish to share ([Sharing files](#))
-

Installing the File & Printer Sharing

Follow the instructions below to install the file and printer sharing service:

For Windows 2000 and XP

1. Right-click on **My Network Places** icon on the desktop and select **Properties** in menu.
 2. Right-click on **Local Area Connection** icon and select **Properties** in menu.
 3. If you can see the **File and Printer Sharing for Microsoft Networks** item, you can skip this section. The file and printer sharing service had already been installed.
 4. If the **File and Printer Sharing for Microsoft Networks** item is not present, click on **Install** button.
 5. Select **Service**, and then click on **Add** button.
 6. Select **File and printer sharing for Microsoft Networks** and click **OK**.
-

Sharing a Printer

To share a printer, perform the following steps on the computer that has the printer you wish to share:

1. Click **Start->Settings->Printers**.
2. Click the printer you want to share to highlight it.
3. On the **File** menu, click **Properties**.
4. Click the **Sharing** tab, and then click **Shared As**.
5. Follow the on screen instructions to complete.

The printer is now available for the other computers to use.

Perform the following steps on the other computers:

1. Click **Start->Settings->Printers**.
 2. Double click the **Add Printer** icon
 3. Click **Next** on the first screen
 4. On the next screen select **Network printer** then click **Next**
 5. Click the **Browse** button and select the shared printer.
 6. Follow the on screen instructions to complete.
-

Sharing files

You can share files on your computer so that users on other computers on your network can view them:

1. In Microsoft Windows Explorer right click on the file, folder, or drive letter you wish to share and select **Sharing** then **Share As**.
 2. Type a name for the share and follow the on screen instructions to complete.
-

Security Note

To prevent other users on the Internet from accessing your files and printers you should install a firewall program.

[Back to Contents Page](#)



[Back to Contents Page](#)

How To Setup WinXP Clients Connecting To The Router



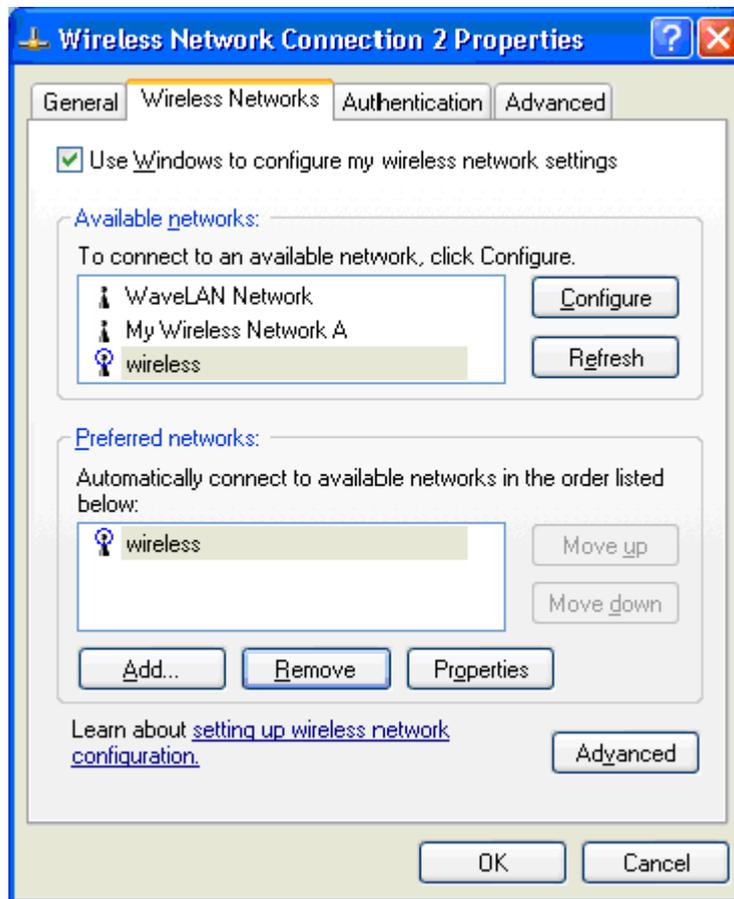
Configuring the Wireless Connection: Microsoft Windows XP Zero Configuration

Microsoft's Windows XP Zero Configuration provides the driver and configuration software for the configuration of the adapter without using software provided by another manufacturer.

Configuring Automatic Network Connections

To configure one or more wireless networks for auto connection, follow these steps:

1. Click **Start -> Control Panel**.
2. Double-click **Network Connections**.
3. Right-click the **Wireless Network Connection** icon and click **Properties**.
4. Click the **Wireless Networks** tab as shown below. The network name you set up should be present.



 Note: For more information click [Learn about setting up wireless network configuration](#) provided by Microsoft.

Enabling Encryption

Because wireless networks transmit data using radio frequency transmission, other computers with wireless network adapters that are within range of your wireless broadband router can connect to your network. You can deter unauthorized access to your wireless network by enabling encryption. When you enable encryption, you must specify a network encryption key, or simply, network key. The network key can be a combination of numbers, letters, or numbers and letters. The network key must match the network key that you specified at your wireless broadband router.

1. From the desktop, click on the **Start** button and click on **Control Panel**.
2. If you are looking at the **Category View of Control Panel**, click on **Switch to Classic View**. If you are looking at the **Classic View of Control Panel**, go to the next step.
3. Double-click the **Network Connections** icon.
4. Right-click your adapter in the LAN or High-Speed Internet area and click on **Properties**.
5. If the **Wireless Networks** tab is not on top, click on the **Wireless Networks** tab.
6. Verify that the **Use Windows to configure my wireless network settings** box is selected. If it is not, select it.
7. Select your wireless network from the Available networks list and click on **Configure**.
8. In the **Wireless Network Properties** box under Wireless network key (WEP), select **Data encryption (WEP enabled)** and unselect **The key is provided for me automatically**. This will allow you to enter an encryption key into the field marked **Network key**.
9. Enter your network key into the Network key field. You do not need to set the Key format or Key length, but these fields may automatically change depending on the length of your key and on whether you use letters in your key.
10. Once you have entered your key, click **OK** at the bottom of the **Wireless Network Properties** box.

 NOTE: If the network encryption key on your wireless USB adapter does not match the key set at your wireless broadband router, your PC will fail to connect to the network.

[Back to Top](#)

[Back to Contents Page](#)





How do I install the Dell™ TrueMobile™ 2300 Wireless Broadband Router for optimal coverage?

Each Dell TrueMobile 2300 Wireless Broadband Router supports up to about a 150 to 200 foot radius, depending on obstacles and interference issues. For smaller installations a little experimentation provides good placement of the Dell TrueMobile 2300 Wireless Broadband Router.

What is the maximum number of wireless, wired, and Internet users for each Dell TrueMobile 2300 Wireless Broadband Router?

The built-in DHCP server can provide IP addresses for up to 252 clients. 16 wireless clients are supported simultaneously on each unit. 32 clients can simultaneously access the Internet via the built-in NAT router.

 *NOTE: As the number of users on each Dell TrueMobile 2300 increases, the network performance level decreases.*

Can the Dell TrueMobile 2300 Wireless Broadband Router attach to a hub, switch, or router?

Yes, via its LAN port, the Dell TrueMobile 2300 Wireless Broadband Router provides the flexibility for a wide variety of network configurations and connections.

What is the physical connection from the Dell TrueMobile 2300 Wireless Broadband Router to a wired network?

Each Dell TrueMobile 2300 Wireless Broadband Router has a 10/100 Ethernet (LAN port) connection, which allows communication with a 10 *megabit per second* (Mbps), 100 Mbps, or 10/100 Mbps hub or switch.

FAQs

[Hardware Installation](#)

Software Configuration:

- ▶ [How can I manage the Dell TrueMobile 2300 Wireless Broadband Router?](#)
- ▶ [How do I locate the MAC address for the Dell TrueMobile 2300?](#)

[Internet Settings](#)

[Wireless Attributes](#)

[Supported Features](#)

[Troubleshooting](#)

[Other](#)

[Glossary](#)

FAQs

[Hardware Installation](#)

[Software Configuration](#)

Internet Settings:

- ▶ [How do I obtain Internet Protocol \(IP\) settings from my Internet Service Provider \(ISP\)?](#)
- ▶ [How do I install TCP/IP?](#)
- ▶ [How do I enable Point to Point Protocol over Ethernet \(PPPoE\)?](#)
- ▶ [How do I configure the Dell TrueMobile 2300 for either dynamic or static IP addresses?](#)
- ▶ [If I do not have a broadband connection, what do I do?](#)

[Wireless Attributes](#)

[Supported Features](#)

[Troubleshooting](#)

[Other](#)

[Glossary](#)

FAQs

[Hardware Installation](#)

[Software Configuration](#)

[Internet Settings](#)

Wireless Attributes:

- ▶ [What is the practical coverage of the Dell TrueMobile 2300 Wireless Broadband Router?](#)
- ▶ [Does the signal travel through walls?](#)
- ▶ [What devices cause interference?](#)
- ▶ [Can I roam to another subnet with the Dell TrueMobile 2300?](#)

[Supported Features](#)

[Troubleshooting](#)

[Other](#)

[Glossary](#)

FAQs

[Hardware Installation](#)

[Software Configuration](#)

[Internet Settings](#)

[Wireless Attributes](#)

Supported Features:

- [Does the Dell TrueMobile 2300 support bridging of two or more Ethernet LANS?](#)
- [Does the Dell TrueMobile 2300 support repeating?](#)
- [Does the Dell TrueMobile 2300 support notebook computers with integrated wireless adapters and wireless adapters from vendors other than Dell?](#)
- [Does the Dell TrueMobile 2300 accommodate optional antennae?](#)
- [Does the Dell TrueMobile 2300 support Virtual Private Networking \(VPN\)?](#)
- [Does the Dell TrueMobile 2300 support MAC address filtering?](#)
- [Does the Dell TrueMobile 2300 support individual game port settings?](#)
- [Does the Dell TrueMobile 2300 support *Routing Information Protocol \(RIP\)*?](#)
- [Can I operate the Dell TrueMobile 2300 in a Macintosh environment?](#)

[Troubleshooting](#)

[Other](#)

[Glossary](#)

FAQs

[Hardware Installation](#)

[Software Configuration](#)

[Internet Settings](#)

[Wireless Attributes](#)

[Supported Features](#)

Troubleshooting:

- [I cannot access the Internet through the Dell TrueMobile 2300 Wireless Broadband Router. What should I do?](#)
- [My computer is not connected to the Dell TrueMobile 2300 Wireless Broadband Router, what should I do?](#)
- [There are only some clients on the LAN work. What should I do?](#)
- [My browser does not display the web-based configuration tool. What should I do?](#)
- [My computer is not connected to the Internet, what should I do?](#)
- [The TrueMobile CD Setup Wizard program does not run automatically after placing the CD-ROM into the CD-ROM drive. What should I do?](#)
- [How do I access the Broadband Router after disabling the DHCP server function?](#)
- [How do I restart or reset the Broadband Router?](#)

[Other](#)

[Glossary](#)

FAQs

[Hardware Installation](#)

[Software Configuration](#)

[Internet Settings](#)

[Wireless Attributes](#)

[Supported Features](#)

[Troubleshooting](#)

Other:

- [How do I find out about firmware upgrades?](#)
- [What is the actual speed throughput for the Dell TrueMobile 2300?](#)
- [Are there any known health issues caused by Radio Frequency \(RF\) transmission from the Dell TrueMobile 2300?](#)
- [Is this a shared or switched technology medium?](#)
- [What is the difference between Bluetooth and 802.11?](#)
- [Does the Dell TrueMobile 2300 support Internet games?](#)
- [What settings do I change to play games with the router connected in the network?](#)
- [Does the Dell TrueMobile 2300 prevent hacker attacks?](#)
- [How can I find additional information?](#)

[Glossary](#)

Glossary

- [Access Point](#)
- [Cable Modem](#)
- [Client](#)
- [Domain Name System \(DNS\)](#)
- [Dynamic Host Configuration Protocol \(DHCP\)](#)
- [Encryption](#)
- [Ethernet](#)
- [Ethernet Address \(MAC Address\)](#)
- [Host](#)
- [Internet Protocol \(IP\)](#)
- [Internet Service Provider \(ISP\)](#)
- [IP Address](#)
- [Link Light](#)
- [Local Area Network \(LAN\)](#)
- [Network Adapter](#)
- [Network Address Translation \(NAT\)](#)
- [Network Name \(SSID\)](#)
- [Point to Point Protocol over Ethernet \(PPPoE\)](#)
- [Port](#)
- [Protocol](#)
- [Transmission Control Protocol/Internet Protocol \(TCP/IP\)](#)
- [Virtual Local Area Network \(VLAN\)](#)
- [Virtual Server](#)
- [Wide Area Network \(WAN\)](#)
- [Wireless Local Area Network \(WLAN\)](#)
- [xDSL Modem](#)

[FAQs](#)

[Back to Contents Page](#)

How to Configure the Router by the Control Utility: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

- ▶ [My Network Overview](#)
- ▶ [Wireless Settings](#)
- ▶ [Network Access Control](#)
- ▶ [Gaming](#)
- ▶ [Remote Access](#)
- ▶ [Administration](#)
- ▶ [Diagnostics](#)
- ▶ [Advanced Settings](#)

My Network Overview

The information on this menu provides you a general overview of your network status. On the left side of the screen, it displays the status of current connection to your router. The status will update when you click the Refresh button. On the right side, you can see the basic facts about your router. These items are as below:

- Operation Mode
- Connection Type
- Internet IP Address
- WAN MAC Address
- LAN IP Address
- Netmask
- Network Name (SSID)
- WEP Functionality

[Back to Top](#)

Wireless Settings

Network Name and Channel are necessary for enabling a wireless network.

- **Network Name (SSID)** - a unique network name, also called SSID (Service Set Identifier). It is used to identify the WLAN. When a mobile device tries to connect to the router, the user must know the router's SSID first.
- **Channel** - the radio channel over which a communication transmission occurs. The operating channel number depends on the regulatory domain.

The Wireless Broadband Router provides advanced mechanism for wireless security. It ensures the confidentiality of data, and also guards data against being modified. If you want to enable the security mechanism, check the **Enable Wireless Security** box. Select either **WEP** or **WPA** in **Network Authentication**.

WEP

Wired Equivalent Privacy (WEP) encryption used in the 802.11 standard is to protect wireless communication from eavesdropping. WEP provides a way of creating an encrypted key that is shared between a wireless client (such as a notebook with a wireless PC card) and the router. This key encrypts data before it is transmitted. WEP can be implemented with 40(64)-bit or 104(128)-bit key. Basically, the larger key length is relatively more secure for your data. For added security, change your key often. When you change the key on one wireless device, remember that it must be changed for all wireless devices and access points in the network.

- **Key Format:** It could be in ASCII or hexadecimal format. Hexadecimal digits include the numbers 0 to 9 and the letters A to F. ASCII format allows you to enter any characters.
- **Key Length:** It could be either 40(64)-bit or 104(128)-bit key length. Some wireless network cards are only able to use 40(64)-bit encryption. If all your clients are able to communicate at 104(128)-bit choose 104(128)-bit. If any client is only able to communicate at 40(64)-bit, choose 40(64)-bit.
- **Key1, Key2, Key3, and Key4:** Enter four different keys in the Key fields provided to store on the Wireless Broadband Router. If you choose 40(64)-bit encryption, enter a 5-character (or 10 hexadecimal digits). For 104(128)-bit encryption, enter a 13-character (or 26 hexadecimal digits) WEP key.
- **Default Key:** Select only one key out of the four provided in the Default Key applied for encryption drop-down list.

WPA

WPA is an upgrade to the WEP (Wired Equivalent Privacy) standard for securing your wireless network.

If you would like to secure your wireless network using WPA, you will need the following:

- WPA enabled on your Dell TrueMobile 2300 Wireless Broadband Router
- WPA support for your wireless clients. If you are using a Dell TrueMobile wireless client, you can check for the availability of WPA enabled software update for your wireless client at <http://support.dell.com>.

Enter the fields with the required parameters.

- **WPA Pre-shared Key:** WPA Pre-Shared Key (PSK) is a field where the password is entered. All wireless clients must also use this password to gain access to the network. Note that the Key format must also match the setting for the wireless clients.
- **Key Format:** Key Format is a box that lists 2 items: **Hexadecimal** Digits (numbers 0-9 and letters A-F only) and **ASCII** Characters (any letter, number, or symbol). Select the proper format for your key. If your wireless client(s) only support one of the two formats, be sure to specify the correct one.
- **WPA Group Rekey Interval:** WPA Group Rekey Interval is used to specify the frequency of encryption key rotations. The lower the number, the faster your encryption key will rotate, however, setting this number too low may cause your wireless network to slow down.
- **WPA Encryption:** WPA Encryption has 2 choices: **TKIP** (Temporal Key Integrity Protocol) - it is the most commonly used encryption method and **AES** (Advanced Encryption Standard) - it can be used if your wireless clients do not support TKIP.

Click the **Factory Default Value** button to reset the wireless settings to its factory defaults.

Click the **Apply** button to save the settings.

Click the **Restore** button to restore to its previous settings.

[Back to Top](#)

Network Access Control

Buttons	Actions
Add	Click "Add" button to add an new entry in the list.

Edit	Click on the record needs to be modified in the list and then click "Edit" button. Then, a dialog box will appear for you to edit it.
Delete	If you want to delete the record from the list, click on the record you want to delete and then click "Delete" button to remove it from the list.
Delete All	Click "Delete All" button to delete all the records in the list.
Restore	Click the "Restore" button to restore to the previous settings.

Parental Control

In the wake of increasing concern by parents about inappropriate content on the Internet, the router provides parental control function to filter and block inappropriate website (such as sex and violence related sites). Parental Control enables you to determine what website your children can and cannot access. It also allows you to specify what time children can access the Internet.

Step-by-step to add an new entry

1. Check the **Enable Parental Control** box.
2. Click **Add** button. A pop-up **Parental Control** window will appear.
3. Enter the IP address of the computer you want to control (for example, your child's computer) in the **Host IP** field.
4. Select **Allowed** or **Denied** from the **Internet Access** list.
5. Decide the time **Interval**. Check the radio button of **Permanent** if this rule always applies or specify a period of time for Internet access control.
6. Select **allow** or **deny** for web access.
7. Specify which website is allowed / denied by entering its URL in the **Website URL** field.
8. Click the **OK** button to apply. Or click the **Cancel** button to exit without making any change.
9. Click the **Apply Parental Control Settings** button on the bottom of the screen to activate the new settings.

MAC

This feature filters specific MAC (Media Access Control) addresses within the wireless local area network (WLAN) from accessing the network.

Step-by-step to add an new entry

1. Check the **Enable MAC Access Control** box. The following **MAC Access Control Settings** window will appear.
2. Click **Add** button. A pop-up **MAC Access Control: Add Entry** window will appear.
3. Enter the hexadecimal characters of the MAC address (for example, 00:11:22:33:44:55) that you want to grant or deny the access in **Host MAC** box.
4. Select **Grant** or **Deny** from the **Operating Type** list. If you select Grant, the device with this MAC Address is allowed to access the network, and the device with other MAC address will be filtered and denied to access the network.



NOTE: The operating type for ALL records MUST be either Grant or Deny.

5. Click the **OK** button to apply. Or click the **Cancel** button to exit without making any change.
6. You can click on the selected record and click again on its **Host Name** to enter the desired name for this record.
7. Click the **Apply MAC Control Settings** button on the bottom of the screen to activate the new settings.

[Back to Top](#)

Gaming

In some cases, the firewall feature of the router will cause a game not to function as intended. The settings listed on the **Gaming** menu can solve these problems. This section will guide you how to configure the device for gaming.

Your TrueMobile 2300 Router has an integrated Network Address Translation (NAT) firewall that rejects any unsolicited data from the Internet to access the computer on your LAN. Basically, if you do not request data, the

data will not be allowed by the firewall to pass. Applications like email and web browsing are unaffected by NAT because in each case, you make this request to receive the email or web page. However, some applications (such as Internet messaging and gaming applications) will not function correctly. It is because the requests for data do not originate from your computer but from a device/computer out on the Internet, and the NAT firewall blocks the data needed for those applications.

Port Forwarding Settings

You can configure on this **Gaming** menu to create a custom rule that defines a specific port and protocol for unsolicited traffic to pass through to that computer. The ports for gaming and the protocol type (TCP, UDP, or both) will depend on what gaming service you are using. Make sure you have the following ports setup as described below.

Information: Port Number

The port number identifies the protocol or service. Those from 0 through 1023 are the most commonly used port numbers and have been agreed as the standardized ports for specific kind of servers. For example, port 80 typically always indicates HTTP traffic. Those from 1024 through 49151 are used for many purposes, while those from 49152 through 65535 are Dynamic/Private Ports (they are rarely used). You can check the status of current IP connections by simply entering **netstat -a** on the command line (Click **Start** and then click **Run**. Type **cmd**, and press Enter. On the command prompt, type **netstat -a**). It will display all connections and listening ports.

1. Click **Add** button on the bottom the screen. A pop-up **Gaming: New Record** window will appear (as shown below).

*If you want to edit the gaming profile in the list, click on the profile you want to modify and then click **Edit** button. Then, a pop-up **Gaming: Edit Record** window will appear for you to edit it.*

*If you want to delete the gaming profile from the list, click on the profile you want to delete and then click **Delete** button to remove it from the list.*

*If you want to delete all the gaming profiles in the list, click **Delete All** button to remove all the entries in the list.*

2. Enter the desired name or description in the **Game Description** field.
3. Enter the IP address of the device (e.g. desktop PC) for gaming in the **Computer IP for gaming** field.
4. Select a transport layer protocol from the **Protocol Type** list. The options listed here are TCP (Transmission Control Protocol), UDP (User Datagram Protocol), and both.
5. Enter the incoming port number in the **Incoming Port No.** field and the outgoing port number in the **Outgoing Port No.** (also called **Destination Port**) field. The information should be available from your gaming service provider.

 **NOTE:** The minimum port number is 0, and the maximum port number is 65535.

For example, if you want to play online game "Diablo II" (Battle.net) on your PC with the IP Address 192.168.2.3, enter **192.168.2.3** in the Host IP field. Select **Both** from the Protocol Type list. Then enter **4000** or **6112-6119** in the Incoming Port No. field and also in Outgoing Port No. (or called Destination Port No.) field.

6. Select **Enable** or **Disable** the gaming from the **State** list.
7. Click the **OK** button to apply. Or click the **Cancel** button to exit without making any change.

DMZ

Some applications have problems to work behind a firewall. You can put the computer running this application outside the firewall, either physically, or via the router's DMZ (demilitarized zone) feature.

Place the computer into the router's DMZ would let the router allow all data to pass through all ports of the router to this computer. It disables the NAT firewall for that computer and leaves that computer vulnerable to attack, so it is inherently less secure. It is recommended to do this only on the computer that has no important data.

1. Check the **Enable DMZ Host** box.
2. Type the IP address of the computer that you want to run the gaming application in the **DMZ IP Address** field.

Remote Access

Allow remote user to configure the device

This option allows you to configure the device from the remote site via the network.

1. Check the **Allow remote user to configure the device** box.
2. Enter the IP address of the remote administration host in the required field.
3. Enter the HTTP port number that will be used on the router in the **HTTP port number** field.
4. Click the **Apply** button to save the settings. Or click the **Restore** button to restore to its previous settings.

Allow remote user to ping the device

This option allows you to configure the WAN ping capability. The default setting is disabled. The router will not answer ping requests, so your WAN port is invisible to port scanners, which can make your network safer.

1. If you want your WAN port to be visible on the Internet, you can check the **Allow remote user to ping the device** box.
2. Click the **Apply** button to save the settings. Or click the **Restore** button to restore to its previous settings.

Administration

Change Password

To prevent unauthorized access to change the setting, the device is password protected. It's strongly recommended that you change the factory default password.

1. Click **Change Password** button. Then, a pop-up **Password Settings** window will appear.
2. Type the original Password in the **Original Password** field.
3. Type the new password in the **New Password** field and retype it in the **Confirm Password** to verify.
4. Type the password hint message in the **password hint message** field.
5. Click **Submit** when you finish the setting. If you want to clear any values you have entered on any field, click **Cancel**.

System Rescue

The configuration settings can be saved as "TrueMobile Profile (.pro)" file. You can restore these backup settings whenever necessary. Four buttons for system rescue are as below:

- Save Current System Configuration To File - save the current settings as a ".pro" file in any directory you want to map.
- Load System Configuration Manually - load the backup file to restore the setting.
- Choose From The Configuration File List - the router will automatically add a record in the file list when you save the setting file. You can select the setting file from this list. You do not need to find the directory in which you saved the file.
- Reset to Factory Default Settings - reset the router to its default configuration.

Upgrade to New Firmware

If you are instructed to upgrade the firmware, click the **Upgrade to New Firmware** button. It will connect to dell website to upgrade to the latest firmware release. It is unnecessary to upgrade the firmware if your router is working properly.

Diagnostics

You can monitor the current status of your network connection in the **Diagnostics** menu. The network detecting can be activated by clicking **Start Diagnostics** button on the bottom of the screen.

When the detecting is done, the screen will display a summary of your Internet connectivity. It will show the information (such as the Host Name, IP Address, MAC Address, and Connection Status) of the **LAN Hosts** and **Wireless Hosts** in your network.

[Back to Top](#)

Advanced Settings

To configure the advanced settings of the router, click **Login** button to login the Web-based Configuration Tool. The web-based configuration tool enables you to set up every possible network configuration for your Dell TrueMobile 2300 Wireless Broadband Router.

[Back to Top](#)

[Back to Contents Page](#)



[Back to Contents Page](#)

Basic Settings: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

The following configuration options are included in **Basic Settings**:

- ▶ [Router Mode](#)
- ▶ [Wireless Settings](#)
- ▶ [Wireless Security](#)
- ▶ [Internet Connection Settings](#)
- ▶ [Save & Apply](#)



NOTE: To implement the changes you make to the settings, you must save and restart the router. Otherwise, the router uses the previous settings. If you are using the **BACK/NEXT** links to step through each screen in the **Basic Settings** portion of the web-configuration tool, you ultimately reach the Save & Restart page. Click **Save & Restart** to commit the changes and the router will reboot automatically with the new settings in effect.

Router Mode

The *Dell TrueMobile 2300 Wireless Broadband Router* device comes with two operating modes, the **Gateway** mode and the **Access Point** mode.

Gateway mode allows your router to create a wireless network to access the broadband router. Wired and wireless network devices share the same Internet connection through **Internet** port in the Gateway mode. However, some ISP may request you to do the additional setup such as PPPoE, before using your router to access Internet.

Access Point mode allows your router to act as a bridge between wireless devices and Ethernet devices in the existing network. All wired and wireless devices are located in the same class C subnet. Internet port is useless here. Thus, Access Point mode is here to help you setting up a single isolated network.



NOTE: If the device is put in AP mode, the **Internet Connection Settings** will not be available.

The **Gateway** mode is the default setting in Wireless Broadband Router. Click the radio button to select between these two modes.

Click **NEXT** to continue.

[Back to Top](#)

Wireless Settings

When you configure the Wireless Broadband Router, you must set the wireless parameters listed below. If you are adding the Wireless Broadband Router to an existing wireless network, see your network administrator or the person who initially set up the wireless network. If you are unfamiliar with the wireless settings, see the descriptions below.



NOTE: You must change each client's wireless adapter settings to match the Wireless Broadband Router settings. Use the factory defaults for the Wireless Broadband Router, unless the default settings have been changed. In this case, note the changes, and use the new settings for each wireless network card. For assistance configuring a wireless network card, see the card's documentation.

Setting	Possible Values
Network Name (SSID)	(wireless by default)
Channel	(6 by default)

Network Name (SSID)

The network name is a value that identifies a collection of **wireless** devices found in a particular network. The default value for the Wireless Broadband Router is "wireless". All workstations and access points must use the same SSID to be able to communicate with one another.

The SSID is a 32-character field, and the value is case sensitive. For example, your street address or some other identifier of the physical location of the WLAN, your name, your company name, or the company name and department, a favorite slogan or saying, etc.

