Wireless N Gigabit Router
setup guide

PACKAGE INCLUDES

Business Router (Wireless N Gigabit)

WiFi Antennas (3x)

Wall Power Adapter (12v DC)

Ethernet Cable (5-feet)

Mounting Hardware (1x)

Setup Guide

ADDITIONAL INFORMATION
cradlepoint.com/mbr1400

all::connected
BUSINESS SERIES

The CradlePoint Business Wireless Router (MBR1400) is built to provide an a effortless instant network connection from high-speed broadband data modems to your network.

CONNECT
USB or ExpressCard modems, Ethernet-Based Wired Services, WiFi

Designed for small businesses, branch offices, and retail locations, the MBR1400