Channel

The Wireless Broadband Router can operate on a variety of channels. Units within close proximity to one another must be on different channels. If you have just one unit, then the default, channel 6, is probably adequate. If you have multiple access points in your network, it is suggested to stagger the channels for each unit. It is advisable to use the default unless there is a specific reason for changing the channel such as interference from microwaves, cellular phone towers, or other access points in the area.

Click **NEXT** to continue.

[Back to Top](#)

Wireless Security

Data encryption provides added security by encoding network communications using an encryption key. Your Wireless Broadband Router, in conjunction with wireless network adapters that support encryption, can scramble your transmitted data to make it very difficult for someone to eavesdrop or intercept your information. Two methods of data encryption are available: WEP and WAP. If you wish to enable wireless security, check the **Enable Wireless Security** box.

WEP

If you wish to enable WEP encryption, select **WEP** in the **Network Authentication** list.

Setting	Possible Values
Key Format	Hexadecimal Digits / ASCII Characters
Key Length	40 bits (5 characters) / 104bits (13 characters)
Key1, Key2, Key3, Key4	<user-defined>

There are two levels of WEP encryption: 40(64)-bit and 104(128)-bit, with 104(128)-bit being the more secure. The WEP

encryption keys are simply a random set of hexadecimal numbers or ASCII characters that you choose. Each Wireless Broadband Router and every wireless workstation must use the same WEP encryption key to communicate. For more information on encryption, see the [Wireless Networking Overview - Encryption](#) section of this User's Guide.

- **Key Format**

It could be in ASCII or hexadecimal format. Hexadecimal digits include the numbers 0 to 9 and the letters A to F. For example, the decimal number 15 is represented as F in the hexadecimal numbering system. If you select ASCII characters format, you can enter any character. ASCII is the acronym for the *American Standard Code for Information Interchange*. ASCII is a code for representing English characters as numbers, with each letter assigned a number from 0 to 127. For example, the ASCII code for uppercase M is 77. Most computers use ASCII codes to represent text, which makes it possible to transfer data from one computer to another.

- **Key Length**

It could be either **40(64)-bit** or **104(128)-bit** key length. Basically, the larger key length is relatively more secure for your data. Some wireless network cards are only able to use 40(64)-bit encryption. If all your clients are able to communicate at 104(128)-bit choose 104(128)-bit. If any client is only able to communicate at 40(64)-bit, choose 40(64)-bit.

- **Key**

If you choose 40(64)-bit encryption, enter a 5-character (or 10 hexadecimal digits) WEP encryption **Key** in the fields provided. For 104(128)-bit encryption, enter a 13-character (or 26 hexadecimal digits) WEP key in the fields provided. You have the option of entering four different keys to store on the Wireless Broadband Router. Select only one key out of the four provided in the **Default Key** applied for encryption drop-down list. For added security, change your key often. When you change the key on one wireless device, remember that it must be changed for all wireless devices and access points in the network.



NOTICE: If you are adding the Wireless Broadband Router to an existing network and will be using an existing encryption key for the wireless clients, contact the person in charge of the network. The same key must be used when configuring the encryption for the Wireless Broadband Router. The administrator must propagate any changes to these keys to all access points and wireless clients on a network. Changing the key on just one access point or wireless client disconnects it from the rest of the network.

WPA

If you wish to enable WPA encryption, select **WPA** in the **Network Authentication** list.

WPA is an upgrade to the WEP (Wired Equivalent Privacy) standard for securing your wireless network.

If you would like to secure your wireless network using WPA, you will need the following:

- WPA enabled on your Dell TrueMobile 2300 Wireless Broadband Router
- WPA support for your wireless clients. If you are using a Dell TrueMobile wireless client, you can check for the availability of WPA enabled software update for your wireless client at <http://support.dell.com>.

Enter the fields with the required parameters.

- **WPA Pre-shared Key**

WPA Pre-Shared Key (PSK) is a field where the password is entered. All wireless clients must also use this password to gain access to the network. Note that the Key format must also match the setting for the wireless clients.

- **Key Format**

Key Format is a box that lists 2 items: **Hexadecimal** Digits (numbers 0-9 and letters A-F only) and **ASCII** Characters (any letter, number, or symbol). Select the proper format for your key. If your wireless client(s) only support one of the two formats, be sure to specify the correct one.

- **WPA Group Rekey Interval**

WPA Group Rekey Interval is used to specify the frequency of encryption key rotations. The lower the number, the faster your encryption key will rotate, however, setting this number too low may cause your wireless network to slow down.

- **WPA Encryption**

WPA Encryption has 2 choices: **TKIP** (Temporal Key Integrity Protocol) - it is the most commonly used encryption method and **AES** (Advanced Encryption Standard) - it can be used if your wireless clients do not support TKIP.

Click **NEXT** to continue.

[Back to Top](#)

Internet Connection Settings

It is only necessary to specify these settings when the Wireless Broadband Router is used as a router. To determine the set of information of ISP settings you need, refer to the [ISP Settings Checklist](#).

 **NOTE:** The Setup Wizard enters the required Cable/xDSL ISP settings into the router after you select "**Installation**" and "**Setup First Computer**" and complete the installation successfully. Only if the Setup Wizard is not successful in establishing an Internet connection should the Cable/xDSL ISP settings need to be changed with the options provided here.

 **NOTE:** If the device is put in AP mode, the **Internet Connection Settings** will not be available.

Your ISP requires you to input Host Computer Name or Domain Name

If your ISP requires that you input a host computer name or domain name, check the box titled **Your ISP requires you to input Host Computer Name or Domain Name**. This box should only be checked if your cable-based ISP has provided you with a host or computer name and/or a domain name. Enter the appropriate values in the fields provided.

Click the **NEXT** button to continue.

 **NOTE:** Host computer names and domain names are only used by cable-modem ISPs.

Your ISP requires you to input WAN Ethernet Mac

If your ISP requires that you input a WAN Ethernet MAC address, check the box titled **Your ISP requires you to input WAN Ethernet MAC**. In the field provided, enter the public WAN (cable/xDSL) MAC address assigned to your Wireless Broadband Router. You can find the WAN MAC address on the back panel of the Wireless Broadband Router or on the Device Information page on the web-based configuration tool.

Click the **NEXT** button to continue.

Connection Type

Select the Connection Type from the list. There are four options available.

- Cable Modem
- DSL (Static)
- DSL (PPPoE)
- PPTP

Cable Modem Settings

No additional settings are required. Make sure that the settings listed above are correct for Cable Modem connection.

DSL Static IP Settings

In the fields provided (listed below), enter the IP address, IP subnet mask, ISP gateway address, and *Domain Name Server* (DNS) IP address provided by your ISP.

- o IP assigned by your ISP
- o IP Subnet Mask
- o ISP Gateway Address
- o Domain Name Server (DNS) IP Address

DSL PPPoE Settings

Point to Point Protocol over Ethernet (PPPoE) is a proposal specifying how a host PC interacts with a broadband modem (i.e. xDSL, cable, wireless, etc) to access to the network. In many respects PPPoE is similar to the "Dialup Networking" approach. If you have an DSL (PPPoE) Internet connection, enter the PPPoE user name and password (Retype password to confirm.) provided by your ISP.

PPTP Settings

The following settings should be provided to you by your Internet Service Provider (ISP).

- o IP Address
- o Subnet Mask
- o Server IP Address
- o User Name
- o Password

If your ISP specifies that you use PPTP (Point-to-Point Tunneling Protocol) as your connection to the internet, you cannot use the provided setup wizard to automatically setup your router. Remove the ethernet cable from the back of the computer you currently connect with, and connect it to the internet port of your router. Connect the ethernet cable provided to any of the 4 LAN ports, and the other end to your computer. Configure your computer's ethernet adapter to obtain an address automatically. See Windows Help for information on how to configure your computers network adapter.

Click the **NEXT** button to continue.



WARNING! If you are charged for your Internet Connection by the minute, unplug the network cable from the Internet port on the Wireless Broadband Router when Internet access is no longer desired.

[Back to Top](#)

Save & Apply

Use the Save & Apply page to submit all the network setting changes you have made. Click the **Save & Restart** button to update the network configurations for your Wireless Broadband Router. New settings are written to the firmware, and the Wireless Broadband Router reboots automatically.



NOTE: If you have wireless clients in your network, you must configure the clients' wireless network cards to match the settings for the Wireless Broadband Router.

[Back to Top](#)

[Back to Contents Page](#)



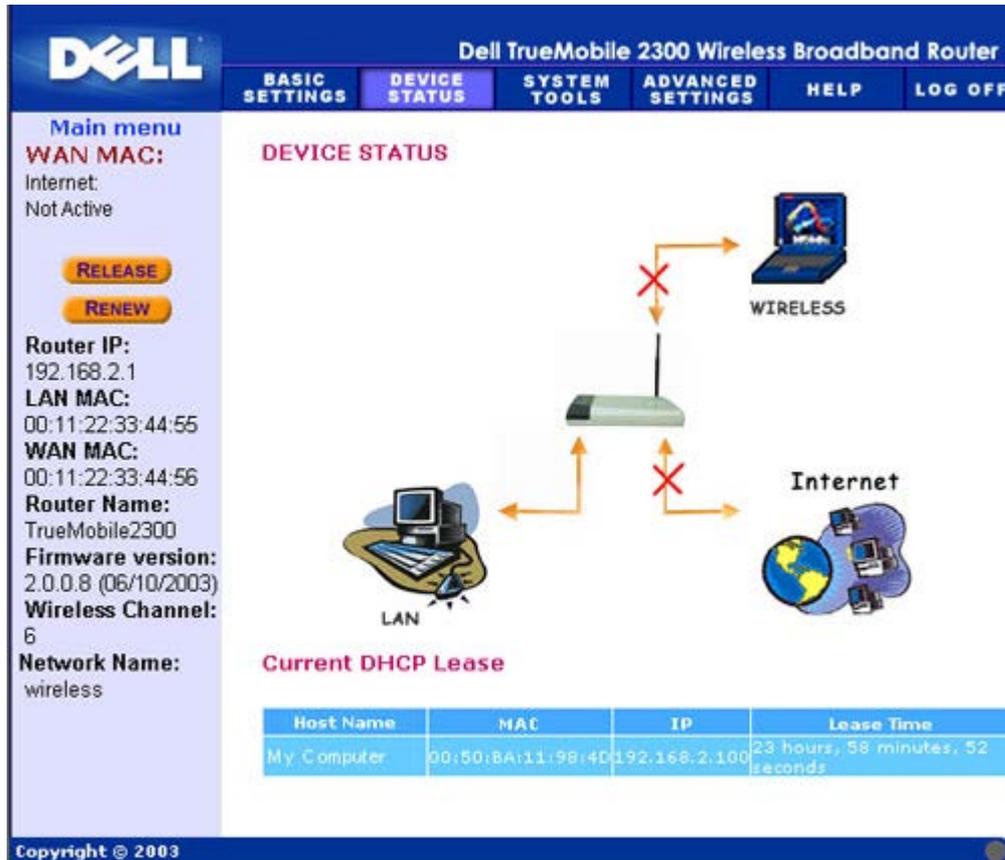
[Back to Contents Page](#)

Device Status: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

The Device Status screen displays the basic network settings for your Dell TrueMobile 2300 Wireless Broadband Router. When changes are made to the network settings, those changes are updated on this screen. In addition, it graphically displays the current connection status for the Wireless Broadband Router and other devices in your network. Connections between network devices are shown with a yellow arrow. Inoperative connections are represented by one red cross through the yellow connection line (see Figure 1).

NOTE: The TrueMobile 2300 router offers 2 ways to check the status of your network. One is Device Status feature in web configuration tool mentioned here. The other is through the Windows-based software program - [control utility](#). To learn more about this utility, click on the aforementioned link.

Figure 1. Device Status page



Device Status

The following connections are displayed on the Device Status page:

Device	Indication
	An inactive cable/DSL connection indicates that either the cable is unplugged or the Wireless Broadband Router has not received an IP address.

Internet	An active connection indicates the WAN interface of the router has a valid IP address and your computers can connect to the Internet via the router.
Wired Client (LAN)	Shown as an active connection when a wired client is configured and physically connected to your network; inactive when the Ethernet cable is disconnected from the PC.
Wireless Client	Shown as an active connection when a wireless client is configured for your network; inactive when there is no wireless client connected to your router.

When the Wireless Broadband Router acts as a DHCP server, it assigns IP addresses to the clients on the network. These IP addresses are displayed in the *DHCP Log* below the Device Status figure.

WAN Ethernet Settings

Refer to the left-side of the screen for the following WAN Ethernet Settings, and the Internet protocol (IP) settings for the Wireless Broadband Router:

Setting/Device	Information Displayed
Internet	the connection to the Internet is Active/Not Active
Router IP	IP address assigned to the Wireless Broadband Router
LAN MAC	MAC address for the LAN and Wireless interfaces
WAN MAC	MAC address for the WAN interface
Router Name	the name for the Wireless Broadband Router (the default is TrueMobile 2300)
Firmware Version	Version number of the firmware currently installed on the Wireless Broadband Router and the release date of the firmware
Wireless Channel	radio channel on which the Wireless Broadband Router is communicating on the air
Network Name	a unique network name that identifies the network. It is also known as SSID (Service Set Identifier). When a client station tries to connect to the router, the user must know the router's SSID first.

The following buttons appear on the left navigation bar:

Button	Action
RELEASE	Clicking this button to release the IP address that the Wireless Broadband Router has been assigned from your ISP. If the Wireless Broadband Router has been configured to receive a static IP address, clicking Release does not release this IP address.
RENEW	Clicking this button to renew the IP address with a DHCP server provided by your ISP. If the Wireless Broadband Router has been configured to receive a static IP address, clicking Renew does not renew the IP address.

[Back to Top](#)

[Back to Contents Page](#)

[Back to Contents Page](#)

System Tools: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

Use the System Tools section to view the intruder detection log, routing tables, and system diagnostics regarding the device settings and status. These three pages are for your information only. The System Tools section also includes features to reload the default settings, upgrade the firmware for the Wireless Broadband Router, and reset the unit.

Use the following pages in the web-based configuration tool to access the System Tools:

- ▶ [Intruder Detection Log](#)
- ▶ [Display Routing Table](#)
- ▶ [System Diagnostic](#)
- ▶ [Load Default Settings](#)
- ▶ [Upgrade Firmware](#)
- ▶ [Reset Device](#)

Intruder Detection Log

Indicator	Description
Event	Type of attack that the router detects
Time	Based on the timestamp of the IP packet, plus or minus the time offset
Source	IP address that the packet came from
Dest (=Destination)	Usually the IP address for the Wireless Broadband Router
Port	Port number

The figure below shows an example of an entry of an Intrusion attempt (INT_ATEMPT) event from a computer with IP address 192.168.2.60 (Source) targeted at the router's port number 80 at time 12 AM:1 Min: 5 Sec.



Main menu

**INTRUDER
DETECTION LOG**

**DISPLAY
ROUTING TABLE**

**SYSTEM
DIAGNOSTIC**

**LOAD DEFAULT
SETTINGS**

**UPGRADE
FIRMWARE**

RESET DEVICE

INTRUDER DETECTION LOG

Event	Time	Source	Dest	Port	Remark
INT_ATEMPT	12:1:5	192.168.2.60		80	Intrusion attempt

Click clear button to clear the intruder log buffer

CLEAR

[Back to Top](#)

Display Routing Table

Indicator	Description
Type	The type of routing. This can be either: LAN or WAN interface (INTF) Static routing
Destination LAN IP Address	Either an entire network or a specific IP address. An IP address ending in .0 refers to a network.
Subnet Mask	Must follow the subnet mask rules
Gateway IP Address	To communicate with an IP address matching the destination IP Address, the Wireless Broadband Router sends all traffic through the gateway IP address listed here.
Hop Count	The number of routers the packet has passed through to its destination. Hop count is used to measure the distance between a source and a destination. If there are 3 routers between the source and the destination nodes, the hop count for the packet will be 3 when it arrives at its destination node.

The figure below shows three network routes that your router currently possesses. 192.168.2.0 is the destination network connected to one of your router's interface port (LAN or WAN) and the IP address and Subnet Mask for this interface is 192.168.2.1 and 255.255.255.0, respectively. The number of routers (Hop Count) the packet passed through is 1. Also in the same example, the destination with 0.0.0.0 network and 0.0.0.0 Subnet Mask is the default route for your router, where every packet that left unmapped to any other route will be mapped to this route. The outgoing default gateway IP address is 192.168.1.254.



Main menu

INTRUDER
DETECTION LOG

DISPLAY
ROUTING TABLE

SYSTEM
DIAGNOSTIC

LOAD DEFAULT
SETTINGS

UPGRADE
FIRMWARE

RESET DEVICE

DISPLAY ROUTING TABLE

Type	Destination IP Address	Subnet Mask	Gateway IP Address	Hop Count
INF	192.168.2.0	255.255.255.0	192.168.2.1	1
INF	192.168.0.0	255.255.0.0	192.168.253.222	1
INF	0.0.0.0	0.0.0.0	192.168.1.254	1

[Back to Top](#)

System Diagnostic

The Systems Diagnostics page is for your information only. This page displays both the configuration settings and diagnostics for the Wireless Broadband Router. Configuration settings include firmware version, the ISP and device settings that have been configured for your network.

The Diagnostics section shows the current connections for your network. Diagnostic settings include the ISP status, link status, current WAN connection, LAN MAC table, and WAN MAC table.

[Back to Top](#)

Load Default Settings

The Load Default Settings page allows you to reload the factory default configurations that came with the device. When this option is used, the default IP address is reset to the factory default value (192.168.2.1). This is equivalent to pressing and holding the **Reset** button on the back panel of the device for more than 3 seconds (for more details, please refer to [A Look at the Hardware](#)).

 **CAUTION:** Loading the default settings option will cause the current settings for your Wireless Broadband Router to be lost.

Click the **START** button to reload the default settings.

[Back to Top](#)

Upgrade Firmware

Dell periodically releases firmware updates to provide improved performance or capabilities. Use the firmware upgrade feature to easily upgrade the firmware on your Wireless Broadband Router. You can check Dell support website, support.dell.com, to see if there are any new upgrades. Download the new firmware first before upgrade, and save it to one of the clients in your network. To upgrade the firmware, enter the firmware file path into the box, or click the **Browse** button to choose a firmware file to upgrade to.



NOTE: Make sure the file you choose is an actual Dell TrueMobile 2300 Wireless Broadband Router firmware file.

Click the **START** button when you have chosen a file. After the firmware is written to the Wireless Broadband Router, the home page will be loaded automatically. While the Wireless Broadband Router resets, the **Power** light on the front panel of the unit blinks.

[Back to Top](#)

Reset Device

Use the Reset Device function if a system failure occurs. This feature does **not** reload the factory default settings. It simply resets the device to the network settings that existed on the device before the system failure occurred. This is equivalent to unplugging the device and plugging it back in or pressing the reset button for less than 3 seconds until the **Power** light start to blinks. No settings are lost.



NOTICE: If you were in the process of updating the network settings, those changes are lost when the device is reset.

Click the **START** button to reset the Wireless Broadband Router to its **current firmware settings**. While the Wireless Broadband Router is reset, the **Power** light on the front of the unit blinks.

[Back to Top](#)

[Back to Contents Page](#)



[Back to Contents Page](#)

Advanced Settings: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

- ▶ [Advanced IP Settings](#)
- ▶ [DHCP Server Settings](#)
- ▶ [Time Zone](#)
- ▶ [Advanced Wireless](#)
- ▶ [Parental Control](#)
- ▶ [Access Control Settings](#)
- ▶ [Port Forwarding Settings](#)
- ▶ [Static Routing](#)
- ▶ [Administration Settings](#)

 **NOTE:** Dell technical support representatives do not support the configuration options in the Advanced Settings portion of the configuration program. These options are provided for your convenience only; however, the advanced settings are fully documented and explained in this guide.

 **NOTE:** The options "**Port Forwarding Settings**" and "**Static Routing**" are invisible if you are in Access Point Mode.

 **NOTE:** After making changes to any section in Advanced Settings and clicking the **SUBMIT** button, you are taken to a page where you can click the **Save & Restart** button. Click this button to store changes and to reboot the router. You must save all new settings for the changes to take effect.

Advanced IP Settings

The Dell TrueMobile 2300 Wireless Broadband Router comes with an assigned **IP address** and **IP subnet mask**. These settings apply only to the Local Network portion of the router. If you are installing the unit on an existing network or simply want to change these values, make sure the IP subnet mask is the same for all devices on your network. The network portion of the IP address must also be the same for all devices on your network.

 **NOTE:** Dell strongly suggests you do not change the IP address unless there is a specific reason for doing so.

While you are changing the IP address, be aware that:

- Changing the IP address of the Wireless Broadband Router also changes the IP address pool if the DHCP server is enabled.
- If you are using the Wireless Broadband Router with a cable modem or DSL line, you should assign a "private" IP address. Private IP addresses are in one of three ranges:

- 10.0.0.1-10.254.254.254
- 172.16.0.1-172.31.254.254
- 192.168.0.1-192.168.254.254
- You must use the new IP address to access the web-based configuration tool.

NOTICE: You should only change the IP address or IP subnet mask if you are installing the Wireless Broadband Router on an existing wired network and the DHCP server function for your Wireless Broadband Router is disabled in the Advanced Settings. For more information, contact your network administrator.

Click the **SUBMIT** button to store the changes.

[Back to Top](#)

DHCP Server Settings

Dynamic Host Configuration Protocol (DHCP), defines a way to automatically assign IP addresses to computers on a network. IP addresses are managed by a DHCP server. If a Windows computer is configured to obtain an IP address automatically, it automatically gets an address from the DHCP server.

Enable DHCP Server Functions

By default, the Wireless Broadband Router is set to function as a DHCP server. If you are installing the unit on an existing network that already has a DHCP server or simply do not want the Wireless Broadband Router to function as the network's DHCP server, uncheck the box **Enable DHCP Server Functions** to disable the DHCP server function.

IP Address Pool Range

The IP Address Pool Range section provides a means of controlling a low and high value for the IP addresses on a network. Use the indicated fields to define the range of IP addresses you would like the Wireless Broadband Router to provide to DHCP clients. The valid range of numbers you should enter is between 1 and 254.

The lease time is the amount of time a user will be allowed to use the IP address assigned by the DHCP server. You may specify the lease time that DHCP server offers for the client to use the IP address. This setting is especially useful in campus or other environments where users change frequently.

IP Address Reservation

Specific IP addresses may also be reserved for particular devices in a network. The **IP Address Reservation** fields allow you to reserve up to four IP addresses for a specific system. The **Computer MAC** field is the MAC address of your network card on the client computer interfacing the same network as the router. Use the input boxes under **IP Address** to indicate the IP address for those devices that should use a manually-defined IP address.

Click the **SUBMIT** button to store the changes.

[Back to Top](#)

Time Zone

Use the Time Zone page to select your local time zone from the pull-down list. The Time Zone Settings affects the Intruder Detection Log. This setting offsets the time stamp on IP packets that are in *Greenwich Mean Time* (GMT). IP packets may not

always have this stamp, or they may have an invalid stamp; thus, the time zone information is not always accurate.

The Time Zone Selection also affects the Parent Control option. This option allows parents to control Internet access. To enable this option, go to **Advanced Settings** -> **Parental Control** section of the router's web-configuration tool. By default, there is no blocking at any time on Internet access.

Click the **SUBMIT** button to store the changes.

[Back to Top](#)

Advanced Wireless

Enable Wireless

Check this box to enable radio transmission and reception on the Wireless Broadband Router.
Uncheck the box to disable the radio.

Hide my wireless network

Checking this box disables the Wireless Broadband Router to send out beacon packets to the wireless network. It is unchecked by default and other users can easily find and make association to your Wireless Broadband Router with the use of a site survey tool.
If you want to increase wireless network security, you can enable this feature.

Mode

TrueMobile 2300 Router is 802.11g-compatible. You can select "**both b & g**" (dual mode), or "**802.11b**", or "**802.11g**" from the **Mode** list.

SSID

Service Set Identifier (SSID) is a 32-character name that uniquely identifies all the computers and equipment that make up the wireless network.

Transfer Rate

Transfer rate can be set to automatic, or some other fixed value. It's recommended that you set the transfer rate to automatic (Auto) to allow the wireless network devices to transmit at a rate they deem optimum at any given point of time.

Channel

The channel settings let you set the channel for this Wireless Broadband Router. The radio channel is the place over which a communication transmission occurs. The operating channel number depends on the regulatory domain.



*NOTE: If you want to configure the settings of Beacon Interval, RTS Threshold, Fragmentation Threshold, and DTIM Interval, please ensure that the **Advanced Options** is checked first.*

Beacon Interval

The amount of time in Kusecs (one Kusec equals 1,024 microseconds) between radio beacons from the Wireless Broadband Router to its client stations. The value range is from 1 to 65535.

RTS Threshold

The packet size above which the Wireless Broadband Router will issue a Request to Send before sending the packet.

RTS (Request to Send) mechanism prevents the "Hidden Node" problem. When two stations are within range of the same Access Point (AP) but are not within range of each other, they are hidden nodes for each other. The packets from these two stations may collide if they arrive at the AP at the same time. To prevent data collision with the hidden node, you can activate RTS mechanism. If RTS mechanism is activated, the station will send a RTS first to inform the AP that it is going to transmit the data. Then, the AP will reply with the CTS (Clear to Send) to all stations within its range to notify all other stations and reserve the bandwidth for your data.

The RTS threshold controls what size data packet would issue a RTS. Only when the packet exceeds the RTS threshold, the device will send a RTS before sending the packet. There is trade-off to consider what value you should set for the RTS threshold. Small value causes RTS to be sent more often, and it would waste the bandwidth. However, the more often RTS packets are sent, the sooner the system can recover from collisions. It is recommended to use the default value or only minor reductions of this default value. The value range is from 0 to 2347.

Fragmentation Threshold

The fragmentation threshold, specified in bytes, determines whether data packets will be fragmented and at what size. Packets that are smaller than the specified fragmentation threshold value will not be fragmented. Packets that are larger than the fragmentation threshold will be fragmented into smaller packets and transmitted a piece at a time instead of all at once. Thus, it will reduce the need for retransmission and improve overall network performance. Fragmentation is activated usually when the system is in heavy traffic and interference environment. The setting must be within the range of 256 to 2346 bytes. It is recommended to use the default value or only minor reductions of this default value.

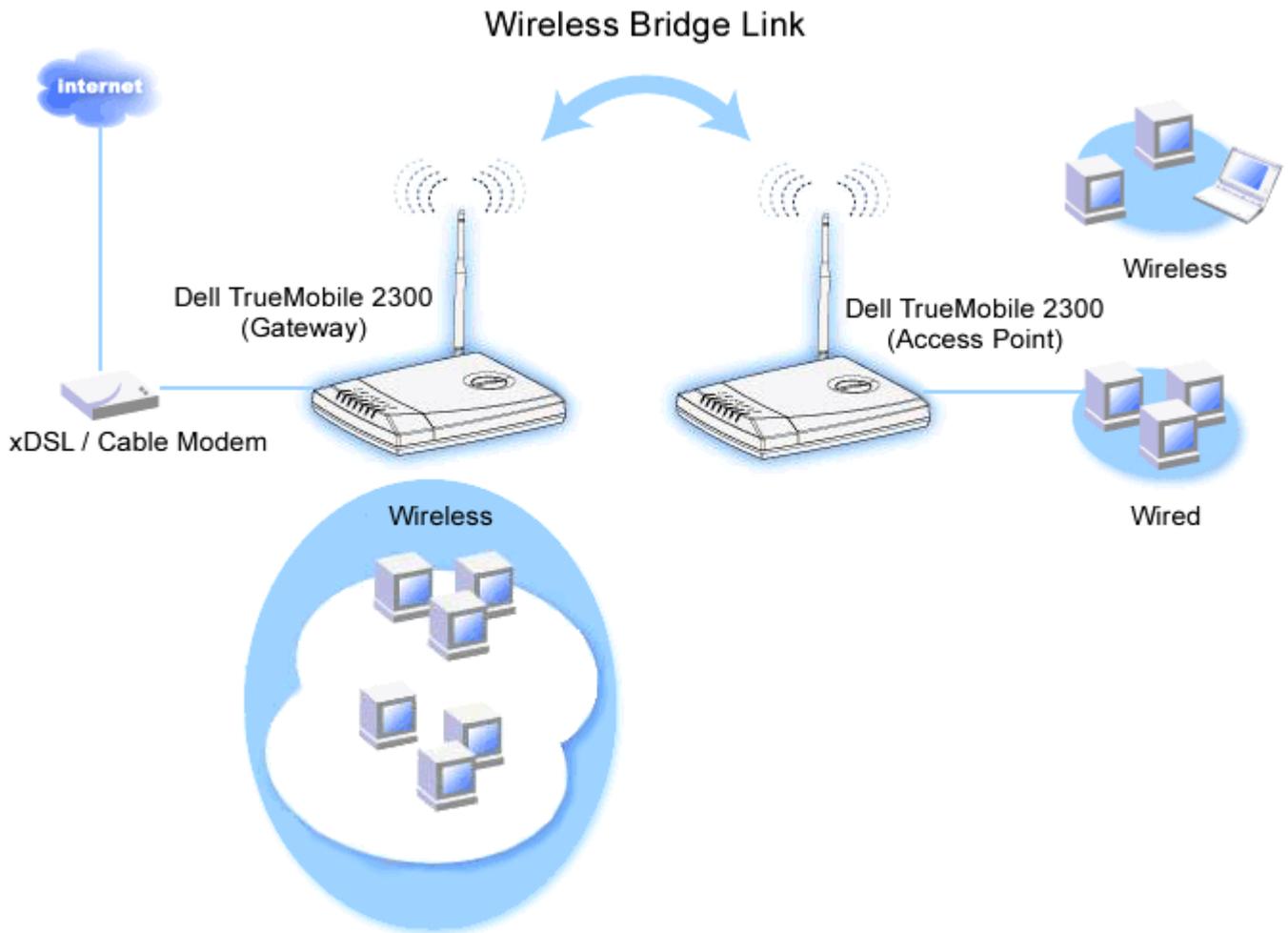
DTIM Interval

DTIM (Delivery Traffic Indication Message) Interval, always a multiple of the beacon period, determines how often the beacon contains a traffic indicator map (TIM). The TIM alerts stations in sleep state to stay awake long enough to receive their data frames. The value range is from 1 to 255.

Wireless Bridge

Wireless Bridging can be used to increase the coverage of your wireless network and/or to provide wired access to a remote computer(s). You need two or more Dell TrueMobile 2300 Wireless Broadband Routers to setup Wireless Bridging.

To setup wireless bridging, configure the wireless settings for all of your Dell TrueMobile 2300 Wireless Broadband Routers to the same settings.



Configuring your router for Wireless Bridging:

1. Open your web browser and go to <http://my.router> (or the default address <http://192.168.2.1>).
2. Click the **Advanced Settings** tab on the top navigation bar.
3. Click the **Advanced wireless** button on the left navigation bar.
4. Ensure **Enable Wireless** is checked.
5. Type your wireless network name in the **Network name (SSID)** field if you desire to change it from default settings "Wireless".
6. Ensure **Advanced Options** is unchecked.
7. Enable **Wireless Bridge**.
8. Enter the Wireless MAC address(es) of the other Dell TrueMobile 2300 Wireless Broadband Router(s) that you want to bridge.

 **NOTE:** To connect two bridges together, enter the MAC address of the bridge at the other end. To connect three bridges together, enter the MAC addresses of the other two bridges in the bridge acted as the multipoint center. The other two bridges only need to be entered the MAC address of the center bridge.

9. Click the **Submit** button.
10. Click the **Save & Restart** button.
11. When your web browser returns to the main page of the Wireless Broadband Router, the device has successfully restarted with the new settings.

12. Repeat steps 1 to 11 for each Dell TrueMobile 2300 Wireless Broadband router you want to bridge.

 **NOTE:** Ensure all Dell TrueMobile 2300 wireless Broadband Routers set to same wireless settings and all router(s) not directly connected to Internet should be configured to Access point mode.

[Back to Top](#)

Parental Control

IP filtering is a mechanism enabling a networking node to accept or deny certain types of IP datagrams based on the IP address, port number, protocol type, and other criteria. This router supports two types of IP filtering which allows you to have greater control over the access to Internet:

- **Internet Access Control** allows you to block access to the Internet based on the time of the day.
- **Web Site Restrictions** allows you to deny access to specified Web sites from a particular IP address.

Click **Add** button. A pop-up **Parental Control Rule** window will appear.

Internet Access Control

1. Select the IP address of the particular computer you want to control (for example, your child's computer) in the **IP Address** list.
2. To block / grant access to the Internet during a period of time, specify the start and end time from the **Time Restriction** list.
3. Select **Allow** or **Deny** from the **Internet Access** list.
4. Click the **SUBMIT** button to store the changes.

Web Site Restrictions

1. Enter the URL that you want to allow or deny the access in the **Web Site Restrictions** field.
2. Select **Allow** or **Deny** access to these web sites.
3. Click the **SUBMIT** button to store the changes.

[Back to Top](#)

Access Control Settings

Access Control Settings feature allows you to control which local client computer can access the network through the router. The Wireless Broadband Router by default allows any local client computer to access the network.

To enable access control in the router:

1. Check the **Enable MAC Access Control** box.
2. Select the appropriate **Operating Type**. **Grant** allows client computers access to the router. **Deny** restricts the access.
3. Enter the MAC address of the network card on the computer on which you wish to apply the above control policy.

4. Click **Add** to enter the rule to the router.
5. To remove an existing rule, check the "**Del**" checkbox next to the MAC address and click the **DEL** button.
6. Click the **SUBMIT** button to store the changes.

[Back to Top](#)

Port Forwarding Settings

DMZ

DMZ (demilitarized zone) feature allows access to all ports. (For example, if you have problems hosting a game server, you can choose this option. This will open all ports to your game server.)

1. Check the **Enable DMZ Host** box.
2. Type the IP address of the computer that you want to run the gaming application in the **DMZ IP Address** field.
3. Click **SUBMIT** button to activate the setting.



NOTE: Configuring the Wireless Broadband Router in DMZ mode is useful if you want to play certain games through the Wireless Broadband Router, but the ports cannot be opened with all other existing configuration tools.



NOTICE: Opening a service to the Internet causes security concerns. Pay careful attention to security alerts, and make sure that strong access controls and authentication are in place before allowing access to any services.

Custom Port Forwarding Settings

Port Forwarding may be more difficult than DMZ to configure. However, it provides a relatively safe way of running a Internet application or providing a Internet service from behind a firewall since only a single port (or a range of ports) is exposed to the Internet. You can configure this port forwarding setting to create a custom rule that defines a specific port and protocol for data traffic to pass through to the specific computer on your LAN.

An example is a HTTP server running on your LAN, which you want it to be available to the Internet. Your public IP address (that your ISP gives you) is X.X.X.X (The X is a number), and you have a computer hosting the HTTP server at LAN address 192.168.2.2 on your Wireless Broadband Router (192.168.2.1) controlled LAN. You can configure 192.168.2.2 to have port forwarding for port 80 (HTTP), then users on the Internet can go to <http://X.X.X.X> and get the HTTP server (192.168.2.2). The data traffic entering service port 80 will be directed to the computer (192.168.2.2), and other computers on your LAN will not see this data traffic.

For some internet applications (such as Internet messaging and gaming applications), you can configure this port forwarding setting so that these applications can function correctly behind the firewall. These applications are required to have specific TCP/UDP ports. The ports for these applications and the protocol type will depend on what Internet services you are using. Please check with your service provider or application's user manual to have the information first.

Make sure you have the following ports setup as described below.

1. Check the **Enable** box.
2. Enter the desired name or description in the **Service Name** field.
3. In the **Incoming Ports** field, enter a range of ports. If you want to specify only a single port number, enter the same number in both boxes.

4. In the **Destination IP Address** field, enter the IP address of the computer you want to receive the connection request.
5. In the **Destination MAC Address** field, enter the MAC address of the computer you want to receive the connection request.

 **Information:** Find the MAC address

The steps below show how to find the MAC address of the computer in Windows 2000 and XP.

- a. Click on **Start -> Run**.
 - b. Type **cmd** in the Open field and then press Enter or click OK button.
 - c. In the command prompt, type **ipconfig/all** to obtain the **Physical Address** (=MAC address).
 - d. Write down this Physical Address (=MAC address). You need this information for setting. Its format should be XX-XX-XX-XX-XX-XX. The X is a hexadecimal digit (0-9 or A-F).
6. In the **Destination Port** field, enter a port number or a range of ports of the machine to which you are mapping.
 7. In the **Port type** field, select TCP, UDP, or both protocols. The protocol could be specified in your application's documentation.
 8. Click **SUBMIT** button to activate the setting.

For example, if you want to play game "Fighter Ace II" on a computer with an IP address of 192.168.2.3, enter **3** for the **Destination IP Address**. Find the MAC address of this computer and enter it for the **Destination MAC Address**. Select **TCP** as the **Port type**. Enter "**50000**" and "**51000**" for two boxes of **Incoming Ports** and also for the **Destination Port**. Click **SUBMIT** button to activate the setting. For other games or services, please consult the application's user manual.

Commonly Used Ports

Services	Protocol Type	Ports
HTTP (WEB Server)	TCP	80
FTP	TCP	20, 21
TELNET	TCP	23
SMTP (Mail Server)	TCP	25
POP3 (Mail Server)	TCP	110
IRC	TCP	6667
NNTP (News Server)	TCP	119

Port Triggering

Port triggering allows the router to watch outgoing data for specific port number. The IP address of the the computer that sends the data is remembered by the router, so that when the requested data returns through the router, the data will be passed to the specific computer by way of IP address and port mapping rules. The router opens the port when the Port Triggering happens. When the computer running the application stops sending the data through this port, the router will close the port.

1. Check the **Enable** box.
2. Enter the desired name or description in the **Application Name** field.
3. In the **Trigger Port** field, enter a port number. Check with your Internet application provider for more information on what the Trigger Port it is using.
4. Select TCP (Transmission Control Protocol), or UDP (User Datagram Protocol), or both protocols as the **Trigger Port Type**.

5. Specify the range of the **Public Ports** by entering the start and end port numbers in the required fields.
6. Select TCP (Transmission Control Protocol), or UDP (User Datagram Protocol), or both (TCP and UDP) as the **Public Port Type**.
7. Click **SUBMIT** button to activate the setting.

Click the **SUBMIT** button to store the changes.

[Back to Top](#)

Static Routing

Static routes are manually configured routes to remote networks. That is, the route is predefined and is not discovered by the *Routing Information Protocol* (RIP), as in dynamic routing. Static routing allows you to assign a gateway to an IP address or network. If there are routers on your internal network that do not function with RIP 1 or 2, you can set up a static route to those routers.

The advantage to using static routing is that network traffic is reduced; thus, static routing is beneficial for slow Internet connections. Routing using static routes is practical for small networks. For larger networks, the router needs to dynamically keep track of changes in the physical wiring of the network, and the use of dynamic routing (RIP) is recommended.

 **NOTICE: The Static Routing settings are intended for advanced network administrators only. Do not change these settings unless you are certain of the correct values. You may not be able to access the configuration tool if invalid information is entered.**

To use static routing, manually add the Destination IP Address, Subnet Mask, and Gateway IP Address for each route you are adding to the Static Routing Table, and click **ADD**. If you are routing to an entire network, the last number in the destination IP address should be a zero (0); for example, 192.168.0.0.

 **NOTE: In static routing, the Wireless Broadband Router does *NOT* dynamically discover routing information and does *NOT* use RIP. The Wireless Broadband Router currently does *NOT* support RIP.**

Use the checkboxes beside each route and the **DELETE** button to remove static routes from the Static Routing Table.

Click the **SUBMIT** button to store the changes.

[Back to Top](#)

Administration Settings

Password Settings

The Wireless Broadband Router uses a password to authenticate the user before allowing changes to be made to any network settings. If you would like to change the current password, check the **Change Your Password** checkbox and enter the new password in both **New Password** and **Retype Password** fields. Write down the password and keep it in a secure location for future reference.

System Administration

- **HTTP Port No.**

Do not change the **HTTP Port** value unless you have reason to do so. Typically, web servers listen for incoming web requests on port 80.

- **Allow remote user to configure the device**

If you would like a remote user to be able to administer your Wireless Broadband Router over the Internet, check the box titled **Allow remote user to configure the device**. Enter the IP address for the remote administration host computer.

- **Allow remote user to ping the device**

Check the box **Allow remote user to ping the device** to enable your Wireless Broadband Router to be "ping"ed by any user on the Internet. This feature is helpful if you want to let other Internet users to check the status of your Wireless Broadband Router.

- **Enable UPnP function**

UPnP stands for Universal Plug and Play, a protocol which allows UPnP-enabled client computers such as Windows XP to discover and configure the Wireless Broadband Router. One of most common use of UPnP on the router is to open ports to allow application-specific data to be forwarded through the router for various Internet services or gaming applications. The router detection and the router configuration process can be carried out automatically by the UPnP-enabled client applications such as **MSN Messenger** so you won't have to do it manually. Check the **Enable UPnP function** box to enable this service or clear the box to disable it.

If you have an Windows XP system, you can use it to access and control the router while the router's UPnP function is enabled. Here are some examples of what you can do with UPnP from your XP system.

Example 1) Access the router's Web Configuration tool without knowing its IP address.

1. Double click on the "My Network Neighborhood" icon from the desktop.
2. Double click on the "Broadband Router" icon that is created for your router.



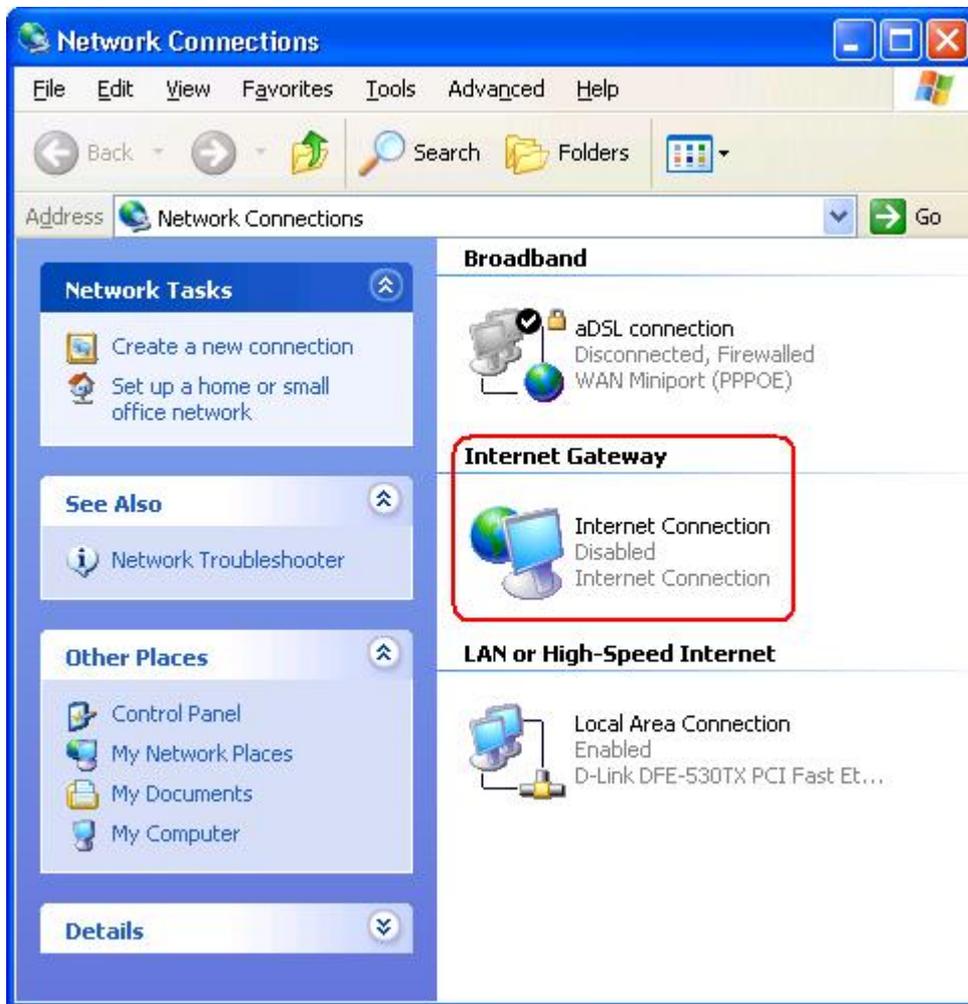
3. This will bring up the authentication screen of the router's Web configuration tool. Enter the correct password and click **OK** to access the Web configuration tool.



Example 2) Manage the router's port forwarding rules from the XP interface.

NOTE: You have already configured a port forwarding rule for the service via the web configuration tool, you don't need to perform the following steps for the same service again.

1. Right click on the "My Network Neighborhood" icon from the desktop.
2. Right click the **Internet Connection** icon created for the router. (See below)



3. Right click the icon and select **Property**.
4. Click **Settings**.
5. Click **Add**.
6. Enter Description of service, IP address of the service host, External Port number for this service, Internal Port number for this service and select either TCP or UDP.

For example, the graph below shows an example of how to enable a computer with an IP address 192.168.2.101 to host a public HTTP server.



7. Click **OK** button to save the changes.

Click the **SUBMIT** button to store the changes.

[Back to Top](#)

[Back to Contents Page](#)



[Back to Contents Page](#)

How to Configure the Router by the Control Utility: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

- ▶ [My Network Overview](#)
- ▶ [Wireless Settings](#)
- ▶ [Network Access Control](#)
- ▶ [Gaming](#)
- ▶ [Remote Access](#)
- ▶ [Administration](#)
- ▶ [Diagnostics](#)
- ▶ [Advanced Settings](#)

My Network Overview

The information on this menu provides you a general overview of your network status. On the left side of the screen, it displays the status of current connection to your router. The status will update when you click the Refresh button. On the right side, you can see the basic facts about your router. These items are as below:

- Operation Mode
- Connection Type
- Internet IP Address
- WAN MAC Address
- LAN IP Address
- Netmask
- Network Name (SSID)
- WEP Functionality

[Back to Top](#)

Wireless Settings

Network Name and Channel are necessary for enabling a wireless network.

- **Network Name (SSID)** - a unique network name, also called SSID (Service Set Identifier). It is used to identify the WLAN. When a mobile device tries to connect to the router, the user must know the router's SSID first.
- **Channel** - the radio channel over which a communication transmission occurs. The operating channel number depends on the regulatory domain.

The Wireless Broadband Router provides advanced mechanism for wireless security. It ensures the confidentiality of data, and also guards data against being modified. If you want to enable the security mechanism, check the **Enable Wireless Security** box. Select either **WEP** or **WPA** in **Network Authentication**.

WEP

Wired Equivalent Privacy (WEP) encryption used in the 802.11 standard is to protect wireless communication from eavesdropping. WEP provides a way of creating an encrypted key that is shared between a wireless client (such as a notebook with a wireless PC card) and the router. This key encrypts data before it is transmitted. WEP can be implemented with 40(64)-bit or 104(128)-bit key. Basically, the larger key length is relatively more secure for your data. For added security, change your key often. When you change the key on one wireless device, remember that it must be changed for all wireless devices and access points in the network.

- **Key Format:** It could be in ASCII or hexadecimal format. Hexadecimal digits include the numbers 0 to 9 and the letters A to F. ASCII format allows you to enter any characters.
- **Key Length:** It could be either 40(64)-bit or 104(128)-bit key length. Some wireless network cards are only able to use 40(64)-bit encryption. If all your clients are able to communicate at 104(128)-bit choose 104(128)-bit. If any client is only able to communicate at 40(64)-bit, choose 40(64)-bit.
- **Key1, Key2, Key3, and Key4:** Enter four different keys in the Key fields provided to store on the Wireless Broadband Router. If you choose 40(64)-bit encryption, enter a 5-character (or 10 hexadecimal digits). For 104(128)-bit encryption, enter a 13-character (or 26 hexadecimal digits) WEP key.
- **Default Key:** Select only one key out of the four provided in the Default Key applied for encryption drop-down list.

WPA

WPA is an upgrade to the WEP (Wired Equivalent Privacy) standard for securing your wireless network.

If you would like to secure your wireless network using WPA, you will need the following:

- WPA enabled on your Dell TrueMobile 2300 Wireless Broadband Router
- WPA support for your wireless clients. If you are using a Dell TrueMobile wireless client, you can check for the availability of WPA enabled software update for your wireless client at <http://support.dell.com>.

Enter the fields with the required parameters.

- **WPA Pre-shared Key:** WPA Pre-Shared Key (PSK) is a field where the password is entered. All wireless clients must also use this password to gain access to the network. Note that the Key format must also match the setting for the wireless clients.
- **Key Format:** Key Format is a box that lists 2 items: **Hexadecimal** Digits (numbers 0-9 and letters A-F only) and **ASCII** Characters (any letter, number, or symbol). Select the proper format for your key. If your wireless client(s) only support one of the two formats, be sure to specify the correct one.
- **WPA Group Rekey Interval:** WPA Group Rekey Interval is used to specify the frequency of encryption key rotations. The lower the number, the faster your encryption key will rotate, however, setting this number too low may cause your wireless network to slow down.
- **WPA Encryption:** WPA Encryption has 2 choices: **TKIP** (Temporal Key Integrity Protocol) - it is the most commonly used encryption method and **AES** (Advanced Encryption Standard) - it can be used if your wireless clients do not support TKIP.

Click the **Factory Default Value** button to reset the wireless settings to its factory defaults.

Click the **Apply** button to save the settings.

Click the **Restore** button to restore to its previous settings.

[Back to Top](#)

Network Access Control

Buttons	Actions
Add	Click "Add" button to add an new entry in the list.

Edit	Click on the record needs to be modified in the list and then click "Edit" button. Then, a dialog box will appear for you to edit it.
Delete	If you want to delete the record from the list, click on the record you want to delete and then click "Delete" button to remove it from the list.
Delete All	Click "Delete All" button to delete all the records in the list.
Restore	Click the "Restore" button to restore to the previous settings.

Parental Control

In the wake of increasing concern by parents about inappropriate content on the Internet, the router provides parental control function to filter and block inappropriate website (such as sex and violence related sites). Parental Control enables you to determine what website your children can and cannot access. It also allows you to specify what time children can access the Internet.

Step-by-step to add an new entry

1. Check the **Enable Parental Control** box.
2. Click **Add** button. A pop-up **Parental Control** window will appear.
3. Enter the IP address of the computer you want to control (for example, your child's computer) in the **Host IP** field.
4. Select **Allowed** or **Denied** from the **Internet Access** list.
5. Decide the time **Interval**. Check the radio button of **Permanent** if this rule always applies or specify a period of time for Internet access control.
6. Select **allow** or **deny** for web access.
7. Specify which website is allowed / denied by entering its URL in the **Website URL** field.
8. Click the **OK** button to apply. Or click the **Cancel** button to exit without making any change.
9. Click the **Apply Parental Control Settings** button on the bottom of the screen to activate the new settings.

MAC

This feature filters specific MAC (Media Access Control) addresses within the wireless local area network (WLAN) from accessing the network.

Step-by-step to add an new entry

1. Check the **Enable MAC Access Control** box. The following **MAC Access Control Settings** window will appear.
2. Click **Add** button. A pop-up **MAC Access Control: Add Entry** window will appear.
3. Enter the hexadecimal characters of the MAC address (for example, 00:11:22:33:44:55) that you want to grant or deny the access in **Host MAC** box.
4. Select **Grant** or **Deny** from the **Operating Type** list. If you select Grant, the device with this MAC Address is allowed to access the network, and the device with other MAC address will be filtered and denied to access the network.



NOTE: The operating type for ALL records MUST be either Grant or Deny.

5. Click the **OK** button to apply. Or click the **Cancel** button to exit without making any change.
6. You can click on the selected record and click again on its **Host Name** to enter the desired name for this record.
7. Click the **Apply MAC Control Settings** button on the bottom of the screen to activate the new settings.

[Back to Top](#)

Gaming

In some cases, the firewall feature of the router will cause a game not to function as intended. The settings listed on the **Gaming** menu can solve these problems. This section will guide you how to configure the device for gaming.

Your TrueMobile 2300 Router has an integrated Network Address Translation (NAT) firewall that rejects any unsolicited data from the Internet to access the computer on your LAN. Basically, if you do not request data, the

data will not be allowed by the firewall to pass. Applications like email and web browsing are unaffected by NAT because in each case, you make this request to receive the email or web page. However, some applications (such as Internet messaging and gaming applications) will not function correctly. It is because the requests for data do not originate from your computer but from a device/computer out on the Internet, and the NAT firewall blocks the data needed for those applications.

Port Forwarding Settings

You can configure on this **Gaming** menu to create a custom rule that defines a specific port and protocol for unsolicited traffic to pass through to that computer. The ports for gaming and the protocol type (TCP, UDP, or both) will depend on what gaming service you are using. Make sure you have the following ports setup as described below.

Information: Port Number

The port number identifies the protocol or service. Those from 0 through 1023 are the most commonly used port numbers and have been agreed as the standardized ports for specific kind of servers. For example, port 80 typically always indicates HTTP traffic. Those from 1024 through 49151 are used for many purposes, while those from 49152 through 65535 are Dynamic/Private Ports (they are rarely used). You can check the status of current IP connections by simply entering **netstat -a** on the command line (Click **Start** and then click **Run**. Type **cmd**, and press Enter. On the command prompt, type **netstat -a**). It will display all connections and listening ports.

1. Click **Add** button on the bottom the screen. A pop-up **Gaming: New Record** window will appear (as shown below).

*If you want to edit the gaming profile in the list, click on the profile you want to modify and then click **Edit** button. Then, a pop-up Gaming: Edit Record window will appear for you to edit it.*

*If you want to delete the gaming profile from the list, click on the profile you want to delete and then click **Delete** button to remove it from the list.*

*If you want to delete all the gaming profiles in the list, click **Delete All** button to remove all the entries in the list.*

2. Enter the desired name or description in the **Game Description** field.
3. Enter the IP address of the device (e.g. desktop PC) for gaming in the **Computer IP for gaming** field.
4. Select a transport layer protocol from the **Protocol Type** list. The options listed here are TCP (Transmission Control Protocol), UDP (User Datagram Protocol), and both.
5. Enter the incoming port number in the **Incoming Port No.** field and the outgoing port number in the **Outgoing Port No.** (also called **Destination Port**) field. The information should be available from your gaming service provider.

 **NOTE:** The minimum port number is 0, and the maximum port number is 65535.

For example, if you want to play online game "Diablo II" (Battle.net) on your PC with the IP Address 192.168.2.3, enter **192.168.2.3** in the Host IP field. Select **Both** from the Protocol Type list. Then enter **4000** or **6112-6119** in the Incoming Port No. field and also in Outgoing Port No. (or called Destination Port No.) field.

6. Select **Enable** or **Disable** the gaming from the **State** list.
7. Click the **OK** button to apply. Or click the **Cancel** button to exit without making any change.

DMZ

Some applications have problems to work behind a firewall. You can put the computer running this application outside the firewall, either physically, or via the router's DMZ (demilitarized zone) feature.

Place the computer into the router's DMZ would let the router allow all data to pass through all ports of the router to this computer. It disables the NAT firewall for that computer and leaves that computer vulnerable to attack, so it is inherently less secure. It is recommended to do this only on the computer that has no important data.

1. Check the **Enable DMZ Host** box.
2. Type the IP address of the computer that you want to run the gaming application in the **DMZ IP Address** field.

Remote Access

Allow remote user to configure the device

This option allows you to configure the device from the remote site via the network.

1. Check the **Allow remote user to configure the device** box.
2. Enter the IP address of the remote administration host in the required field.
3. Enter the HTTP port number that will be used on the router in the **HTTP port number** field.
4. Click the **Apply** button to save the settings. Or click the **Restore** button to restore to its previous settings.

Allow remote user to ping the device

This option allows you to configure the WAN ping capability. The default setting is disabled. The router will not answer ping requests, so your WAN port is invisible to port scanners, which can make your network safer.

1. If you want your WAN port to be visible on the Internet, you can check the **Allow remote user to ping the device** box.
2. Click the **Apply** button to save the settings. Or click the **Restore** button to restore to its previous settings.

Administration

Change Password

To prevent unauthorized access to change the setting, the device is password protected. It's strongly recommended that you change the factory default password.

1. Click **Change Password** button. Then, a pop-up **Password Settings** window will appear.
2. Type the original Password in the **Original Password** field.
3. Type the new password in the **New Password** field and retype it in the **Confirm Password** to verify.
4. Type the password hint message in the **password hint message** field.
5. Click **Submit** when you finish the setting. If you want to clear any values you have entered on any field, click **Cancel**.

System Rescue

The configuration settings can be saved as "TrueMobile Profile (.pro)" file. You can restore these backup settings whenever necessary. Four buttons for system rescue are as below:

- Save Current System Configuration To File - save the current settings as a ".pro" file in any directory you want to map.
- Load System Configuration Manually - load the backup file to restore the setting.
- Choose From The Configuration File List - the router will automatically add a record in the file list when you save the setting file. You can select the setting file from this list. You do not need to find the directory in which you saved the file.
- Reset to Factory Default Settings - reset the router to its default configuration.

Upgrade to New Firmware

If you are instructed to upgrade the firmware, click the **Upgrade to New Firmware** button. It will connect to dell website to upgrade to the latest firmware release. It is unnecessary to upgrade the firmware if your router is working properly.

Diagnostics

You can monitor the current status of your network connection in the **Diagnostics** menu. The network detecting can be activated by clicking **Start Diagnostics** button on the bottom of the screen.

When the detecting is done, the screen will display a summary of your Internet connectivity. It will show the information (such as the Host Name, IP Address, MAC Address, and Connection Status) of the **LAN Hosts** and **Wireless Hosts** in your network.

[Back to Top](#)

Advanced Settings

To configure the advanced settings of the router, click **Login** button to login the Web-based Configuration Tool. The web-based configuration tool enables you to set up every possible network configuration for your Dell TrueMobile 2300 Wireless Broadband Router.

[Back to Top](#)

[Back to Contents Page](#)



FAQs

Hardware Installation:

- ▶ [How do I install the Dell TrueMobile 2300 Wireless Broadband Router for optimal coverage?](#)
- ▶ [What is the maximum number of wireless, wired, and Internet users for each Dell TrueMobile 2300 Wireless Broadband Router?](#)
- ▶ [Can the Dell TrueMobile 2300 Wireless Broadband Router attach to a hub, switch, or router?](#)
- ▶ [What is the physical connection from the Dell TrueMobile 2300 Wireless Broadband Router to a wired network?](#)

Software Configuration

Internet Settings

Wireless Attributes

Supported Features

Troubleshooting

Other

Glossary

How can I manage the Dell TrueMobile 2300 Wireless Broadband Router?

The Dell TrueMobile 2300 Wireless Broadband Router can be managed on your computer using the Windows-based Setup Wizard, Control Utility programs, or a web-based configuration tool. For detailed information, refer to the [Managing your Router](#) section of the User's Guide.

How do I locate the MAC address for the Dell TrueMobile 2300?

The **Device Status** page from the web-based configuration tool displays the MAC address. From the web-based configuration tool, click the **Device Status** tab. Both the WAN and LAN ports have separate MAC addresses.

How do I obtain Internet Protocol (IP) settings from my Internet Service Provider (ISP)?

1. Make sure that the cable or xDSL modem is connected properly to the Wireless Broadband Router.
 2. Reset the cable or xDSL modem by powering the modem off and on.
 3. If you are using dynamic IP addressing, make sure that the cable or xDSL modem is DHCP capable. For assistance, consult the modem's documentation.
 4. Some ISPs require that you register a MAC address with them:
 - To view the WAN Ethernet MAC address, start the web-based configuration tool. Click the **Device Status** tab.
 - In the case that your ISP requires a WAN Ethernet MAC address different from the one listed on the Device Status page, refer to the [Cable/xDSL ISP settings](#) portion of the Basic Settings section in the user's guide.
 5. If you have a DSL line and your ISP requires you to input a username and password:
 *NOTE: This information is required for some cable modem users.*
 - Start the web-based configuration tool.
 - Click the **Basic Settings** -> **Cable/xDSL ISP Settings** tabs.
 - Enter a username and password in the fields provided.
 - Click the **Save & Restart** button to save the changes and restart the computer.
 6. If you have a cable connection and your ISP requires a host computer name or domain name:
 - Start the web-based configuration tool.
 - Click the **Basic Settings** -> **Cable/xDSL ISP Settings** tabs.
 - Enter the host computer name in the field provided.
 - Click the **Save & Restart** button to save the changes and restart the computer.
-

How do I install TCP/IP?

When a wired or wireless network adapter is installed, TCP/IP is usually installed. If TCP/IP is not installed on the computer, refer to the documentation that accompanied with the network adapter.

Likewise, the typical installation configures the computer to automatically obtain an IP address and other Internet protocol information from a DHCP server.

How do I enable Point to Point Protocol over Ethernet (PPPoE)?

The Dell TrueMobile 2300 Wireless Broadband Router supports PPPoE. To set PPPoE support:

1. Start the web-based configuration tool.
 2. Click the **Basic Settings** -> **Cable/xDSL ISP Settings** tabs.
 3. Click the **Enable** option for PPPoE.
 4. Enter the username and password as specified by your Internet Service Provider (ISP).
 5. Click the **Save & Restart** button to save the changes and restart the computer.
 6. To ensure that PPPoE is enabled and that the status shows a successful connection, click the **Device Status** tab.
-

How do I configure the Dell TrueMobile 2300 for either dynamic vs. static IP addresses?

The Dell TrueMobile 2300 Wireless Broadband Router can be configured for either static or dynamic IP addresses.

For static IP addresses:

- The computer's IP address should use the same network portion of the address as the access point. For example, for the router's default IP address, the computer's IP address must begin with 192.168.2.

- The computer's subnet mask should be the same as the access point's subnet mask.
- The computer's gateway IP address should match the IP Address for the access point.
- Make sure the IP address assigned by your ISP matches the DNS IP address for your computer.

For dynamic IP addresses:

- Make sure your computer has successfully acquired an IP address from the DHCP server. Open a DOS command prompt, type `ipconfig`, and then press <Enter>.
- Compare the network portion of the address for the computer with that of the access point. The computer's IP address begins with 192.168.2. To find the current IP address for the access point, start the web-based configuration tool. Click the **Device Status** tab.



NOTE: It is recommendable to configure the devices connected to the WLAN to acquire their IP settings from the DHCP server dynamically.

If I do not have a broadband connection, what do I do?

It's recommended that you subscribe to a Broadband service from your local ISP for Internet connectivity and then try the setup again. However, if your need is to connect additional wireless or wired computers to the existing local network or to create a new isolated local network, you can configure your TM 2300 router as an access point. To configure the router as an access point, refer to the [How to switch to an Access Point mode](#) section in the User's Guide.



Glossary

- [Access Point](#)
- [Cable Modem](#)
- [Client](#)
- [Domain Name System \(DNS\)](#)
- [Dynamic Host Configuration Protocol \(DHCP\)](#)
- [Encryption](#)
- [Ethernet](#)
- [Ethernet Address \(MAC Address\)](#)
- [Host](#)
- [Internet Protocol \(IP\)](#)
- [Internet Service Provider \(ISP\)](#)
- [IP Address](#)
- [Link Light](#)
- [Local Area Network \(LAN\)](#)
- [Network Adapter](#)
- [Network Address Translation \(NAT\)](#)
- [Network Name \(SSID\)](#)
- [Point to Point Protocol over Ethernet \(PPPoE\)](#)
- [Port](#)
- [Protocol](#)
- [Transmission Control Protocol/Internet Protocol \(TCP/IP\)](#)
- [Virtual Local Area Network \(VLAN\)](#)
- [Virtual Server](#)
- [Wide Area Network \(WAN\)](#)
- [Wireless Local Area Network \(WLAN\)](#)
- [xDSL Modem](#)

[FAQs](#)



What is the practical coverage of the Dell TrueMobile 2300 Wireless Broadband Router?

The coverage of each Dell TrueMobile 2300 Wireless Broadband Router micro cell varies with physical objects and interference in the coverage area. The rated coverage is 1500 feet for line of site, open area, optimal conditions, and minimal throughput. Realistically, in a common home, office, or business environment, each Dell TrueMobile 2300 Wireless Broadband Router micro cell has approximately a 150 to 250 foot coverage, while maintaining optimal throughput.

The coverage of the system is virtually unlimited. By design, the coverage of the system is extended via multiple access points (Dell TrueMobile 2300 Wireless Broadband Routers) arranged into an overlapping micro cell coverage arrangement, similar to the cellular telephone system. This allows for virtually unlimited range via roaming, maximum throughput, redundancy, minimized interference issues, and increased communication reliability.

Does the signal travel through walls

Yes, the signal travels through many barriers including glass, cement, wood and brick.

What devices cause interference?

The Dell TrueMobile 2300 Wireless Broadband Router and workstation adapters operate in the unlicensed 2.4 *gigahertz* (GHz) band. Other items operating in this frequency range that may cause interference include microwave ovens and 2.4 GHz portable phones. PCS or analog cellular phones do not operate at 2.4 GHz and do not cause interference. Proper placement of access points usually eliminates interference problems created by other 2.4 GHz devices.

Can I roam to another subnet with the Dell TrueMobile 2300?

In order to roam to another subnet, consider implementing a *Virtual Local Area Network* (VLAN) and have all access points located on one VLAN.



Does the Dell TrueMobile 2300 support bridging of two or more Ethernet LANS?

The Dell TrueMobile 2300 supports either a point-to-point bridging situation or a multipoint bridging situation (for 3 remote locations). Point-to-Point and Point-to-Multipoint AP/Bridge modes require you to use the same product (Dell TrueMobile 2300) at the other end(s) of the bridge. Be sure to follow the instructions on how to use the bridging functions of AP/Bridges.

Does the Dell TrueMobile 2300 support repeating?

Yes, you can use the Dell TrueMobile 2300 as a repeater to extend the coverage range beyond the limits imposed by a single segment.

Does the Dell TrueMobile 2300 support notebook computers with integrated wireless adapters and wireless adapters from vendors other than Dell?

Several computer manufacturers are offering integrated 802.11b/g wireless adapters as an add-on option. Additionally, there are several manufacturers of 802.11b/g wireless adapters. If the adapter is WiFi™ certified, the adapter should interoperate with the Dell TrueMobile 2300 Wireless Broadband Router.

Does the Dell TrueMobile 2300 support optional antennae?

The Dell TrueMobile 2300 does not have the capability to accommodate optional antennae.

Does the Dell TrueMobile 2300 support Virtual Private Networking (VPN)?

Yes, the Dell TrueMobile 2300 supports PPTP, IPSec, L2TP VPN pass-through.

Does the Dell TrueMobile 2300 support MAC address filtering?

Yes, the Dell TrueMobile 2300 supports MAC address filtering.

Does the Dell TrueMobile 2300 support individual gaming port settings?

Yes, the Dell TrueMobile 2300 supports individual gaming port settings.

Does the Dell TrueMobile 2300 support *Routing Information Protocol (RIP)*?

No, the Dell TrueMobile 2300 currently does not support *Routing Information Protocol (RIP)*.

Can I operate the Dell TrueMobile 2300 in a Macintosh environment?

The Dell TrueMobile 2300 operates in a Macintosh environment; however, the web-based configuration tool typically only functions with *Microsoft Internet Explorer* or *Netscape Navigator*, both version 4.0 or higher. Dell does not provide support for Macintosh environments.





I cannot access the Internet through the Dell TrueMobile 2300 Wireless Broadband Router. What should I do?

Use the Control Utility to first determine where the connectivity is broken. This can be verified by the presence of the arrow on its connection status window. You may also ignore this step and check for the following scenarios.

If there is a connection failure between your computer and the router, make sure the computer is successfully connected to the network.

- To review the connection status for the wireless network, start the web-based configuration tool and click the **Device Status** tab.
- Make sure the network adapter is successfully installed. For assistance, refer to the documentation that was shipped with the adapter.
- Make sure the TCP/IP stack is successfully installed.
- Check the physical network cable connections for the computer.
- Make sure the computer's IP settings are correct: Open a DOS command prompt window, type `ipconfig`, and press <Enter>.
 - The computer's IP address must use the same network extension as the access point. For example, for the access point's default IP address, the computer's IP address would have to be in the range of 192.168.2.2 to 192.168.2.254. To view the Dell TrueMobile 2300 Wireless Broadband Router IP settings, start the web-based configuration tool. Click the **Device Status** tab.
 - The computer's subnet mask should be the same as the access point's subnet mask.
 - The computer's gateway IP address should match with the IP Address for the access point.
 - Check that the IP address assigned by your Internet service provider matches with the DNS IP address for your computer.

If there is a connection failure between the Wireless Broadband Router and Internet,

- Make sure the cable or DSL modem is properly plugged in and has power.
- Verify that the cable or DSL modem has a good physical cable or telephone connection. If you are not sure, review the documentation that was shipped with your modem.
- Make sure the cable or DSL modem is properly connected to the Internet port of the TrueMobile 2300 Wireless Broadband Router.

Try to view a valid Internet site. If you go to a known Internet site and are able to view the page, then you should be able to access the Internet through the Wireless Broadband Router.

My computer is not connected to the Dell TrueMobile 2300 Wireless Broadband Router, what should I do?

1. Check the LAN (Ethernet) cable and make sure you have inserted it correctly in the router. Please refer to the Quick Start Guide that came with the router for reference.
 2. Make sure your web browser is not configured to access the Internet via a proxy server. To do this in **Internet Explorer**, click **Tools > Internet Options > Connection Tab > LAN Settings** button. Make sure all boxes are unchecked.
 3. Unplug the power cable from the rear of the router. Wait 5 seconds. Plug the power cable back in.
 4. If you are connected by a wireless network, then make sure that you have the same SSID (network name) on your computer and the Dell TrueMobile 2300 Wireless Broadband Router. The default SSID (network name) is "**wireless**" (the name is case-sensitive).
-

There are only some clients on the LAN that work. What should I do?

If the wired clients work, but the wireless clients cannot access the Dell TrueMobile 2300 Wireless Broadband Router:

Make sure the network name (SSID), encryption method, and encryption key for the Dell TrueMobile 2300 Wireless Broadband Router match with those for the wireless client:

For the wireless client:

- See the documentation for your wireless adapter.

For the Dell TrueMobile 2300 Wireless Broadband Router:

- Start the web-based configuration tool.
- Click the **Basic Settings** -> **Wireless Settings** tabs.

Make sure that either the client is set to get an IP address automatically. For instructions, click [here](#).

If the wireless clients work, but the wired clients cannot access the Dell TrueMobile 2300 Wireless Broadband Router:

Make sure the Ethernet cables are connected correctly. For information, see the documentation for the hub or switch.

My browser does not display the web-based configuration tool. What should I do?

Use *Microsoft Internet Explorer* or *Netscape Navigator*, both version 4.0 or higher, as your browser.

Check the browser's proxy server settings:

1. Open the Control Panel on your computer, and double click the **Internet** icon from the Control Panel window. This will open a window titled *Internet Properties*.
2. From the Internet Properties window select the **Connection** tab.
3. Click the **LAN Settings** button.
4. Under the heading *Proxy server* select the **Access the Internet using a proxy server** option.
5. Click the **Advanced** button. This will bring up a window titled *Proxy Settings*.
6. Disable the proxy server setting or set it to auto-detect.

Remove or disable any firewall software on the client. See the documentation included with the firewall software.

Remove any dialup settings in the browser:

1. Open a browser. For *Internet Explorer*, follow the next two steps.
2. Click **Tools** --> **Internet Options** --> **Connections**.
3. Click the **Never Dial a connection** option.

Enter `http://192.168.2.1` for the default IP address. If the default IP address has been changed, then use the new IP address assigned to the Dell TrueMobile 2300 Wireless Broadband Router.

Make sure the client is set to obtain an IP address automatically.

To obtain an IP address automatically:

1. Open the Control Panel on your computer, and double click the **Network and Dial-up Connections** icon.
2. Right-click your local area connection.
3. Click **Properties**.
4. Select the **TCP/IP** option.



*NOTE: Some systems may require you to select the **Networking** tab before selecting the **TCP/IP** option.*

5. Click the **Properties** button.
6. Check the **Obtain an IP address automatically** option.

If you are using a manually assigned IP address for the client, the IP address for the client must be on the same subnet as the Dell TrueMobile 2300 Wireless Broadband Router:

1. Follow the instructions above to access the Internet Protocol (TCP/IP) Properties window.
2. The option **Use the following IP address** should be selected.

3. Check and assure that the value in the **Subnet mask** field matches that for the Dell TrueMobile 2300 Wireless Broadband Router.

If you are using a DHCP server to provide an IP address to the Dell TrueMobile 2300 Wireless Broadband Router, you must determine the address that was provided by the DHCP server. For assistance on getting the IP address from the DHCP server, see the documentation for your server or contact your network administrator.

Make sure that the Dell TrueMobile 2300 Wireless Broadband Router is properly installed and configured:

1. Make sure that the **Power** light on the front of the access point is lit.
2. Make sure that the LAN light on the front of the access point is lit. The LAN LED indicates a wired client connection.
3. Check the computer's network settings. Verify that the TCP/IP settings are correct.
 1. Open a DOS command prompt window.
 2. Type `ipconfig` and press <Enter>.
4. Compare the network portion of the address for the computer with that of the access point. The first three octets of the address should be the same. For example, if the access point's IP address is the default, 192.168.2.1, the computer's IP address should be in the range from 192.168.2.2 to 192.168.2.254; thus, it should appear as `192.168.2.xxx`.

Reset the Dell TrueMobile 2300 Wireless Broadband Router to its default settings. See [How do I restart or reset the Broadband Router?](#)

My computer is not connected to the Internet, what should I do?

1. Check the connection between the router and the cable/DSL modem to make sure it is properly connected.
 2. Double-click the information you entered in the cable/DSL settings.
 3. Unplug the power cable from the rear of the cable/DSL modem. Wait 5 seconds. Plug the power cable back in.
-

The TrueMobile CD Setup Wizard program does not run automatically after inserting the Installation CD into the CD-ROM drive. What should I do?

- a. Go to start > Run
 - b. Type `x:\setup.exe` (where "x" is the drive letter of your CD-ROM drive)
-

How do I access the Wireless Broadband Router after disabling the DHCP server function?

Once you have disabled the DHCP server function on the Wireless Broadband Router by un-checking the **Enable DHCP Server Function** box on the DHCP Server Settings page in the **Advanced Settings**, you may not be able to access the web-based configuration tool again. To restore access to the web tool, use one of your network clients to do the following:

For Windows XP and 2000

1. Right-click **My Network Places** and click **Properties**.
2. Right-click your local area network connection and click **Properties**.
3. Select **Internet Protocol (TCP/IP)** and click **Properties**.
4. Click the **Use the following IP address** option.
5. In the **IP Address** field, enter `192.168.2.2`.
6. In the **Subnet Mask**, enter `255.255.255.0`.

 **NOTICE:** After making changes to the Broadband Router settings, you must reassign your network client to obtain an IP address dynamically. Follow the instructions above for the Internet Protocol Settings on your computer. Recheck the appropriate option to obtain an IP address automatically.

How do I restart or reset the Wireless Broadband Router?

To restart the Dell TrueMobile 2300 Wireless Broadband Router, unplug the power connector and plug it back in.

To load the Dell TrueMobile 2300 Wireless Broadband Router's default settings, hold down the reset button on the router for at least five seconds. While the unit resets, the Power light blinks.

 **NOTICE:** When you reset the Dell TrueMobile 2300 via the reset button, press it for at least five seconds, the current configurations will be erased and the [factory default settings](#) will be loaded on the unit.

For customer support, go to support.dell.com.



How do I find out about firmware upgrades?

All new firmware upgrades are posted on the web. To download the latest firmware, go to the Dell support website: support.dell.com.

 **NOTE:** You can only use firmware designed specifically for the Dell TrueMobile 2300 Wireless Broadband Router.

Use the Upgrade Firmware page on the web-based configuration tool once you have downloaded the firmware. Click the **System Tools** -> **Upgrade Firmware** tabs. Enter the file name and path for the new firmware. Click the **Start** button to load the file on your Dell TrueMobile 2300 Wireless Broadband Router.

What is the actual speed throughput for the Dell TrueMobile 2300?

In 802.11g, wireless network adapters and access points provide up to 54 Mbps data transmission rate. In 802.11b, the data can be transmitted at the rate up to 11 Mbps. Actual throughput, however, may be less, just as 10 Mbps-cabled Ethernet does not always provide 10 Mbps performance. Transmission speeds vary with files size, number of users, and distance from the access point. A properly designed system provides Ethernet-like performance for users. As signal strength decreases, the automatic data rate of 802.11g decreases from 54 Mbps to 48, 36, 24, 18, 12, 9, or 6 Mbps in order to maintain the connection. The data rate of 802.11b may decrease from 11 Mbps to 5.5, 2, or 1 Mbps.

Are there any known health issues caused by Radio Frequency (RF) transmission from the Dell TrueMobile 2300?

There is no conclusive evidence, to date, that RF waves from the 2.4 *gigahertz* (GHz) range pose any health issues. Although wireless LAN devices operate at the same frequency as microwave ovens, wireless access points and adapters at 2.4 GHz emit a power signal of 100 *megawatts* (MW), less than other 2.4 GHz products, such as microwave ovens or cordless phones.

Is this a shared or switched technology medium?

The wireless access point of the Dell TrueMobile 2300 Wireless Broadband Router is similar to a hub, which is a shared medium.

What is the difference between Bluetooth and 802.11?

These technologies are aimed at different situations. Bluetooth is a 1 Mbps technology designed for the interconnection of devices that are in close proximity to one another. You use Bluetooth when you have two or more devices requiring direct connectivity in short distances of about 30 feet. Some examples include PDAs or handheld computers to computers; notebooks to printers; and phones to headsets. The 802.11 products are a full LAN connectivity solution, designed to provide network transmissions at high data rates and in a greater distance. You use 802.11 product when you want to access to the Internet or a local area network.

Does the Dell TrueMobile 2300 support Internet games?

The Dell TrueMobile 2300 Wireless Broadband Router supports some Internet games, depending on the game software. If you have difficulties, consult the software supplier's technical support as they may be aware of configurations to enable their game to be played via a NAT server.

You may play games over a wireless network as long as the game supports multiple users on a LAN. To find out if multiple

users are supported for your particular game, consult the software's technical support or documentation.

What settings do I change to play games with the router connected in the network?

The Dell TrueMobile 2300 Wireless Broadband Router supports many Internet games. Some Internet games may require the router to forward in-bound data to a computer through an application-specific port or ports. To enable the support for these Internet games, configure the **Custom Port Forwarding Settings** portion of the **Port Forwarding** section to open a specific port or a range of ports.



NOTE: It's recommended that you use some form of static IP addressing on the game hosting computer.

Does the Dell TrueMobile 2300 prevent hacker attacks?

The Dell TrueMobile 2300 Wireless Broadband Router attempts to prevent unauthorized access by restricting permissions to specified users on your wireless network.

The web-based configuration tool also contains an intruder detection log which records any attempted break-ins by unidentified users. To view the log, start the web-based configuration tool. Click the **System Tools -> Intruder Detection Log** tabs.

How can I find additional information?

For additional information, including international telecommunication certificates and customer support, visit support.dell.com.



[Back to Contents Page](#)

ISP Settings Checklist: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

Ask Your Internet Service Provider about Your Cable Modem or DSL Modem Settings

Ask your provider these questions about your broadband connection and fill out this ISP checklist so that you will have this information readily available when you begin your installation.

 **NOTE:** In some cases, you may not need to fill in any information (Example: Most of the Cable Modem Service Providers). If you think you fall under that category, please skip this table.

QUESTIONS	Field To Enter	Your Entry	Example Entry
Q1. Is my IP address static or dynamic? If it is static, have your provider give you any required settings. If it is dynamic, you can skip this section.	Static IP address		178.182.12.13
	IP Subnet mask		255.255.255.0
	ISP Gateway Address		172.134.122.100
	Domain Name Server (DNS) Address		233.221.213.10
Q2. Does my ISP service use PPPoE (Point-to-Point Protocol over Ethernet)? If so, have your provider give you any required settings. If not, skip this section. <i>Note: these settings are typically required only for DSL modems.</i>	ISP User Name (PPPoE)		jdoe123
	ISP Password (PPPoE)		99btlber
	Service Name (PPPoE)		(this field may not be required)
Q3. Does my connection have an assigned Host Name? If so, enter the host name here.	Host Name		MY_ISP
Q4. Does my connection have an assigned Domain Name? If so, enter the Domain Name	Domain Name		FRONTIER

here.			
Q5. Is my connection bound to a MAC address? If so, enter the MAC address here. <i>Note: these settings are typically required only for cable modems.</i>	MAC Address		00-06-5B-D2-E1-F3

[Back to Contents Page](#)



[Back to Contents Page](#)

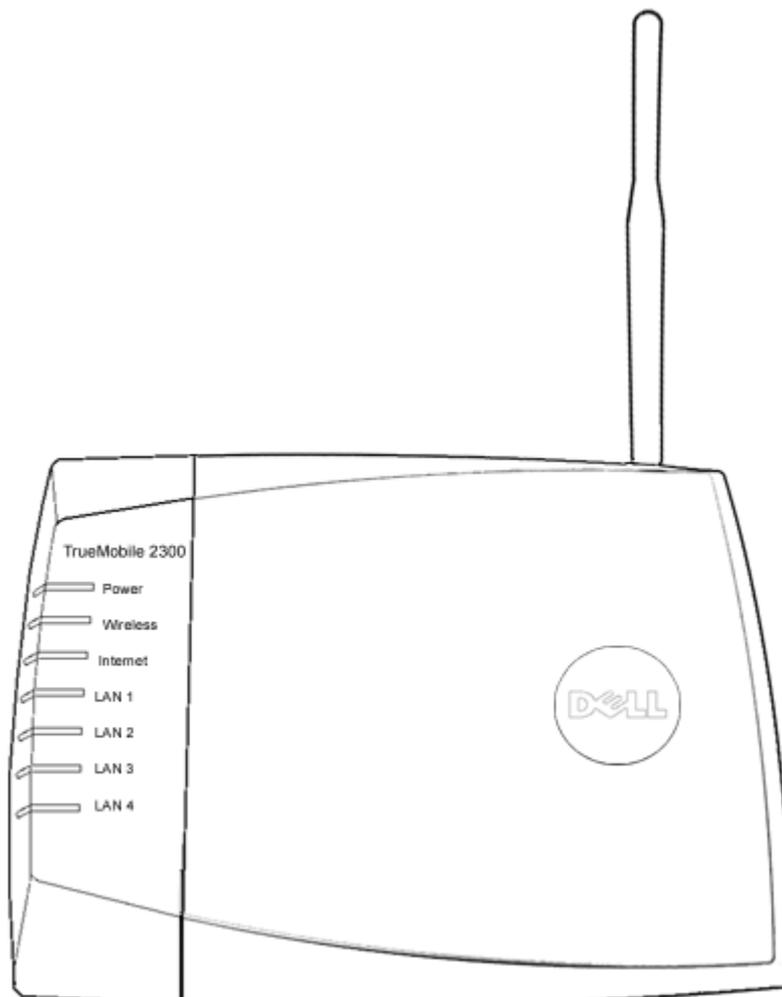
A Look at the Hardware: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

▶ [Front Panel](#)

▶ [Back Panel](#)

Front Panel

The Dell TrueMobile 2300 Wireless Broadband Router has seven *Light Emitting Diodes* (LEDs), or link lights, on its front side. The following table defines the behavior for each LED:



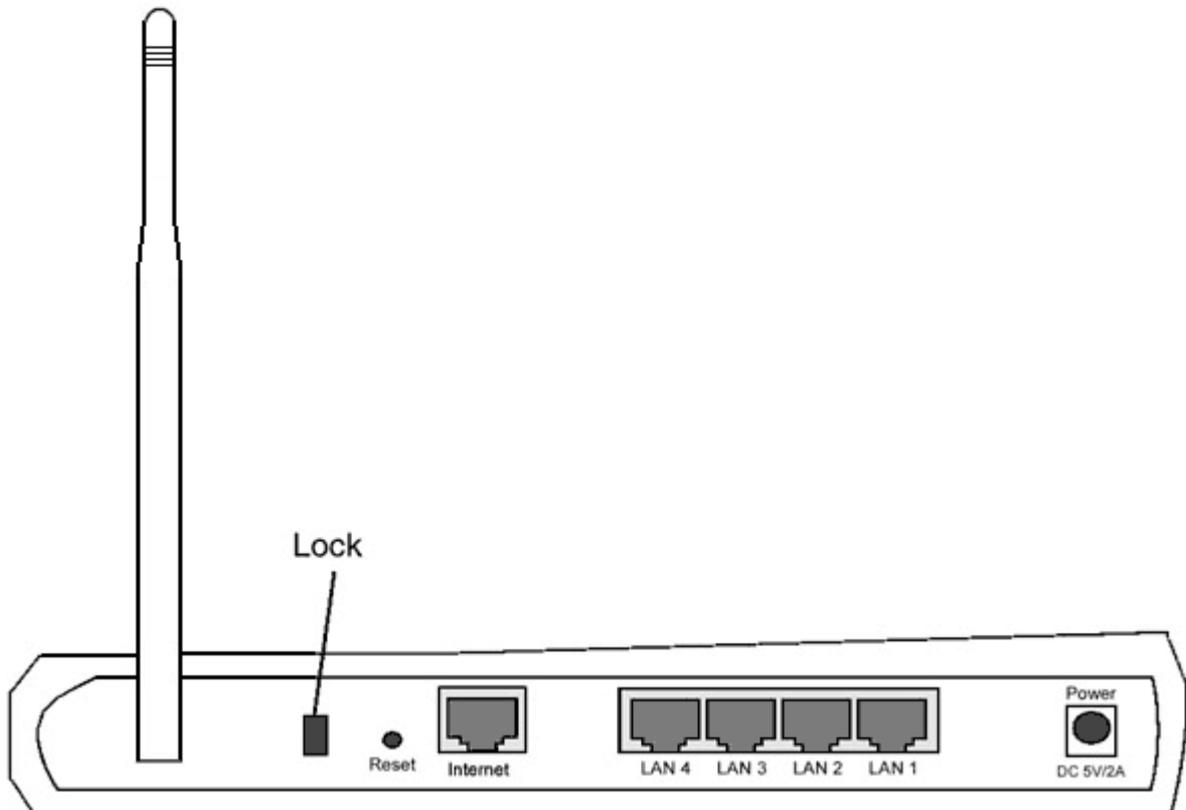
LED	Represents	Activity
Power	Power	The Power LED will light up when the device is powered on. It will blink when the device is reset.
Wireless	Wireless LAN	Steady on when there is at least one wireless link connecting to the unit.
Internet	DSL or	Steady green light indicates the connection is active, blinks with data activity.

	cable modem	Steady amber light indicates data collision.
LAN 1 LAN 2 LAN 3 LAN 4	Local Area Network	Steady green light indicates the connection is active and transfer rate is at 100Mbps. Steady greenish amber light indicates the connection is active and transfer rate is at 10Mbps.

Table 1. Dell TrueMobile 2300 Wireless Broadband Router LEDs

[Back to Top](#)

Back Panel



Connector	Description
Lock	Accept locking devices for protecting the device from theft.
Reset	Use an object, such as a stretched paper clip, to press the button for at least 3 seconds. Power LED will be off for a short time and then light up again. You can release the button now to to reset the device to its factory-default settings.
Internet	Accept an RJ-45 connector for network cabling.
LAN 1 LAN 2 LAN 3 LAN 4	Accept an RJ-45 connectors for connecting up to 4 PCs to the gateway's 4-port switch.
Power	Connect the power adapter to this Power port, and then plug the other end of the power cable into a power outlet.

[Back to Top](#)

[Back to Contents Page](#)

[Back to Contents Page](#)

Control Utility: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

The *Control Utility* is a Windows-based software that allows you to configure your router and monitor the status of the connection from your computer to the Wireless Broadband Router and to Internet.

- ▶ [Install the Control Utility](#)
- ▶ [Uninstall the Control Utility](#)
- ▶ [Start the Control Utility](#)
- ▶ [Exit the Control Utility](#)
- ▶ [How to Configure the Router by the Control Utility?](#)

Install the Control Utility

You can install the control utility on your PC when you step through the setup process using the Setup Wizard.

1. Insert the *TrueMobile 2300 Wireless Broadband Router Setup Wizard and User Guide CD* into the CD drive. Your CD should automatically launch the **Setup Wizard** program. **If it does not, complete the following steps to start the Wizard.**
 - a. Go to **Start > Run**.
 - b. Type `x:\setup.exe` (where "x" is the driver letter of your CD-ROM drive.)
2. From the main menu, click **Installation**, and then click either **Setup First Computer** or **Setup Additional Computers**.
3. Follow the instruction on the screen until you have successfully completed the installation process.

[Back to Top](#)

Uninstall the Control Utility

1. If the router icon is displayed in the system tray, right click the router icon and select **Exit**.
2. Click **Start > Control Panel > Add/Remove Program**.
3. Select the **Control Utility** from the program list and remove it as instructed.

[Back to Top](#)

Start the Control Utility

The control utility program is by default set up to run automatically upon each system startup. If the utility does not start automatically, click **Start -> Programs -> Dell TrueMobile 2300 Wireless Broadband Router -> Dell Control Utility** to invoke the utility program.

Once running, a router icon is created in the system tray. If you have a good connection to the Internet, the system tray icon looks like this . You can Double-click the router icon to open the utility panel.

 *Note: If the icon is in yellow , it indicates that the Internet connection is not active. If the icon is in red , it indicates that the connection to the router has failed.*

[Back to Top](#)

Exit the Control Utility

When you start the control utility program, it will place a small icon like this  to the system tray. If you want to exit the program, right-click the utility icon docked in the system tray to open a menu. Select **Exit** from the menu to quit the program.

 *Note: If you click close button on the window title bar, it only hides Control Utility panel, not really exiting the program.*

[Back to Top](#)

[Back to Contents Page](#)



[Back to Contents Page](#)

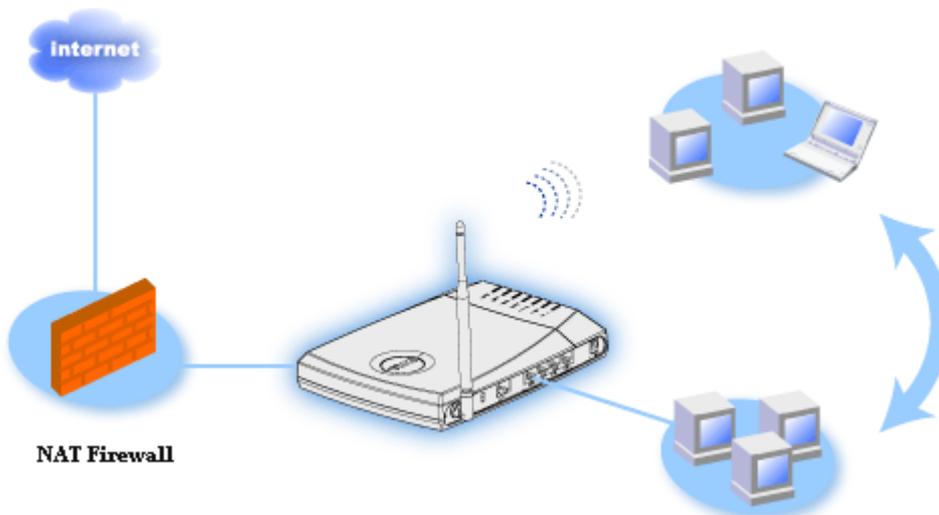
Introduction: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

- ▶ [Overview](#)
- ▶ [Wireless Networking Overview](#)
- ▶ [A Look at the Hardware](#)

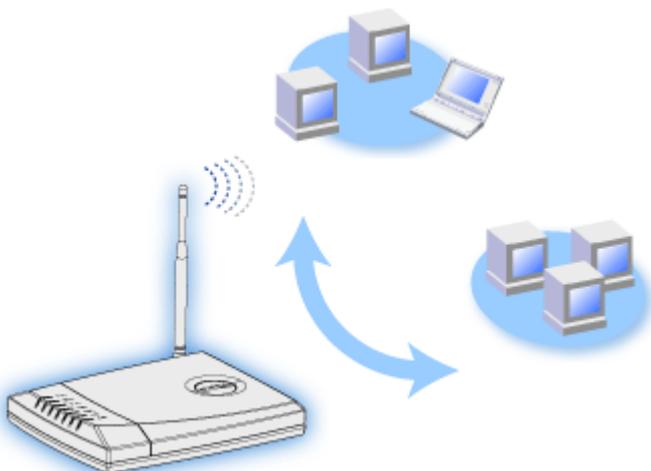
Overview

The Dell TrueMobile 2300 Wireless Broadband Router is an 802.11b/g wireless access point with a built-in Internet router. Connecting to an xDSL or cable modem, the Broadband Router can offer both wired and wireless computers simultaneous access to the Internet. The Wireless Broadband Router can be configured as:

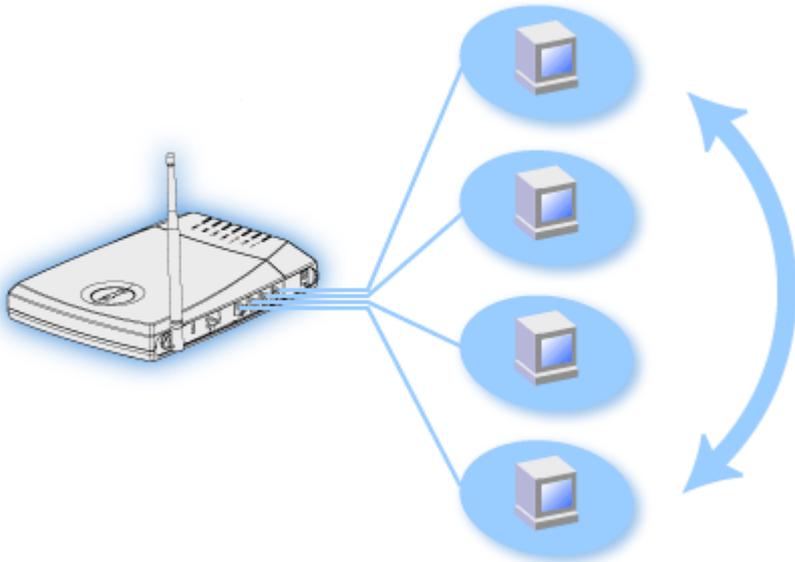
- **Internet router:** Connects to a Cable or xDSL modem providing Internet connectivity to both wired and wireless computers. The firewall features included in the router control Internet access and protect your network.



- **Wireless hub (access point):** Connects wireless computers for file and print sharing.



- **4-port Ethernet switch:** Connects four wired computers for file and print sharing.



- **Ethernet bridge:** Enables file and print sharing between wired and wireless computers. In addition, connects to an Ethernet hub, extending Internet connectivity and sharing to more wired computers.



The Wireless Broadband Router supports up to 252 clients. Up to 16 of the 252 clients can be wireless. The *Network Address Translation* (NAT) feature allows 64 clients to simultaneously communicate out to the Internet. It runs at speeds up to 54 *Megabits per second* (Mbps), and the LAN (wired) port runs at 10/100 Mbps. The maximum distance between the Broadband Router and each computer is 300 feet. This distance may be less depending on your environment.

 **NOTE:** Using the default settings, the Wireless Broadband Router can provide an IP address to 99 wired and wireless computers. The IP address uniquely identifies each computer on the network. Connections above 20 users may cause slower throughput as network traffic increases.

By default, you can use the Broadband Router as:

- a wireless access point using "wireless" as the wireless network name.
- a DHCP server that provides IP addresses to wireless and wired clients.
- a bridge to an Ethernet hub.



[Back to Contents Page](#)

Managing Your Router: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

-  [Overview](#)
-  [Setup Wizard](#)
-  [Control Utility](#)
-  [Web-based Configuration Tool](#)

Overview

Your TrueMobile 2300 Wireless Broadband Router came with factory default settings that should work for the majority of the network usage scenarios. However, there are cases where your network environment may require a different router configuration.

Setup Wizard: Setup Wizard is a Windows-based software program included on your TrueMobile 2300 CD. You can use this program to 1) install the router on your network and create an environment for multiple PCs to share Internet access, 2) add additional computers to the network, and 3) provide links to the User's Guide and the [Dell support website](#).

Control Utility: Control Utility is another Windows-based software program included on your TrueMobile 2300 CD. This utility is usually installed at the end of the router installation. It provides you useful configuration tool to manage your Wireless Broadband Router. Please refer to the section [Control Utility](#) for detailed information.

Web-based Configuration Tool: Web-Based Configuration Tool is for advanced configuration of the Wireless Broadband Router. It is a tool provided inside the router which can be accessed via the web browser on your PC. This tool includes every basic and advanced configuration option for the Wireless Broadband Router. For instance, you can allow other Internet users to access a Web server hosted on your local private network, or disable your wireless network.

 **NOTE:** *Setup Wizard or Control Utility must be run on Windows 2000, and XP computers. Microsoft Internet Explorer (4.0 or higher) or Netscape (4.0 or higher) must be used for the **web-based configuration tool***

Factory Default Settings:

Dell pre-configures the Wireless Broadband Router with the following settings:

 **NOTE:** *If you lose track of the device settings, you can reset the router by pushing the reset button to restore these settings back to your router.*

Setting	Default
User Name	admin
Password	admin
Device Name	my router
IP Address	192.168.2.1

Subnet Mask	255.255.255.0
10 Mbps Ethernet WAN IP	<obtain from ISP via DHCP>
WAN DHCP Client	Enabled
ESSID (wireless network name)	wireless
Channel	6
Encryption	No Encryption
DHCP Server	Enabled
NAT Routing	Enabled

[Back to Contents Page](#)



[Back to Contents Page](#)

Wireless Networking Overview: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

- ▶ [Wireless Local Area Network \(WLAN\)](#)
- ▶ [Identifying a WLAN](#)
- ▶ [Encryption](#)
- ▶ [Automatic Rate Selection and Rate Scaling](#)

Wireless Local Area Network (WLAN)

A *Local Area Network* (LAN) is a network in one location. Users at that location can share files, printers, and other services. In a LAN, a networked computer that requests services is called a client. A *Wireless Local Area Network* (WLAN) is a type of LAN that uses high frequency radio waves rather than wires to communicate and transmit data among the network clients and devices. It is a flexible data communication system implemented as an extension to, or as an alternative for, a wired LAN.

In a WLAN, wireless adapters are installed in clients, also called wireless clients. The adapter allows the wireless client to communicate with the WLAN without cables. Instead, wireless clients send and receive information through a path in the air called a channel.

The standards for a WLAN are based on the IEEE 802.11b standard and proposed 802.11g standard. All Dell 802.11b/g-compliant devices interoperate with other 802.11b/g-compliant wireless devices from other vendors. The WiFi certification logo indicates that the wireless device has been tested by an independent organization.

A wireless client operates in either infrastructure mode or peer-to-peer mode.

[Back to Top](#)

Identifying a WLAN

An ESSID and BSSID are both *Service Set Identifiers* (SSID) that identify and control the wireless client's access to a given WLAN. The SSID is sometimes referred to as the network name. The SSID indicates what WLAN you are referring to. In most cases, the user interface displays the SSID.

When installing an access point or wireless adapter in a wireless client, the installation program asks you to enter the SSID. Dell cannot provide you with this information, as it is specific to your network; although, you may choose to use the default SSID, "wireless", for your Wireless Broadband Router. All wireless clients and access points in a WLAN must use the same network name.

[Back to Top](#)

Encryption

In a WLAN, wireless clients and access points send and receive information through the air. Without implementing security, it is possible for an unauthorized person to intercept the information.

A common way of implementing security and protecting information is *encryption*. Encryption applies a set of instructions, called an *algorithm*, to information. The instructions combine the *plain* or *clear* text of information with a sequence of hexadecimal

numbers, called an *encryption key*.

Before transmitting information over the airwaves, the wireless client or access point *encrypts* or scrambles the information. The access point or wireless client receiving the information uses the same key to *decrypt* or unscramble the information. The information is only readable to WLAN devices that have the correct encryption key. The longer the key is, the stronger the encryption.

TrueMobile 2300 supports both WEP (Wired Equivalent Privacy) and WPA (Wi-Fi Protected Access).

WEP

WEP provides a way of creating an encrypted key that is shared between a wireless client (such as a notebook with a wireless PC card) and the router. In Wireless Broadband Router, WEP is an optional feature that can be enabled or disabled. When WEP encryption is enabled, you must set the WEP key in the client to match the WEP key used by the access point because you can ONLY connect to access points that have a matching WEP Key.



Note: It is better to change keys frequently. The same algorithm is used for all the communications that should be protected. If the same key is used, the same message will give exactly the same cipher text. Then, it will be possible for an eavesdropper to break the encrypted data. For this reason, it is strongly recommended to change keys often.

There are two WEP encryption methods:

- 40(64)-bit Encryption
- 104(128)-bit Encryption

40-bit and 64-bit encryption are identical. Some vendors use the term 40-bit; others use 64-bit. A wireless device that claims to have 40-bit encryption interoperates with a device that claims to have 64-bit encryption, and vice versa. A 40(64)-bit key consists of 10 hexadecimal numbers, arrayed as follows:

Key #1: 1011121314

Key #2: 2021222324

Key #3: 3031323334

Key #4: 4041424344

A 104(128)-bit key has several trillion times as many possible combinations than a 40(64)-bit key. It consists of 26 hexadecimal numbers, arrayed as follows:

Key (#1): 101112131415161718191A1B1C

All wireless clients and access points in a WLAN must use the same encryption method and key. The following two examples stress how important this point is.

Example 1

The encryption method for an access point is 40(64)-bit. The method for a wireless client is 104(128)-bit encryption. The client and access point cannot communicate with each other, even though the selected key is the same. To resolve this problem, set the access point to use 104(128)-bit encryption.

Example 2

The encryption method is the same for the access point and wireless client. You select key 1 for the access point and key 2 for the wireless client. The wireless client cannot communicate with the WLAN. To resolve this problem, select key 1 for the wireless client.



CAUTION: Use the same key and encryption method for the wireless devices in the WLAN. Otherwise, they cannot communicate with each other.

The Wireless Broadband Router uses either hexadecimal digits or ASCII characters to create encryption keys. Hexadecimal digits include the numbers 0 to 9 and the letters A to F. For example, the decimal number 15 is represented as F in the hexadecimal numbering system.

ASCII is the acronym for the *American Standard Code for Information Interchange*. Pronounced *ask-ee*, ASCII is a code for representing English characters as numbers, with each letter assigned a number from 0 to 127. For example, the ASCII code for uppercase *M* is 77. Most computers use ASCII codes to represent text, which makes it possible to transfer data from one computer to another.

WPA

WPA is an upgrade to the WEP (Wired Equivalent Privacy) standard for securing your wireless network. WPA is derived from and will be forward-compatible with the future IEEE 802.11i standard. It provides improved data encryption and user authentication.

To enhance the level of security, WPA uses TKIP (Temporal Key Integrity Protocol) encryption to address the vulnerabilities of the static keys used in WEP (Wired Equivalent Privacy). TKIP includes four algorithms: MIC (message integrity check), to protect packets from tampering; PPK (Per-Packet Key) hashing, to prevent weak key attacks; extended IV (initialization vector), to reduce IV reuse and the possibility that a hacker will collect sufficient packets to crack the encryption; and a re-keying mechanism, to change the temporal key dynamically. TKIP is the most commonly used encryption method; however, if your wireless clients do not support TKIP, TrueMobile 2300 also supports AES (Advanced Encryption Security) encryption. AES will replace 802.11's RC4-based encryption under 802.11i specification. AES, the gold-standard encryption algorithm, provides maximum security for wireless network.

For user authentication, WPA adopts an authentication scheme -- via 802.1x. 802.1x provides a framework for user authentication and a key distribution management method. 802.1x consists of three main elements: an Authentication Server (typically a RADIUS server), WPA-enabled router or AP (called "*Authenticator*"), and a WPA-enabled client (called "*Supplicant*"). 802.1x ensures only authorized users can access the network.

In enterprises, WPA will be used in conjunction with both wireless router and authentication server. In Small Office/ Home Office (SOHO) environment, where there are no authentication server, users can use pre-shared key (PSK) mode in place of the authentication server. TrueMobile 2300 offers you WPA running in PSK mode. The mutual authentication and improved encryption technology of WPA allows wireless communication to achieve greater security.

[Back to Top](#)

Automatic Rate Selection and Rate Scaling

In 802.11g, wireless network adapters and access points can transmit data at one of the following rates: 54, 48, 36, 24, 18, 12, 9, or 6 Mbps. In 802.11b, the data can be transmitted at a rate of 11, 5.5, 2, or 1 Mbps. As the distance between an adapter and access point increases or decreases, the data rate automatically changes. Other factors, like interference, also affect the data rate. The Wireless Broadband Router uses automatic rate selection and rate scaling to determine the most efficient rate of communication. Rate scaling maintains optimal communication between wireless clients and the WLAN.

[Back to Top](#)

[Back to Contents Page](#)



[Back to Contents Page](#)

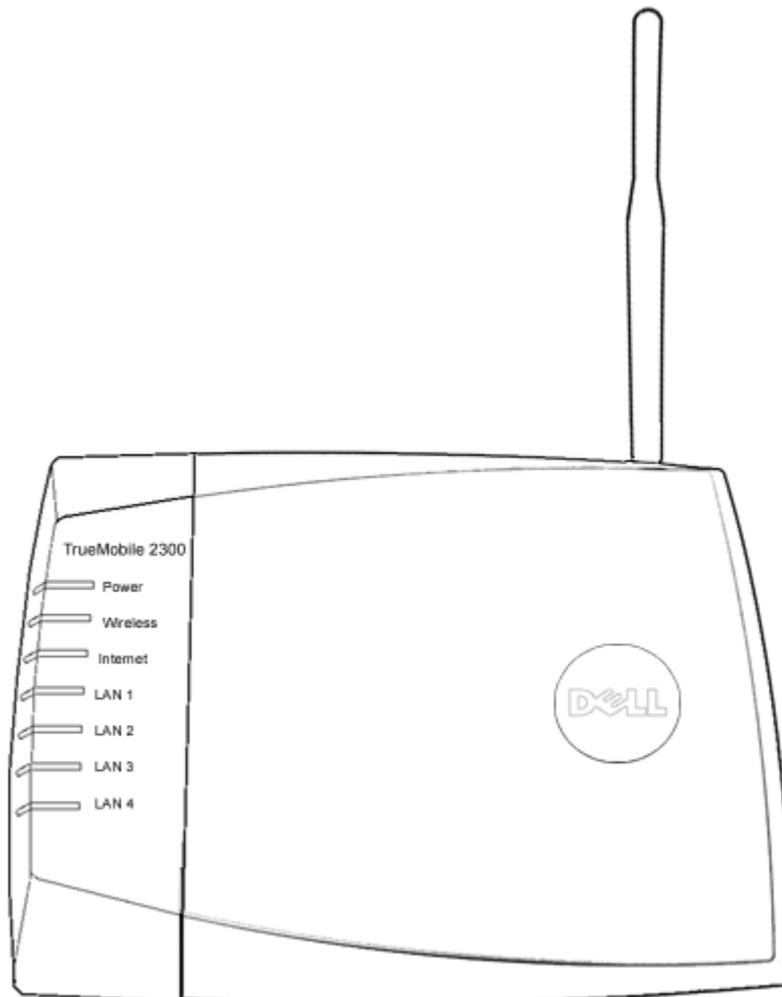
A Look at the Hardware: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

▶ [Front Panel](#)

▶ [Back Panel](#)

Front Panel

The Dell TrueMobile 2300 Wireless Broadband Router has seven *Light Emitting Diodes* (LEDs), or link lights, on its front side. The following table defines the behavior for each LED:



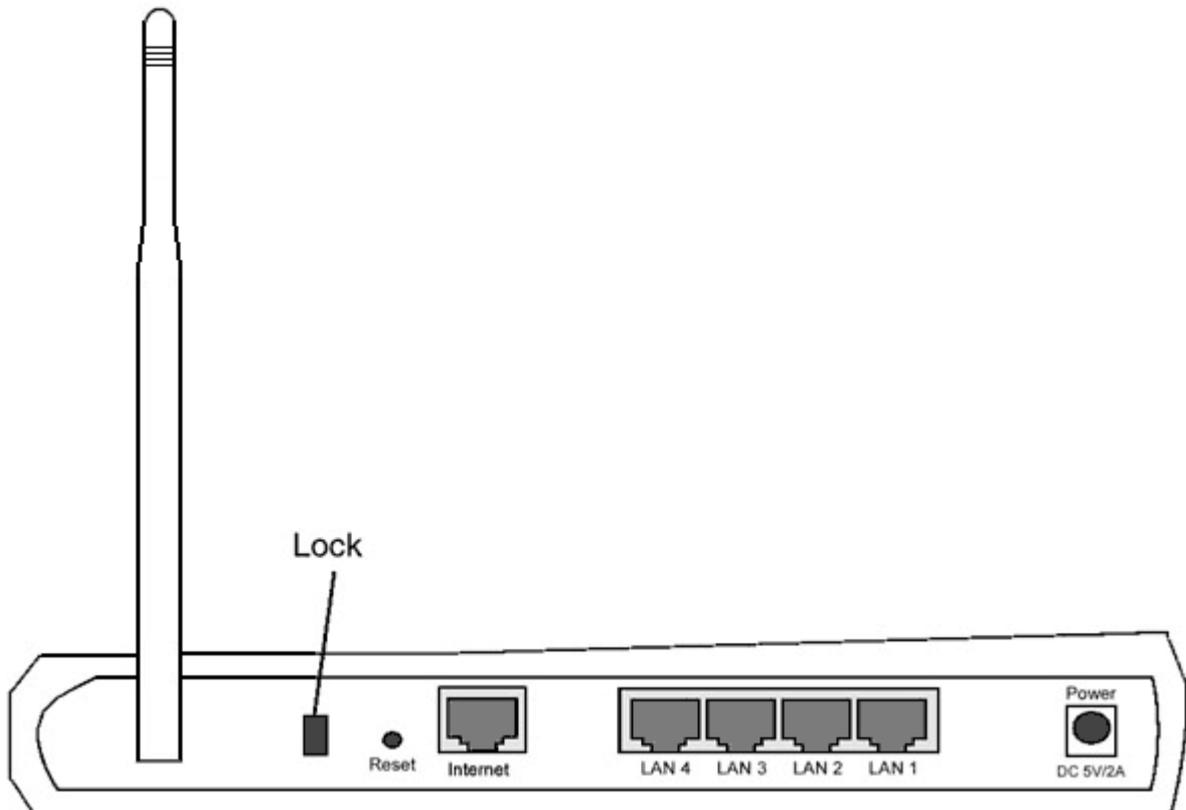
LED	Represents	Activity
Power	Power	The Power LED will light up when the device is powered on. It will blink when the device is reset.
Wireless	Wireless LAN	Steady on when there is at least one wireless link connecting to the unit.
Internet	DSL or	Steady green light indicates the connection is active, blinks with data activity.

	cable modem	Steady amber light indicates data collision.
LAN 1 LAN 2 LAN 3 LAN 4	Local Area Network	Steady green light indicates the connection is active and transfer rate is at 100Mbps. Steady greenish amber light indicates the connection is active and transfer rate is at 10Mbps.

Table 1. Dell TrueMobile 2300 Wireless Broadband Router LEDs

[Back to Top](#)

Back Panel



Connector	Description
Lock	Accept locking devices for protecting the device from theft.
Reset	Use an object, such as a stretched paper clip, to press the button for at least 3 seconds. Power LED will be off for a short time and then light up again. You can release the button now to to reset the device to its factory-default settings.
Internet	Accept an RJ-45 connector for network cabling.
LAN 1 LAN 2 LAN 3 LAN 4	Accept an RJ-45 connectors for connecting up to 4 PCs to the gateway's 4-port switch.
Power	Connect the power adapter to this Power port, and then plug the other end of the power cable into a power outlet.

[Back to Top](#)

[Back to Contents Page](#)

[Back to Contents Page](#)

Setup Wizard: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

- ▶ [Introduction](#)
 - ▶ [Launch the Setup Wizard](#)
 - ▶ [Setup Wizard Screens](#)
-

Introduction

Setup Wizard is an easy-to-use program included on your TrueMobile 2300 CD. It provides simplified configuration procedures for establishing Internet connectivity on the Wireless Broadband Router. The Setup Wizard first extracts the connection settings from your active ISP connection on your PC with Cable/DSL modem. It then displays a series of graphical illustrations on how to connect the router to the network. Finally it applies the extracted settings on your router and validate its installation. If the installation cannot be completed successfully, the Setup Wizard will display troubleshooting instructions to guide you through the installation process.

In addition, the Setup Wizard also provides links to the User's Guide on the TrueMobile 2300 CD and also the Dell support website.

[Back to Top](#)

Launch the Setup Wizard

To run the setup wizard, complete the following steps.

1. Insert the *TrueMobile 2300 Wireless Broadband Router Setup Wizard and User Guide CD* that came with the package into the CD-ROM drive on your computer. Your CD should automatically launch the **Setup Wizard** program. If it does not, complete the following steps to start the **Wizard**.
 - a. On your computer, go to **Start > Run**.
 - b. Type `x:\setup.exe` (where "x" is the drive letter of your CD-ROM drive)

Once the Setup Wizard has been launched, you will be guided through a series of windows. These windows are illustrated below along with an explanation on their functionalities.

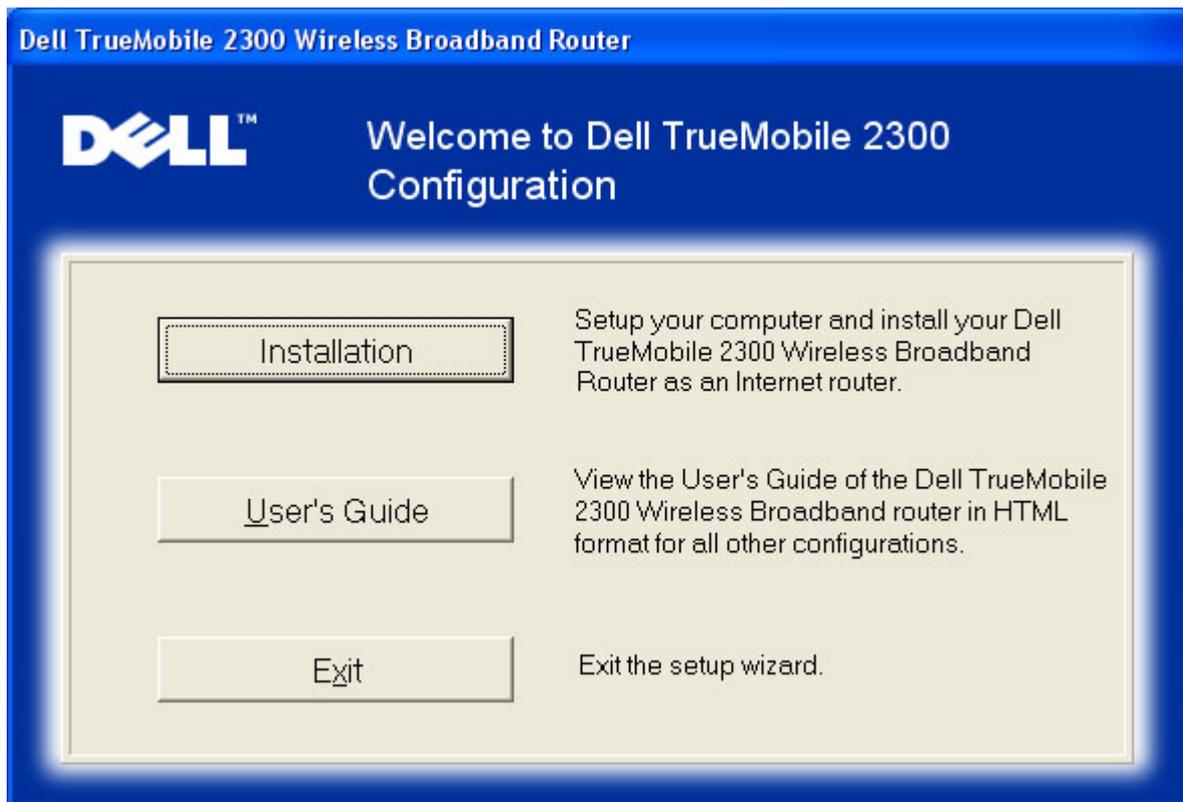
[Back to Top](#)

Setup Wizard Screens

Welcome Menu

This menu offers several options to select from.

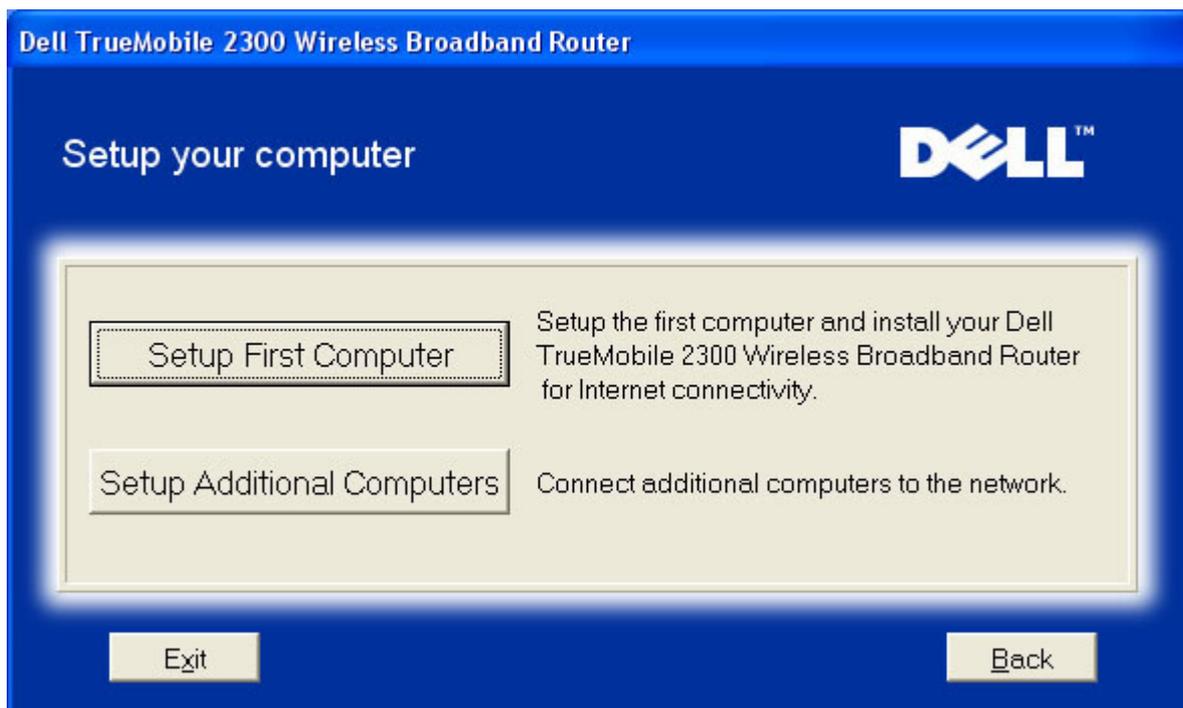
- **Installation** -- to begin installing your router and configure computers for Internet connectivity.
- **User's Guide** -- to allow you view the User's Guide (this document).
- **Exit** -- to end the Setup Wizard.



Installation > Setup your computer

After you select **Installation** from the main menu, the figure below will display.

- Click **Setup First Computer** if you want to install the router on a computer that is used to connect to Internet with Cable or DSL modem.
- Click **Setup Additional Computers** to connect additional computers to the network after you have successfully install the router using the **Setup First Computer** option.



Installation > Setup your computer > Setup First Computer

After you select **Setup First Computer** from the **Setup your computer**, the first following figure will display.

Installation Overview

Display the general steps required for the configuration process.



1. Verify Internet connection on your computer with DSL/Cable modem

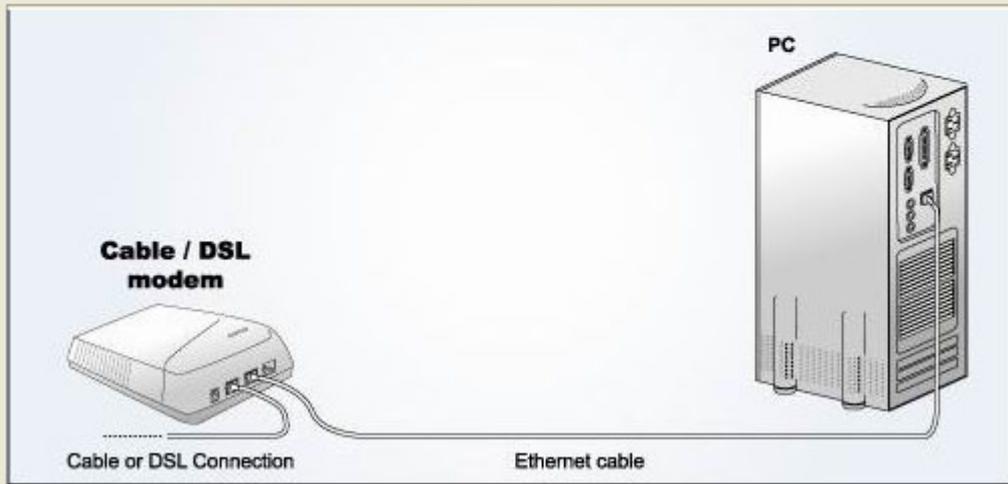
Remind you to establish an active Internet connection before taking the next step.

1. Verify Internet connection on your computer with DSL/Cable modem



If you are not connected to the Internet through Cable or DSL modem, you must do so now. Click **Next** to continue once Internet connectivity has been established.

Note: If you don't have Internet access or do not know how to connect to Internet from this computer, call your local Internet (Cable or DSL) service provider for help before returning to this point.



Exit

Back

Next

If you are using a PPPoE connection, your computer will need to reboot. Click **Next** and then click **OK** to reboot.

Congratulations



Setup wizard has confirmed the Internet connection.

Note: Your computer needs to reboot. After the reboot, the Setup Wizard will guide you through the rest of the setup process. Do **NOT** dial up the DSL connection after rebooting.

Click **Next** to reboot.

Exit

Next

The first Setup Wizard window after reboot.



Welcome to Dell TrueMobile 2300 Configuration



Reboot is successful!

Click **Next** to continue.

NOTE: If there is a DSL session dialup box pops at this point, click **Cancel** or another appropriate key to dismiss the dialup box.

Next

2. Connect Dell TrueMobile 2300 Wireless Broadband Router to your network

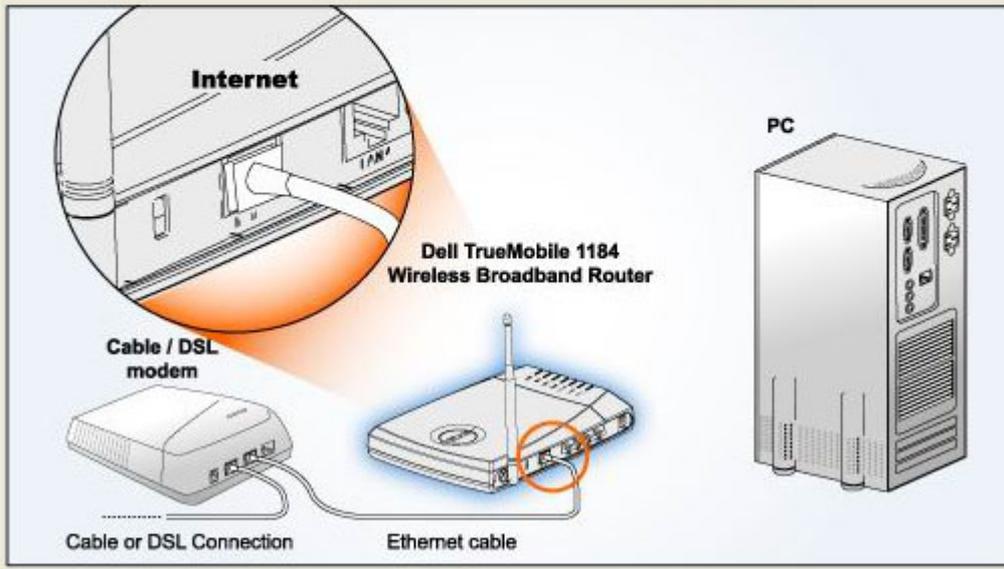
Step 1: Illustrate how one connects the Cable or DSL modem to the router..

2. Connect Dell TrueMobile 2300 Wireless Broadband Router to your network



Step 1

Unplug the Ethernet cable from the computer and plug into the Internet port of the Dell TrueMobile 2300 Wireless Broadband Router. Click **Next** to continue.



Exit

Back

Next

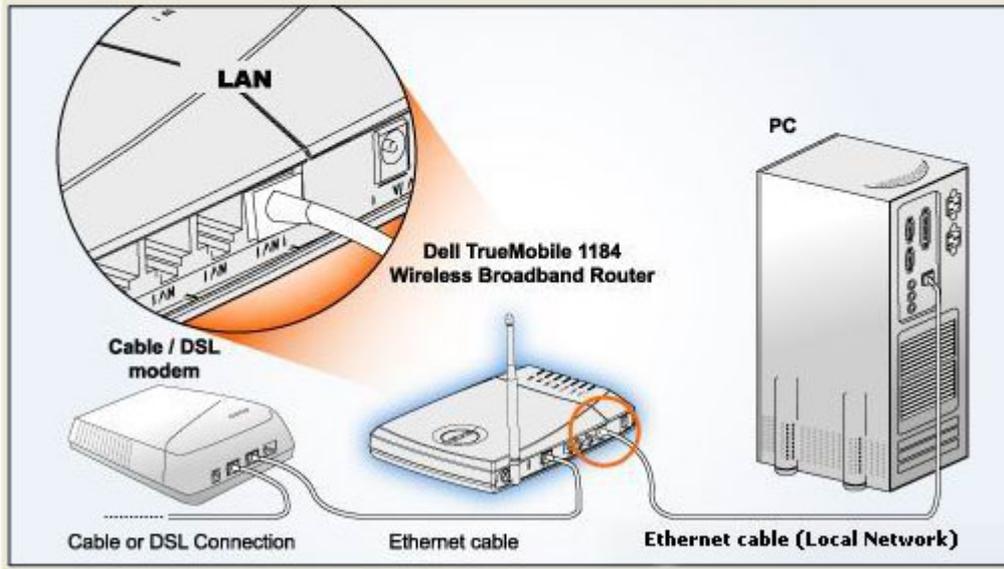
Step 2: Illustrate how one connects the router to the PC.

2. Connect Dell TrueMobile 2300 Wireless Broadband Router to your network



Step 2

Plug the Ethernet cable that came with the Dell TrueMobile 2300 Wireless Broadband Router to any one of the four LAN ports of the router. Plug other end of the cable to the LAN port of the computer. Click **Next** to continue.



Exit

Back

Next

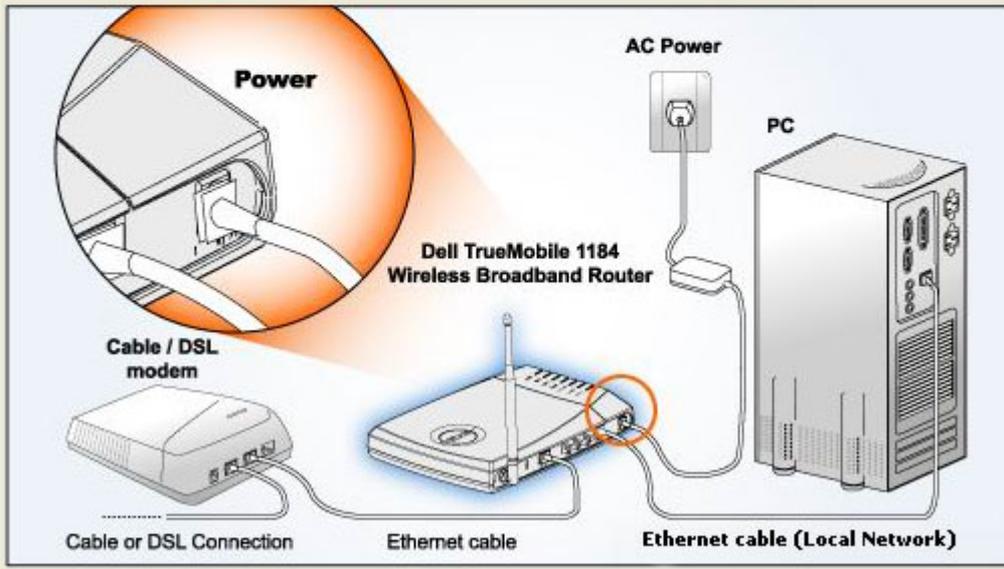
Step 3: Illustrate how one connects the power supply to the router.

2. Connect Dell TrueMobile 2300 Wireless Broadband Router to your network



Step 3

Plug the Power Adapter into the Wall. Plug the other end into the Dell TrueMobile 2300 Wireless Broadband Router.
Click **Next** to continue.



Exit

Back

Next

3. Configure the Dell TrueMobile 2300 Wireless Broadband Router

If you are using a PPPoE connection, type your PPPoE username and password in the box.

3. Configure the Dell TrueMobile 2300 Wireless Broadband Router



The Setup Wizard has detected a DSL connection and will apply its settings to the Dell TrueMobile 2300 Wireless Broadband Router.

Note: If your ISP connection requires additional information, change the appropriate entries below and click **Next** to proceed.

DSL Dialup information

User name:	<input type="text"/>
Password:	<input type="password"/>
Retype Password:	<input type="password"/>

Exit

Back

Next

Setup Wizard will apply the Internet connection settings to your router after clicking **Next**.

3. Configure the Dell TrueMobile 2300 Wireless Broadband Router



The Setup Wizard is going to configure the Dell TrueMobile 2300 Wireless Broadband router to access the Internet. Click **Next** to continue.

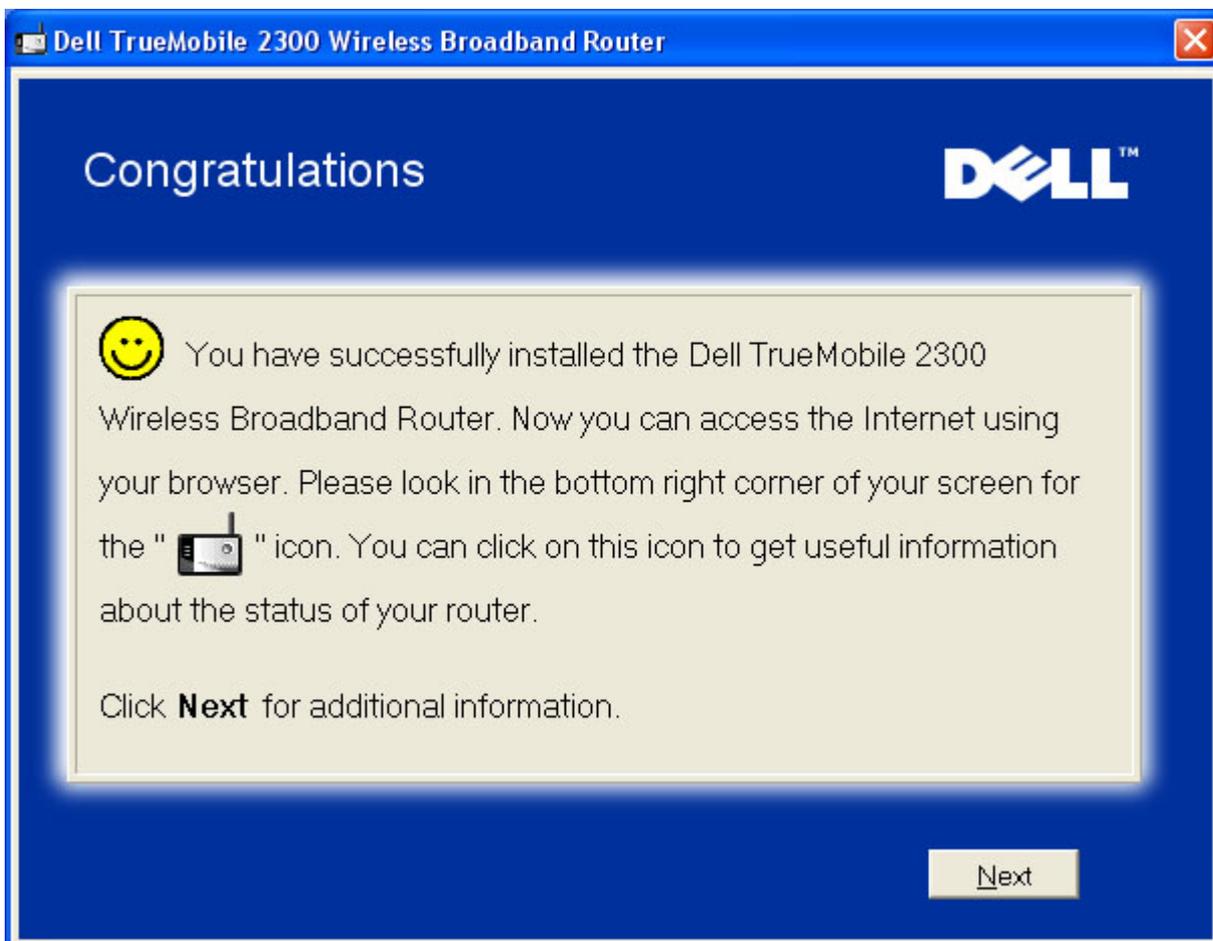
Exit

Back

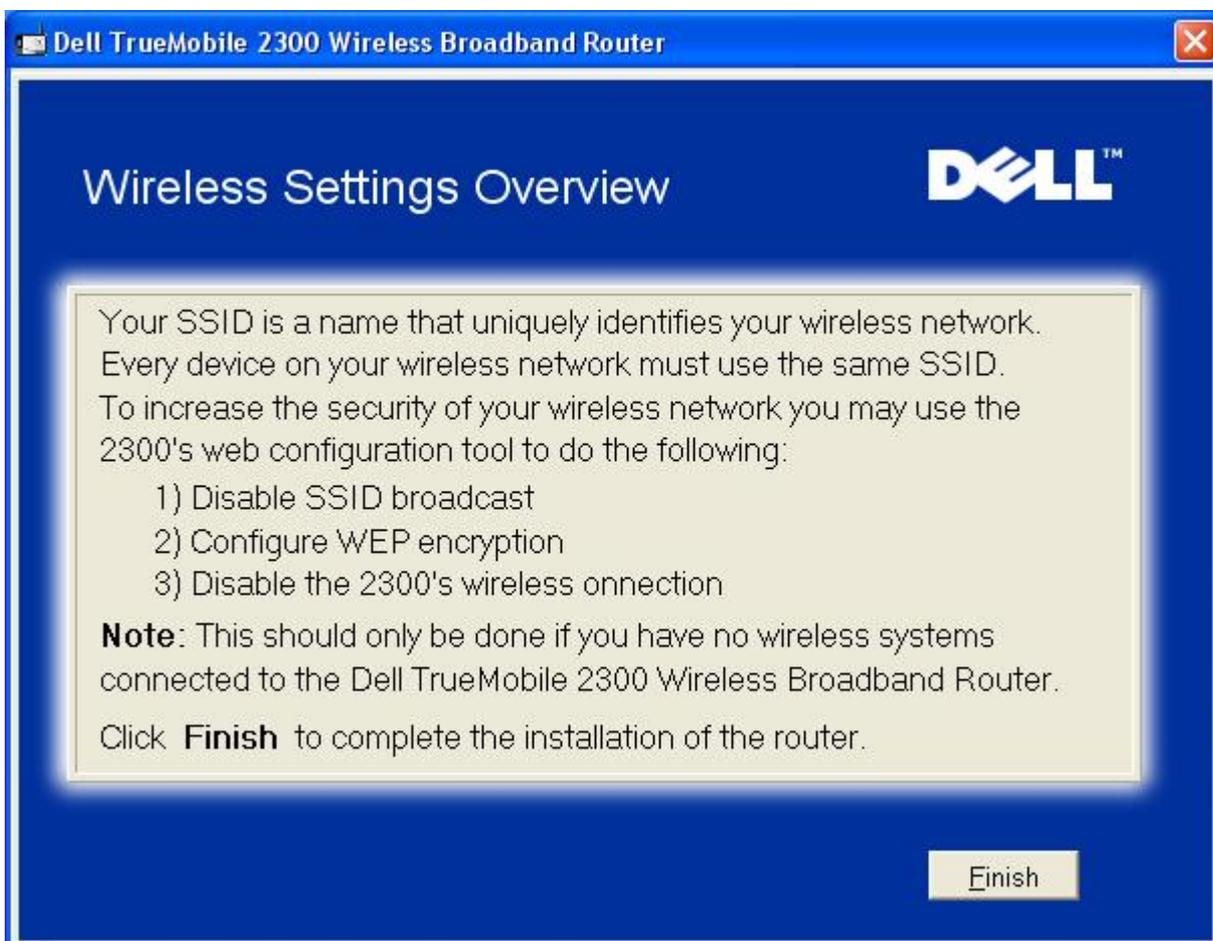
Next

Congratulations

You have successfully installed the router and configure the first PC for Internet access.



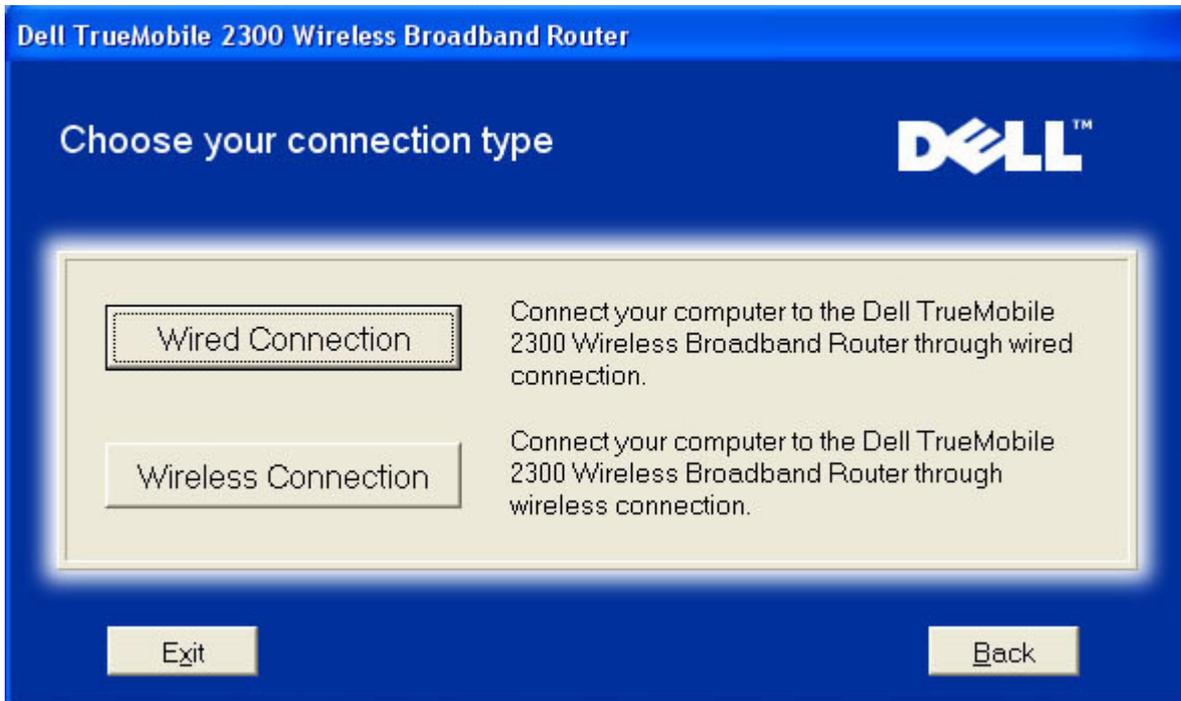
This window explains the information on wireless settings and how to enhance the security of your router.



Installation > Setup your computer > Setup Additional Computers

After you select **Setup Additional Computers** from the **Setup your computer**, the first following figure will display.

Select **Wired Connection** or **Wireless Connection** between your computer and the router.



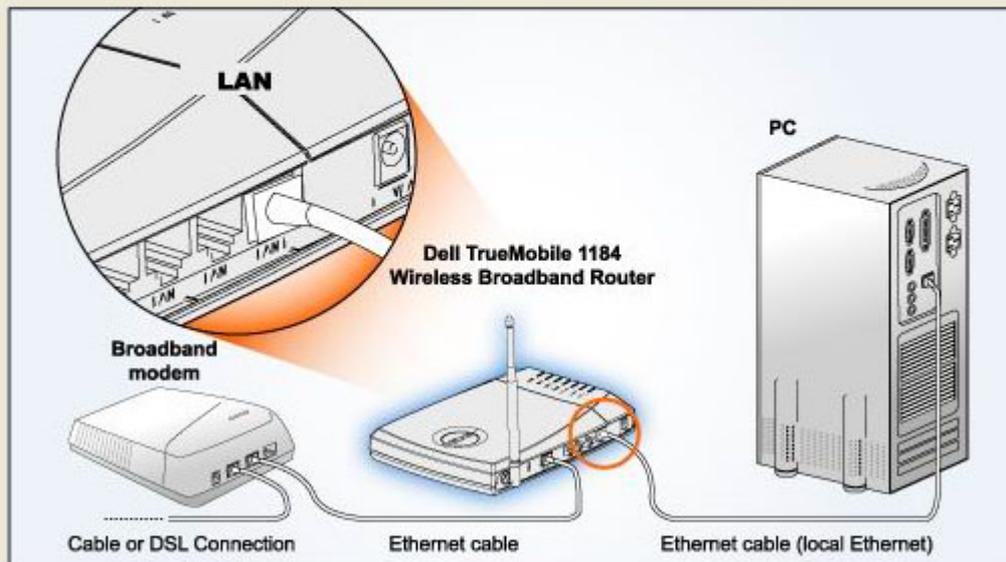
Add Other Computer to Your Network: Wired Connection

Display instruction to connect the computers to the network via Ethernet cable.

Add Other Computer to Your Network



Insert one end of a new Ethernet cable to any one of the four LAN ports on the router, and insert the other end of this cable to the Ethernet card of this PC.



Click **Next** to continue.

Exit

Back

Next

Add Other Computer to Your Network: Wired Connection

Display instruction to connect the computer to the network via wireless channel.

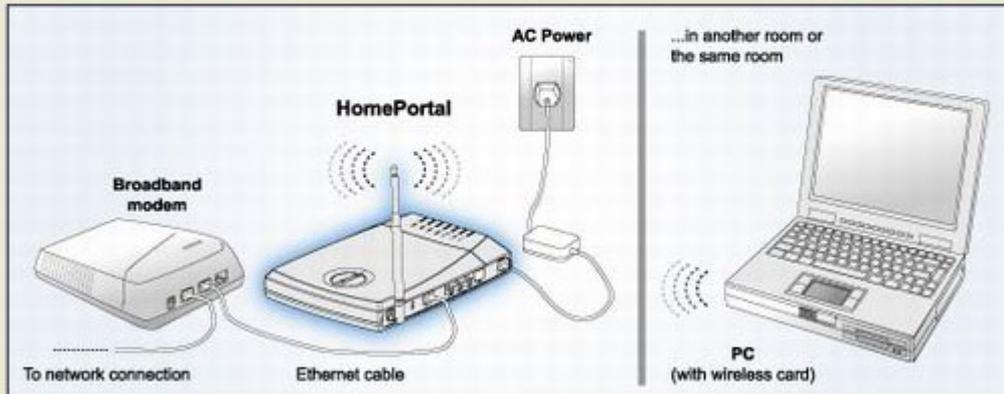
Add Other Computer to Your Network



To establish wireless connection with your router, you have to configure the wireless client card on your computer with the same network name (SSID) and wireless security information of your router.

For instructions on configuring your wireless client, click

[How To Configure](#)



Click **Next** to continue.

[Exit](#)

[Back](#)

[Next](#)

Congratulations

You have successfully connected the PC to the network.



Congratulations



You have successfully installed the Dell TrueMobile 2300 Wireless Broadband Router. Now you can access the Internet using your browser. Please look in the bottom right corner of your screen for the "" icon. You can click on this icon to get useful information about the status of your router.

Click **Next** for additional information.

Next

[Back to Top](#)

[Back to Contents Page](#)

[Back to Contents Page](#)

Web-based Configuration Tool: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

- ▶ [Overview](#)
 - ▶ [Basic Settings](#)
 - ▶ [Device Status](#)
 - ▶ [System Tools](#)
 - ▶ [Advanced Settings](#)
 - ▶ [Log Off](#)
-

Overview

The web-based configuration tool enables you to set up every possible network configuration for your Dell TrueMobile 2300 Wireless Broadband Router. Follow the instructions below to gain access to the web tool.

 **NOTE:** Microsoft Internet Explorer (4.0 or higher) or Netscape (4.0 or higher) must be used for the web-based configuration tool.

1. On a Windows-based computer, Click **Start** and **Run**, and then type the following to bring up the configuration screen of the router:

<http://my.router> (or the default address <http://192.168.2.1>.)

2. If this is the first time configuring your Wireless Broadband Router, or if the username and password have not been changed, type "admin" both in the **User Name** and **Password** boxes, and then click **OK**.
3. After you have successfully opened the configuration screen as illustrated below, select a topic such **Basic Settings** and click the corresponding tab on the top navigation bar to manage your router.

 **NOTE:** Dell technical support representatives do not support the configuration options in the **Advanced Settings** portion of the configuration program. These options are provided for your convenience only; however, the advanced settings are fully documented and explained in this guide.



Dell TrueMobile 2300 Wireless Broadband Router

Basic Settings

Use the basic settings to change the mode of your router, Wireless network name and channel, wireless security, and internet connection settings.

Advanced Settings

Use the advanced settings to change the IP address of the router, DHCP server options, Time zone, Advanced wireless settings, Parental control options, Access control options, and Administration options.

Device Status

Use the device status to check the status for each connection to your router.

System Tools

Use System tools to check the intruder log, display the routing table, perform system diagnostics, load default settings, upgrade firmware, and reset the router.

Help

Use the Help link to get on-screen help with the features of the router.

Log Off

Exit the Dell TrueMobile 2300 Wireless Broadband router configuration.

[Back to Top](#)

Log Off

To prevent confusion when multiple people try to configure the Wireless Broadband Router simultaneously, the web-based configuration tool allows one user at most to access the configuration screen of the router at any time. However, there is a five minute default timeout period after the current administrator discontinues his usage of the web-based configuration tool, before the others are allowed to access the tool again.

To minimize the impact of the five minute timeout, click the **Log Off** tab to relinquish control of the web based configuration tool. This will allow other legitimate users to access the tool.

[Back to Top](#)

[Back to Contents Page](#)



[Back to Contents Page](#)

Basic Settings: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

The following configuration options are included in **Basic Settings**:

- ▶ [Router Mode](#)
- ▶ [Wireless Settings](#)
- ▶ [Wireless Security](#)
- ▶ [Internet Connection Settings](#)
- ▶ [Save & Apply](#)



NOTE: To implement the changes you make to the settings, you must save and restart the router. Otherwise, the router uses the previous settings. If you are using the **BACK/NEXT** links to step through each screen in the **Basic Settings** portion of the web-configuration tool, you ultimately reach the Save & Restart page. Click **Save & Restart** to commit the changes and the router will reboot automatically with the new settings in effect.

Router Mode

The *Dell TrueMobile 2300 Wireless Broadband Router* device comes with two operating modes, the **Gateway** mode and the **Access Point** mode.

Gateway mode allows your router to create a wireless network to access the broadband router. Wired and wireless network devices share the same Internet connection through **Internet** port in the Gateway mode. However, some ISP may request you to do the additional setup such as PPPoE, before using your router to access Internet.

Access Point mode allows your router to act as a bridge between wireless devices and Ethernet devices in the existing network. All wired and wireless devices are located in the same class C subnet. Internet port is useless here. Thus, Access Point mode is here to help you setting up a single isolated network.



NOTE: If the device is put in AP mode, the **Internet Connection Settings** will not be available.

The **Gateway** mode is the default setting in Wireless Broadband Router. Click the radio button to select between these two modes.

Click **NEXT** to continue.

[Back to Top](#)

Wireless Settings

When you configure the Wireless Broadband Router, you must set the wireless parameters listed below. If you are adding the Wireless Broadband Router to an existing wireless network, see your network administrator or the person who initially set up the wireless network. If you are unfamiliar with the wireless settings, see the descriptions below.



NOTE: You must change each client's wireless adapter settings to match the Wireless Broadband Router settings. Use the factory defaults for the Wireless Broadband Router, unless the default settings have been changed. In this case, note the changes, and use the new settings for each wireless network card. For assistance configuring a wireless network card, see the card's documentation.

Setting	Possible Values
Network Name (SSID)	(wireless by default)
Channel	(6 by default)

Network Name (SSID)

The network name is a value that identifies a collection of **wireless** devices found in a particular network. The default value for the Wireless Broadband Router is "wireless". All workstations and access points must use the same SSID to be able to communicate with one another.

The SSID is a 32-character field, and the value is case sensitive. For example, your street address or some other identifier of the physical location of the WLAN, your name, your company name, or the company name and department, a favorite slogan or saying, etc.

Channel

The Wireless Broadband Router can operate on a variety of channels. Units within close proximity to one another must be on different channels. If you have just one unit, then the default, channel 6, is probably adequate. If you have multiple access points in your network, it is suggested to stagger the channels for each unit. It is advisable to use the default unless there is a specific reason for changing the channel such as interference from microwaves, cellular phone towers, or other access points in the area.

Click **NEXT** to continue.

[Back to Top](#)

Wireless Security

Data encryption provides added security by encoding network communications using an encryption key. Your Wireless Broadband Router, in conjunction with wireless network adapters that support encryption, can scramble your transmitted data to make it very difficult for someone to eavesdrop or intercept your information. Two methods of data encryption are available: WEP and WAP. If you wish to enable wireless security, check the **Enable Wireless Security** box.

WEP

If you wish to enable WEP encryption, select **WEP** in the **Network Authentication** list.

Setting	Possible Values
Key Format	Hexadecimal Digits / ASCII Characters
Key Length	40 bits (5 characters) / 104bits (13 characters)
Key1, Key2, Key3, Key4	<user-defined>

There are two levels of WEP encryption: 40(64)-bit and 104(128)-bit, with 104(128)-bit being the more secure. The WEP

encryption keys are simply a random set of hexadecimal numbers or ASCII characters that you choose. Each Wireless Broadband Router and every wireless workstation must use the same WEP encryption key to communicate. For more information on encryption, see the [Wireless Networking Overview - Encryption](#) section of this User's Guide.

- **Key Format**

It could be in ASCII or hexadecimal format. Hexadecimal digits include the numbers 0 to 9 and the letters A to F. For example, the decimal number 15 is represented as F in the hexadecimal numbering system. If you select ASCII characters format, you can enter any character. ASCII is the acronym for the *American Standard Code for Information Interchange*. ASCII is a code for representing English characters as numbers, with each letter assigned a number from 0 to 127. For example, the ASCII code for uppercase M is 77. Most computers use ASCII codes to represent text, which makes it possible to transfer data from one computer to another.

- **Key Length**

It could be either **40(64)-bit** or **104(128)-bit** key length. Basically, the larger key length is relatively more secure for your data. Some wireless network cards are only able to use 40(64)-bit encryption. If all your clients are able to communicate at 104(128)-bit choose 104(128)-bit. If any client is only able to communicate at 40(64)-bit, choose 40(64)-bit.

- **Key**

If you choose 40(64)-bit encryption, enter a 5-character (or 10 hexadecimal digits) WEP encryption **Key** in the fields provided. For 104(128)-bit encryption, enter a 13-character (or 26 hexadecimal digits) WEP key in the fields provided. You have the option of entering four different keys to store on the Wireless Broadband Router. Select only one key out of the four provided in the **Default Key** applied for encryption drop-down list. For added security, change your key often. When you change the key on one wireless device, remember that it must be changed for all wireless devices and access points in the network.



NOTICE: If you are adding the Wireless Broadband Router to an existing network and will be using an existing encryption key for the wireless clients, contact the person in charge of the network. The same key must be used when configuring the encryption for the Wireless Broadband Router. The administrator must propagate any changes to these keys to all access points and wireless clients on a network. Changing the key on just one access point or wireless client disconnects it from the rest of the network.

WPA

If you wish to enable WPA encryption, select **WPA** in the **Network Authentication** list.

WPA is an upgrade to the WEP (Wired Equivalent Privacy) standard for securing your wireless network.

If you would like to secure your wireless network using WPA, you will need the following:

- WPA enabled on your Dell TrueMobile 2300 Wireless Broadband Router
- WPA support for your wireless clients. If you are using a Dell TrueMobile wireless client, you can check for the availability of WPA enabled software update for your wireless client at <http://support.dell.com>.

Enter the fields with the required parameters.

- **WPA Pre-shared Key**

WPA Pre-Shared Key (PSK) is a field where the password is entered. All wireless clients must also use this password to gain access to the network. Note that the Key format must also match the setting for the wireless clients.

- **Key Format**

Key Format is a box that lists 2 items: **Hexadecimal** Digits (numbers 0-9 and letters A-F only) and **ASCII** Characters (any letter, number, or symbol). Select the proper format for your key. If your wireless client(s) only support one of the two formats, be sure to specify the correct one.

- **WPA Group Rekey Interval**

WPA Group Rekey Interval is used to specify the frequency of encryption key rotations. The lower the number, the faster your encryption key will rotate, however, setting this number too low may cause your wireless network to slow down.

- **WPA Encryption**

WPA Encryption has 2 choices: **TKIP** (Temporal Key Integrity Protocol) - it is the most commonly used encryption method and **AES** (Advanced Encryption Standard) - it can be used if your wireless clients do not support TKIP.

Click **NEXT** to continue.

[Back to Top](#)

Internet Connection Settings

It is only necessary to specify these settings when the Wireless Broadband Router is used as a router. To determine the set of information of ISP settings you need, refer to the [ISP Settings Checklist](#).

 **NOTE:** The Setup Wizard enters the required Cable/xDSL ISP settings into the router after you select "**Installation**" and "**Setup First Computer**" and complete the installation successfully. Only if the Setup Wizard is not successful in establishing an Internet connection should the Cable/xDSL ISP settings need to be changed with the options provided here.

 **NOTE:** If the device is put in AP mode, the **Internet Connection Settings** will not be available.

Your ISP requires you to input Host Computer Name or Domain Name

If your ISP requires that you input a host computer name or domain name, check the box titled **Your ISP requires you to input Host Computer Name or Domain Name**. This box should only be checked if your cable-based ISP has provided you with a host or computer name and/or a domain name. Enter the appropriate values in the fields provided.

Click the **NEXT** button to continue.

 **NOTE:** Host computer names and domain names are only used by cable-modem ISPs.

Your ISP requires you to input WAN Ethernet Mac

If your ISP requires that you input a WAN Ethernet MAC address, check the box titled **Your ISP requires you to input WAN Ethernet MAC**. In the field provided, enter the public WAN (cable/xDSL) MAC address assigned to your Wireless Broadband Router. You can find the WAN MAC address on the back panel of the Wireless Broadband Router or on the Device Information page on the web-based configuration tool.

Click the **NEXT** button to continue.

Connection Type

Select the Connection Type from the list. There are four options available.

- Cable Modem
- DSL (Static)
- DSL (PPPoE)
- PPTP

Cable Modem Settings

No additional settings are required. Make sure that the settings listed above are correct for Cable Modem connection.

DSL Static IP Settings

In the fields provided (listed below), enter the IP address, IP subnet mask, ISP gateway address, and *Domain Name Server* (DNS) IP address provided by your ISP.

- o IP assigned by your ISP
- o IP Subnet Mask
- o ISP Gateway Address
- o Domain Name Server (DNS) IP Address

DSL PPPoE Settings

Point to Point Protocol over Ethernet (PPPoE) is a proposal specifying how a host PC interacts with a broadband modem (i.e. xDSL, cable, wireless, etc) to access to the network. In many respects PPPoE is similar to the "Dialup Networking" approach. If you have an DSL (PPPoE) Internet connection, enter the PPPoE user name and password (Retype password to confirm.) provided by your ISP.

PPTP Settings

The following settings should be provided to you by your Internet Service Provider (ISP).

- o IP Address
- o Subnet Mask
- o Server IP Address
- o User Name
- o Password

If your ISP specifies that you use PPTP (Point-to-Point Tunneling Protocol) as your connection to the internet, you cannot use the provided setup wizard to automatically setup your router. Remove the ethernet cable from the back of the computer you currently connect with, and connect it to the internet port of your router. Connect the ethernet cable provided to any of the 4 LAN ports, and the other end to your computer. Configure your computer's ethernet adapter to obtain an address automatically. See Windows Help for information on how to configure your computers network adapter.

Click the **NEXT** button to continue.



WARNING! If you are charged for your Internet Connection by the minute, unplug the network cable from the Internet port on the Wireless Broadband Router when Internet access is no longer desired.

[Back to Top](#)

Save & Apply

Use the Save & Apply page to submit all the network setting changes you have made. Click the **Save & Restart** button to update the network configurations for your Wireless Broadband Router. New settings are written to the firmware, and the Wireless Broadband Router reboots automatically.



NOTE: If you have wireless clients in your network, you must configure the clients' wireless network cards to match the settings for the Wireless Broadband Router.

[Back to Top](#)

[Back to Contents Page](#)



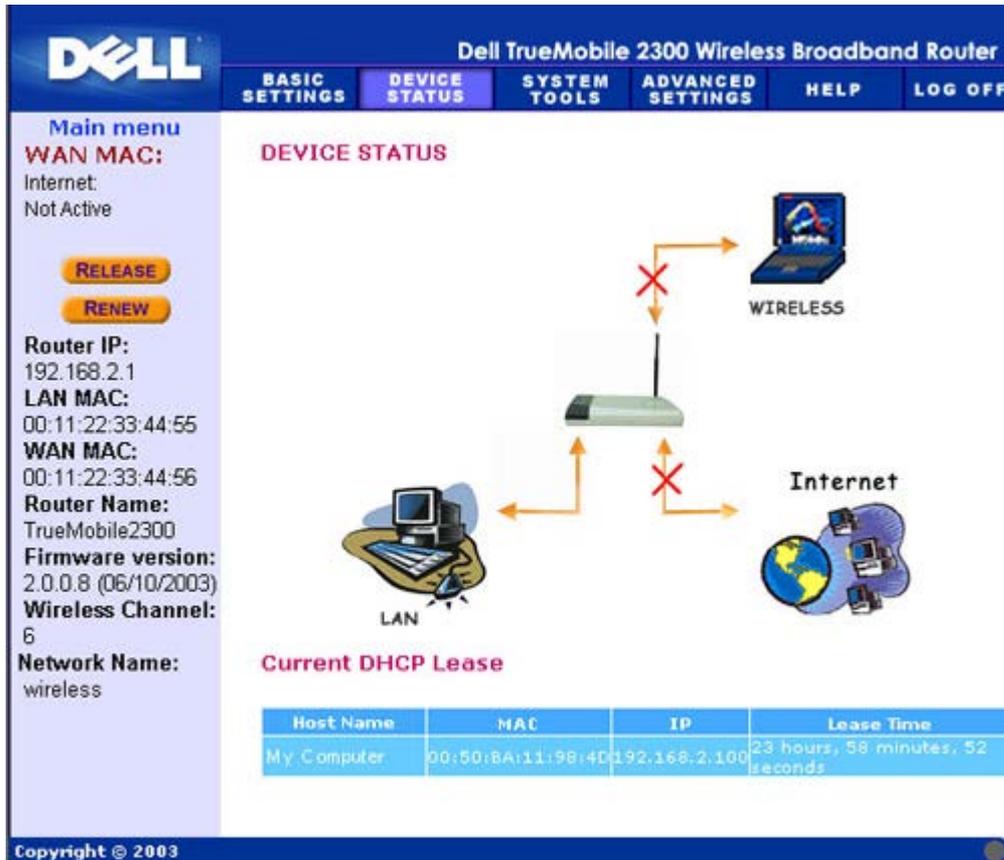
[Back to Contents Page](#)

Device Status: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

The Device Status screen displays the basic network settings for your Dell TrueMobile 2300 Wireless Broadband Router. When changes are made to the network settings, those changes are updated on this screen. In addition, it graphically displays the current connection status for the Wireless Broadband Router and other devices in your network. Connections between network devices are shown with a yellow arrow. Inoperative connections are represented by one red cross through the yellow connection line (see Figure 1).

NOTE: The TrueMobile 2300 router offers 2 ways to check the status of your network. One is Device Status feature in web configuration tool mentioned here. The other is through the Windows-based software program - [control utility](#). To learn more about this utility, click on the aforementioned link.

Figure 1. Device Status page



Device Status

The following connections are displayed on the Device Status page:

Device	Indication
	An inactive cable/DSL connection indicates that either the cable is unplugged or the Wireless Broadband Router has not received an IP address.

Internet	An active connection indicates the WAN interface of the router has a valid IP address and your computers can connect to the Internet via the router.
Wired Client (LAN)	Shown as an active connection when a wired client is configured and physically connected to your network; inactive when the Ethernet cable is disconnected from the PC.
Wireless Client	Shown as an active connection when a wireless client is configured for your network; inactive when there is no wireless client connected to your router.

When the Wireless Broadband Router acts as a DHCP server, it assigns IP addresses to the clients on the network. These IP addresses are displayed in the *DHCP Log* below the Device Status figure.

WAN Ethernet Settings

Refer to the left-side of the screen for the following WAN Ethernet Settings, and the Internet protocol (IP) settings for the Wireless Broadband Router:

Setting/Device	Information Displayed
Internet	the connection to the Internet is Active/Not Active
Router IP	IP address assigned to the Wireless Broadband Router
LAN MAC	MAC address for the LAN and Wireless interfaces
WAN MAC	MAC address for the WAN interface
Router Name	the name for the Wireless Broadband Router (the default is TrueMobile 2300)
Firmware Version	Version number of the firmware currently installed on the Wireless Broadband Router and the release date of the firmware
Wireless Channel	radio channel on which the Wireless Broadband Router is communicating on the air
Network Name	a unique network name that identifies the network. It is also known as SSID (Service Set Identifier). When a client station tries to connect to the router, the user must know the router's SSID first.

The following buttons appear on the left navigation bar:

Button	Action
RELEASE	Clicking this button to release the IP address that the Wireless Broadband Router has been assigned from your ISP. If the Wireless Broadband Router has been configured to receive a static IP address, clicking Release does not release this IP address.
RENEW	Clicking this button to renew the IP address with a DHCP server provided by your ISP. If the Wireless Broadband Router has been configured to receive a static IP address, clicking Renew does not renew the IP address.

[Back to Top](#)

[Back to Contents Page](#)

[Back to Contents Page](#)

System Tools: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

Use the System Tools section to view the intruder detection log, routing tables, and system diagnostics regarding the device settings and status. These three pages are for your information only. The System Tools section also includes features to reload the default settings, upgrade the firmware for the Wireless Broadband Router, and reset the unit.

Use the following pages in the web-based configuration tool to access the System Tools:

- ▶ [Intruder Detection Log](#)
- ▶ [Display Routing Table](#)
- ▶ [System Diagnostic](#)
- ▶ [Load Default Settings](#)
- ▶ [Upgrade Firmware](#)
- ▶ [Reset Device](#)

Intruder Detection Log

Indicator	Description
Event	Type of attack that the router detects
Time	Based on the timestamp of the IP packet, plus or minus the time offset
Source	IP address that the packet came from
Dest (=Destination)	Usually the IP address for the Wireless Broadband Router
Port	Port number

The figure below shows an example of an entry of an Intrusion attempt (INT_ATEMPT) event from a computer with IP address 192.168.2.60 (Source) targeted at the router's port number 80 at time 12 AM:1 Min: 5 Sec.



Main menu

**INTRUDER
DETECTION LOG**

**DISPLAY
ROUTING TABLE**

**SYSTEM
DIAGNOSTIC**

**LOAD DEFAULT
SETTINGS**

**UPGRADE
FIRMWARE**

RESET DEVICE

INTRUDER DETECTION LOG

Event	Time	Source	Dest	Port	Remark
INT_ATEMPT	12:1:5	192.168.2.60		80	Intrusion attempt

Click clear button to clear the intruder log buffer

CLEAR

[Back to Top](#)

Display Routing Table

Indicator	Description
Type	The type of routing. This can be either: LAN or WAN interface (INTF) Static routing
Destination LAN IP Address	Either an entire network or a specific IP address. An IP address ending in .0 refers to a network.
Subnet Mask	Must follow the subnet mask rules
Gateway IP Address	To communicate with an IP address matching the destination IP Address, the Wireless Broadband Router sends all traffic through the gateway IP address listed here.
Hop Count	The number of routers the packet has passed through to its destination. Hop count is used to measure the distance between a source and a destination. If there are 3 routers between the source and the destination nodes, the hop count for the packet will be 3 when it arrives at its destination node.

The figure below shows three network routes that your router currently possesses. 192.168.2.0 is the destination network connected to one of your router's interface port (LAN or WAN) and the IP address and Subnet Mask for this interface is 192.168.2.1 and 255.255.255.0, respectively. The number of routers (Hop Count) the packet passed through is 1. Also in the same example, the destination with 0.0.0.0 network and 0.0.0.0 Subnet Mask is the default route for your router, where every packet that left unmapped to any other route will be mapped to this route. The outgoing default gateway IP address is 192.168.1.254.



Main menu

INTRUDER
DETECTION LOG

DISPLAY
ROUTING TABLE

SYSTEM
DIAGNOSTIC

LOAD DEFAULT
SETTINGS

UPGRADE
FIRMWARE

RESET DEVICE

DISPLAY ROUTING TABLE

Type	Destination IP Address	Subnet Mask	Gateway IP Address	Hop Count
INF	192.168.2.0	255.255.255.0	192.168.2.1	1
INF	192.168.0.0	255.255.0.0	192.168.253.222	1
INF	0.0.0.0	0.0.0.0	192.168.1.254	1

[Back to Top](#)

System Diagnostic

The Systems Diagnostics page is for your information only. This page displays both the configuration settings and diagnostics for the Wireless Broadband Router. Configuration settings include firmware version, the ISP and device settings that have been configured for your network.

The Diagnostics section shows the current connections for your network. Diagnostic settings include the ISP status, link status, current WAN connection, LAN MAC table, and WAN MAC table.

[Back to Top](#)

Load Default Settings

The Load Default Settings page allows you to reload the factory default configurations that came with the device. When this option is used, the default IP address is reset to the factory default value (192.168.2.1). This is equivalent to pressing and holding the **Reset** button on the back panel of the device for more than 3 seconds (for more details, please refer to [A Look at the Hardware](#)).



CAUTION: Loading the default settings option will cause the current settings for your Wireless Broadband Router to be lost.

Click the **START** button to reload the default settings.

[Back to Top](#)

Upgrade Firmware

Dell periodically releases firmware updates to provide improved performance or capabilities. Use the firmware upgrade feature to easily upgrade the firmware on your Wireless Broadband Router. You can check Dell support website, support.dell.com, to see if there are any new upgrades. Download the new firmware first before upgrade, and save it to one of the clients in your network. To upgrade the firmware, enter the firmware file path into the box, or click the **Browse** button to choose a firmware file to upgrade to.



NOTE: Make sure the file you choose is an actual Dell TrueMobile 2300 Wireless Broadband Router firmware file.

Click the **START** button when you have chosen a file. After the firmware is written to the Wireless Broadband Router, the home page will be loaded automatically. While the Wireless Broadband Router resets, the **Power** light on the front panel of the unit blinks.

[Back to Top](#)

Reset Device

Use the Reset Device function if a system failure occurs. This feature does **not** reload the factory default settings. It simply resets the device to the network settings that existed on the device before the system failure occurred. This is equivalent to unplugging the device and plugging it back in or pressing the reset button for less than 3 seconds until the **Power** light start to blinks. No settings are lost.



NOTICE: If you were in the process of updating the network settings, those changes are lost when the device is reset.

Click the **START** button to reset the Wireless Broadband Router to its **current firmware settings**. While the Wireless Broadband Router is reset, the **Power** light on the front of the unit blinks.

[Back to Top](#)

[Back to Contents Page](#)



[Back to Contents Page](#)

Advanced Settings: Dell™ TrueMobile™ 2300 Wireless Broadband Router User's Guide

- ▶ [Advanced IP Settings](#)
- ▶ [DHCP Server Settings](#)
- ▶ [Time Zone](#)
- ▶ [Advanced Wireless](#)
- ▶ [Parental Control](#)
- ▶ [Access Control Settings](#)
- ▶ [Port Forwarding Settings](#)
- ▶ [Static Routing](#)
- ▶ [Administration Settings](#)

 **NOTE:** Dell technical support representatives do not support the configuration options in the Advanced Settings portion of the configuration program. These options are provided for your convenience only; however, the advanced settings are fully documented and explained in this guide.

 **NOTE:** The options "**Port Forwarding Settings**" and "**Static Routing**" are invisible if you are in Access Point Mode.

 **NOTE:** After making changes to any section in Advanced Settings and clicking the **SUBMIT** button, you are taken to a page where you can click the **Save & Restart** button. Click this button to store changes and to reboot the router. You must save all new settings for the changes to take effect.

Advanced IP Settings

The Dell TrueMobile 2300 Wireless Broadband Router comes with an assigned **IP address** and **IP subnet mask**. These settings apply only to the Local Network portion of the router. If you are installing the unit on an existing network or simply want to change these values, make sure the IP subnet mask is the same for all devices on your network. The network portion of the IP address must also be the same for all devices on your network.

 **NOTE:** Dell strongly suggests you do not change the IP address unless there is a specific reason for doing so.

While you are changing the IP address, be aware that:

- Changing the IP address of the Wireless Broadband Router also changes the IP address pool if the DHCP server is enabled.
- If you are using the Wireless Broadband Router with a cable modem or DSL line, you should assign a "private" IP address. Private IP addresses are in one of three ranges:

- 10.0.0.1-10.254.254.254
- 172.16.0.1-172.31.254.254
- 192.168.0.1-192.168.254.254
- You must use the new IP address to access the web-based configuration tool.

NOTICE: You should only change the IP address or IP subnet mask if you are installing the Wireless Broadband Router on an existing wired network and the DHCP server function for your Wireless Broadband Router is disabled in the Advanced Settings. For more information, contact your network administrator.

Click the **SUBMIT** button to store the changes.

[Back to Top](#)

DHCP Server Settings

Dynamic Host Configuration Protocol (DHCP), defines a way to automatically assign IP addresses to computers on a network. IP addresses are managed by a DHCP server. If a Windows computer is configured to obtain an IP address automatically, it automatically gets an address from the DHCP server.

Enable DHCP Server Functions

By default, the Wireless Broadband Router is set to function as a DHCP server. If you are installing the unit on an existing network that already has a DHCP server or simply do not want the Wireless Broadband Router to function as the network's DHCP server, uncheck the box **Enable DHCP Server Functions** to disable the DHCP server function.

IP Address Pool Range

The IP Address Pool Range section provides a means of controlling a low and high value for the IP addresses on a network. Use the indicated fields to define the range of IP addresses you would like the Wireless Broadband Router to provide to DHCP clients. The valid range of numbers you should enter is between 1 and 254.

The lease time is the amount of time a user will be allowed to use the IP address assigned by the DHCP server. You may specify the lease time that DHCP server offers for the client to use the IP address. This setting is especially useful in campus or other environments where users change frequently.

IP Address Reservation

Specific IP addresses may also be reserved for particular devices in a network. The **IP Address Reservation** fields allow you to reserve up to four IP addresses for a specific system. The **Computer MAC** field is the MAC address of your network card on the client computer interfacing the same network as the router. Use the input boxes under **IP Address** to indicate the IP address for those devices that should use a manually-defined IP address.

Click the **SUBMIT** button to store the changes.

[Back to Top](#)

Time Zone

Use the Time Zone page to select your local time zone from the pull-down list. The Time Zone Settings affects the Intruder Detection Log. This setting offsets the time stamp on IP packets that are in *Greenwich Mean Time* (GMT). IP packets may not

always have this stamp, or they may have an invalid stamp; thus, the time zone information is not always accurate.

The Time Zone Selection also affects the Parent Control option. This option allows parents to control Internet access. To enable this option, go to **Advanced Settings** -> **Parental Control** section of the router's web-configuration tool. By default, there is no blocking at any time on Internet access.

Click the **SUBMIT** button to store the changes.

[Back to Top](#)

Advanced Wireless

Enable Wireless

Check this box to enable radio transmission and reception on the Wireless Broadband Router.
Uncheck the box to disable the radio.

Hide my wireless network

Checking this box disables the Wireless Broadband Router to send out beacon packets to the wireless network. It is unchecked by default and other users can easily find and make association to your Wireless Broadband Router with the use of a site survey tool.
If you want to increase wireless network security, you can enable this feature.

Mode

TrueMobile 2300 Router is 802.11g-compatible. You can select "**both b & g**" (dual mode), or "**802.11b**", or "**802.11g**" from the **Mode** list.

SSID

Service Set Identifier (SSID) is a 32-character name that uniquely identifies all the computers and equipment that make up the wireless network.

Transfer Rate

Transfer rate can be set to automatic, or some other fixed value. It's recommended that you set the transfer rate to automatic (Auto) to allow the wireless network devices to transmit at a rate they deem optimum at any given point of time.

Channel

The channel settings let you set the channel for this Wireless Broadband Router. The radio channel is the place over which a communication transmission occurs. The operating channel number depends on the regulatory domain.



*NOTE: If you want to configure the settings of Beacon Interval, RTS Threshold, Fragmentation Threshold, and DTIM Interval, please ensure that the **Advanced Options** is checked first.*

Beacon Interval

The amount of time in Kusecs (one Kusec equals 1,024 microseconds) between radio beacons from the Wireless Broadband Router to its client stations. The value range is from 1 to 65535.

RTS Threshold

The packet size above which the Wireless Broadband Router will issue a Request to Send before sending the packet.

RTS (Request to Send) mechanism prevents the "Hidden Node" problem. When two stations are within range of the same Access Point (AP) but are not within range of each other, they are hidden nodes for each other. The packets from these two stations may collide if they arrive at the AP at the same time. To prevent data collision with the hidden node, you can activate RTS mechanism. If RTS mechanism is activated, the station will send a RTS first to inform the AP that it is going to transmit the data. Then, the AP will reply with the CTS (Clear to Send) to all stations within its range to notify all other stations and reserve the bandwidth for your data.

The RTS threshold controls what size data packet would issue a RTS. Only when the packet exceeds the RTS threshold, the device will send a RTS before sending the packet. There is trade-off to consider what value you should set for the RTS threshold. Small value causes RTS to be sent more often, and it would waste the bandwidth. However, the more often RTS packets are sent, the sooner the system can recover from collisions. It is recommended to use the default value or only minor reductions of this default value. The value range is from 0 to 2347.

Fragmentation Threshold

The fragmentation threshold, specified in bytes, determines whether data packets will be fragmented and at what size. Packets that are smaller than the specified fragmentation threshold value will not be fragmented. Packets that are larger than the fragmentation threshold will be fragmented into smaller packets and transmitted a piece at a time instead of all at once. Thus, it will reduce the need for retransmission and improve overall network performance. Fragmentation is activated usually when the system is in heavy traffic and interference environment. The setting must be within the range of 256 to 2346 bytes. It is recommended to use the default value or only minor reductions of this default value.

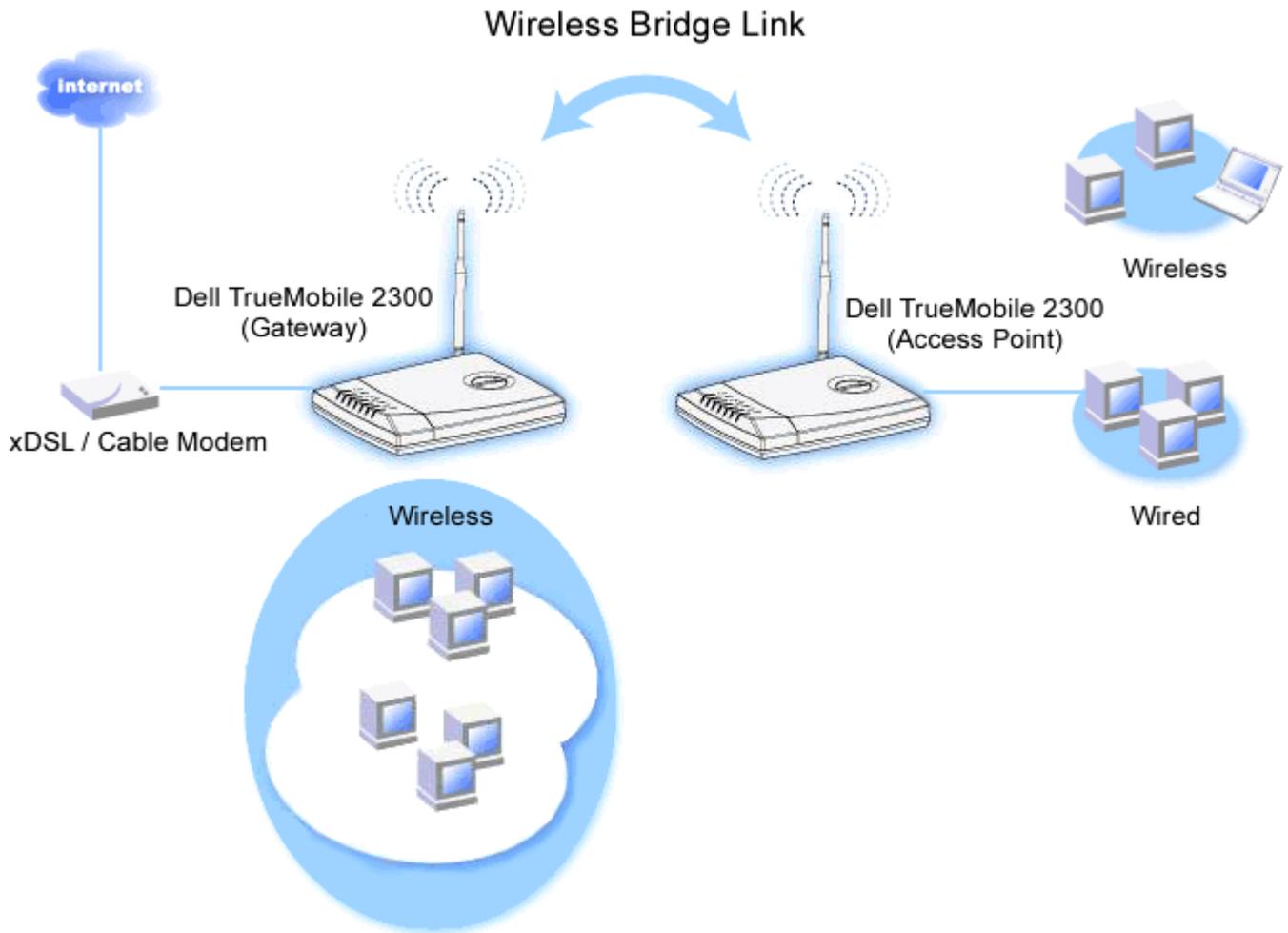
DTIM Interval

DTIM (Delivery Traffic Indication Message) Interval, always a multiple of the beacon period, determines how often the beacon contains a traffic indicator map (TIM). The TIM alerts stations in sleep state to stay awake long enough to receive their data frames. The value range is from 1 to 255.

Wireless Bridge

Wireless Bridging can be used to increase the coverage of your wireless network and/or to provide wired access to a remote computer(s). You need two or more Dell TrueMobile 2300 Wireless Broadband Routers to setup Wireless Bridging.

To setup wireless bridging, configure the wireless settings for all of your Dell TrueMobile 2300 Wireless Broadband Routers to the same settings.



Configuring your router for Wireless Bridging:

1. Open your web browser and go to <http://my.router> (or the default address <http://192.168.2.1>).
2. Click the **Advanced Settings** tab on the top navigation bar.
3. Click the **Advanced wireless** button on the left navigation bar.
4. Ensure **Enable Wireless** is checked.
5. Type your wireless network name in the **Network name (SSID)** field if you desire to change it from default settings "Wireless".
6. Ensure **Advanced Options** is unchecked.
7. Enable **Wireless Bridge**.
8. Enter the Wireless MAC address(es) of the other Dell TrueMobile 2300 Wireless Broadband Router(s) that you want to bridge.

 **NOTE:** To connect two bridges together, enter the MAC address of the bridge at the other end. To connect three bridges together, enter the MAC addresses of the other two bridges in the bridge acted as the multipoint center. The other two bridges only need to be entered the MAC address of the center bridge.

9. Click the **Submit** button.
10. Click the **Save & Restart** button.
11. When your web browser returns to the main page of the Wireless Broadband Router, the device has successfully restarted with the new settings.

12. Repeat steps 1 to 11 for each Dell TrueMobile 2300 Wireless Broadband router you want to bridge.

 **NOTE:** Ensure all Dell TrueMobile 2300 wireless Broadband Routers set to same wireless settings and all router(s) not directly connected to Internet should be configured to Access point mode.

[Back to Top](#)

Parental Control

IP filtering is a mechanism enabling a networking node to accept or deny certain types of IP datagrams based on the IP address, port number, protocol type, and other criteria. This router supports two types of IP filtering which allows you to have greater control over the access to Internet:

- **Internet Access Control** allows you to block access to the Internet based on the time of the day.
- **Web Site Restrictions** allows you to deny access to specified Web sites from a particular IP address.

Click **Add** button. A pop-up **Parental Control Rule** window will appear.

Internet Access Control

1. Select the IP address of the particular computer you want to control (for example, your child's computer) in the **IP Address** list.
2. To block / grant access to the Internet during a period of time, specify the start and end time from the **Time Restriction** list.
3. Select **Allow** or **Deny** from the **Internet Access** list.
4. Click the **SUBMIT** button to store the changes.

Web Site Restrictions

1. Enter the URL that you want to allow or deny the access in the **Web Site Restrictions** field.
2. Select **Allow** or **Deny** access to these web sites.
3. Click the **SUBMIT** button to store the changes.

[Back to Top](#)

Access Control Settings

Access Control Settings feature allows you to control which local client computer can access the network through the router. The Wireless Broadband Router by default allows any local client computer to access the network.

To enable access control in the router:

1. Check the **Enable MAC Access Control** box.
2. Select the appropriate **Operating Type**. **Grant** allows client computers access to the router. **Deny** restricts the access.
3. Enter the MAC address of the network card on the computer on which you wish to apply the above control policy.

4. Click **Add** to enter the rule to the router.
5. To remove an existing rule, check the "**Del**" checkbox next to the MAC address and click the **DEL** button.
6. Click the **SUBMIT** button to store the changes.

[Back to Top](#)

Port Forwarding Settings

DMZ

DMZ (demilitarized zone) feature allows access to all ports. (For example, if you have problems hosting a game server, you can choose this option. This will open all ports to your game server.)

1. Check the **Enable DMZ Host** box.
2. Type the IP address of the computer that you want to run the gaming application in the **DMZ IP Address** field.
3. Click **SUBMIT** button to activate the setting.



NOTE: Configuring the Wireless Broadband Router in DMZ mode is useful if you want to play certain games through the Wireless Broadband Router, but the ports cannot be opened with all other existing configuration tools.



NOTICE: Opening a service to the Internet causes security concerns. Pay careful attention to security alerts, and make sure that strong access controls and authentication are in place before allowing access to any services.

Custom Port Forwarding Settings

Port Forwarding may be more difficult than DMZ to configure. However, it provides a relatively safe way of running a Internet application or providing a Internet service from behind a firewall since only a single port (or a range of ports) is exposed to the Internet. You can configure this port forwarding setting to create a custom rule that defines a specific port and protocol for data traffic to pass through to the specific computer on your LAN.

An example is a HTTP server running on your LAN, which you want it to be available to the Internet. Your public IP address (that your ISP gives you) is X.X.X.X (The X is a number), and you have a computer hosting the HTTP server at LAN address 192.168.2.2 on your Wireless Broadband Router (192.168.2.1) controlled LAN. You can configure 192.168.2.2 to have port forwarding for port 80 (HTTP), then users on the Internet can go to <http://X.X.X.X> and get the HTTP server (192.168.2.2). The data traffic entering service port 80 will be directed to the computer (192.168.2.2), and other computers on your LAN will not see this data traffic.

For some internet applications (such as Internet messaging and gaming applications), you can configure this port forwarding setting so that these applications can function correctly behind the firewall. These applications are required to have specific TCP/UDP ports. The ports for these applications and the protocol type will depend on what Internet services you are using. Please check with your service provider or application's user manual to have the information first.

Make sure you have the following ports setup as described below.

1. Check the **Enable** box.
2. Enter the desired name or description in the **Service Name** field.
3. In the **Incoming Ports** field, enter a range of ports. If you want to specify only a single port number, enter the same number in both boxes.

4. In the **Destination IP Address** field, enter the IP address of the computer you want to receive the connection request.
5. In the **Destination MAC Address** field, enter the MAC address of the computer you want to receive the connection request.

 **Information:** Find the MAC address

The steps below show how to find the MAC address of the computer in Windows 2000 and XP.

- a. Click on **Start -> Run**.
 - b. Type **cmd** in the Open field and then press Enter or click OK button.
 - c. In the command prompt, type **ipconfig/all** to obtain the **Physical Address** (=MAC address).
 - d. Write down this Physical Address (=MAC address). You need this information for setting. Its format should be XX-XX-XX-XX-XX-XX. The X is a hexadecimal digit (0-9 or A-F).
6. In the **Destination Port** field, enter a port number or a range of ports of the machine to which you are mapping.
 7. In the **Port type** field, select TCP, UDP, or both protocols. The protocol could be specified in your application's documentation.
 8. Click **SUBMIT** button to activate the setting.

For example, if you want to play game "Fighter Ace II" on a computer with an IP address of 192.168.2.3, enter **3** for the **Destination IP Address**. Find the MAC address of this computer and enter it for the **Destination MAC Address**. Select **TCP** as the **Port type**. Enter "**50000**" and "**51000**" for two boxes of **Incoming Ports** and also for the **Destination Port**. Click **SUBMIT** button to activate the setting. For other games or services, please consult the application's user manual.

Commonly Used Ports

Services	Protocol Type	Ports
HTTP (WEB Server)	TCP	80
FTP	TCP	20, 21
TELNET	TCP	23
SMTP (Mail Server)	TCP	25
POP3 (Mail Server)	TCP	110
IRC	TCP	6667
NNTP (News Server)	TCP	119

Port Triggering

Port triggering allows the router to watch outgoing data for specific port number. The IP address of the the computer that sends the data is remembered by the router, so that when the requested data returns through the router, the data will be passed to the specific computer by way of IP address and port mapping rules. The router opens the port when the Port Triggering happens. When the computer running the application stops sending the data through this port, the router will close the port.

1. Check the **Enable** box.
2. Enter the desired name or description in the **Application Name** field.
3. In the **Trigger Port** field, enter a port number. Check with your Internet application provider for more information on what the Trigger Port it is using.
4. Select TCP (Transmission Control Protocol), or UDP (User Datagram Protocol), or both protocols as the **Trigger Port Type**.

5. Specify the range of the **Public Ports** by entering the start and end port numbers in the required fields.
6. Select TCP (Transmission Control Protocol), or UDP (User Datagram Protocol), or both (TCP and UDP) as the **Public Port Type**.
7. Click **SUBMIT** button to activate the setting.

Click the **SUBMIT** button to store the changes.

[Back to Top](#)

Static Routing

Static routes are manually configured routes to remote networks. That is, the route is predefined and is not discovered by the *Routing Information Protocol* (RIP), as in dynamic routing. Static routing allows you to assign a gateway to an IP address or network. If there are routers on your internal network that do not function with RIP 1 or 2, you can set up a static route to those routers.

The advantage to using static routing is that network traffic is reduced; thus, static routing is beneficial for slow Internet connections. Routing using static routes is practical for small networks. For larger networks, the router needs to dynamically keep track of changes in the physical wiring of the network, and the use of dynamic routing (RIP) is recommended.

 **NOTICE: The Static Routing settings are intended for advanced network administrators only. Do not change these settings unless you are certain of the correct values. You may not be able to access the configuration tool if invalid information is entered.**

To use static routing, manually add the Destination IP Address, Subnet Mask, and Gateway IP Address for each route you are adding to the Static Routing Table, and click **ADD**. If you are routing to an entire network, the last number in the destination IP address should be a zero (0); for example, 192.168.0.0.

 **NOTE: In static routing, the Wireless Broadband Router does *NOT* dynamically discover routing information and does *NOT* use RIP. The Wireless Broadband Router currently does *NOT* support RIP.**

Use the checkboxes beside each route and the **DELETE** button to remove static routes from the Static Routing Table.

Click the **SUBMIT** button to store the changes.

[Back to Top](#)

Administration Settings

Password Settings

The Wireless Broadband Router uses a password to authenticate the user before allowing changes to be made to any network settings. If you would like to change the current password, check the **Change Your Password** checkbox and enter the new password in both **New Password** and **Retype Password** fields. Write down the password and keep it in a secure location for future reference.

System Administration

- **HTTP Port No.**

Do not change the **HTTP Port** value unless you have reason to do so. Typically, web servers listen for incoming web requests on port 80.

- **Allow remote user to configure the device**

If you would like a remote user to be able to administer your Wireless Broadband Router over the Internet, check the box titled **Allow remote user to configure the device**. Enter the IP address for the remote administration host computer.

- **Allow remote user to ping the device**

Check the box **Allow remote user to ping the device** to enable your Wireless Broadband Router to be "ping"ed by any user on the Internet. This feature is helpful if you want to let other Internet users to check the status of your Wireless Broadband Router.

- **Enable UPnP function**

UPnP stands for Universal Plug and Play, a protocol which allows UPnP-enabled client computers such as Windows XP to discover and configure the Wireless Broadband Router. One of most common use of UPnP on the router is to open ports to allow application-specific data to be forwarded through the router for various Internet services or gaming applications. The router detection and the router configuration process can be carried out automatically by the UPnP-enabled client applications such as **MSN Messenger** so you won't have to do it manually. Check the **Enable UPnP function** box to enable this service or clear the box to disable it.

If you have an Windows XP system, you can use it to access and control the router while the router's UPnP function is enabled. Here are some examples of what you can do with UPnP from your XP system.

Example 1) Access the router's Web Configuration tool without knowing its IP address.

1. Double click on the "My Network Neighborhood" icon from the desktop.
2. Double click on the "Broadband Router" icon that is created for your router.



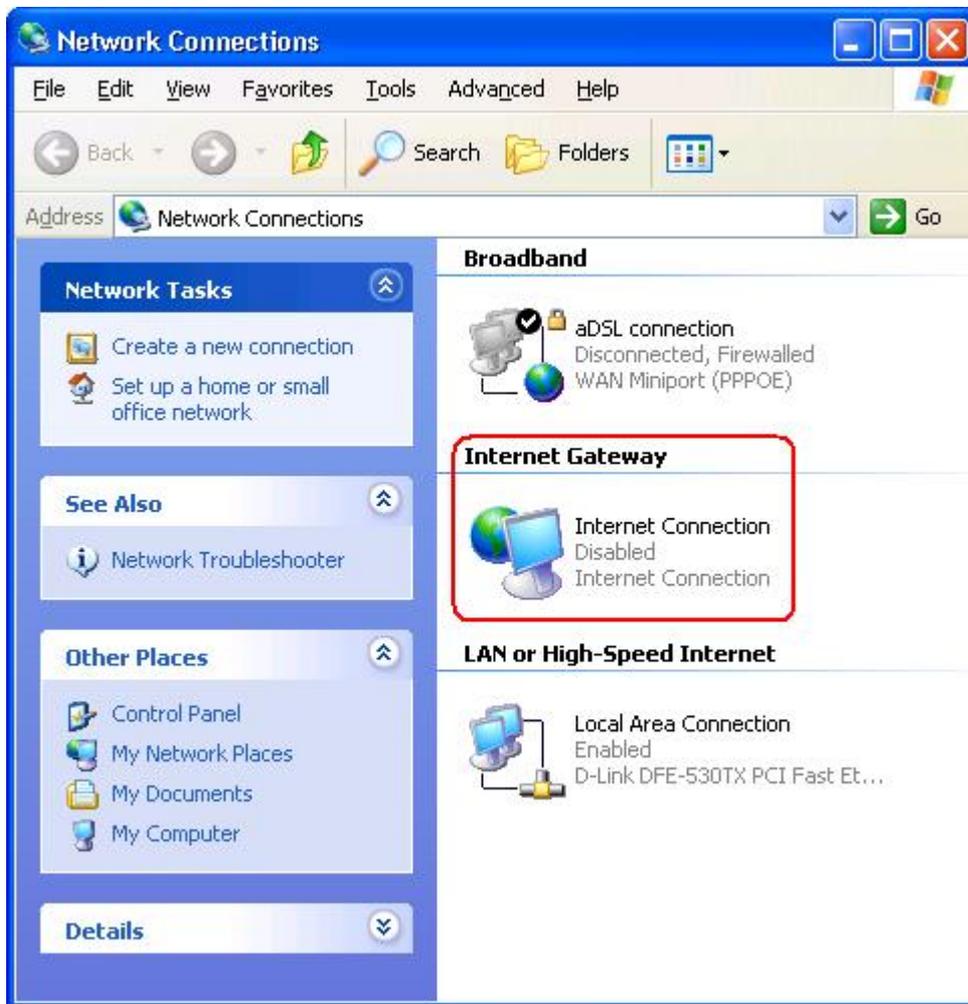
3. This will bring up the authentication screen of the router's Web configuration tool. Enter the correct password and click **OK** to access the Web configuration tool.



Example 2) Manage the router's port forwarding rules from the XP interface.

NOTE: You have already configured a port forwarding rule for the service via the web configuration tool, you don't need to perform the following steps for the same service again.

1. Right click on the "My Network Neighborhood" icon from the desktop.
2. Right click the **Internet Connection** icon created for the router. (See below)



3. Right click the icon and select **Property**.
4. Click **Settings**.
5. Click **Add**.
6. Enter Description of service, IP address of the service host, External Port number for this service, Internal Port number for this service and select either TCP or UDP.

For example, the graph below shows an example of how to enable a computer with an IP address 192.168.2.101 to host a public HTTP server.



7. Click **OK** button to save the changes.

Click the **SUBMIT** button to store the changes.

[Back to Top](#)

[Back to Contents Page](#)

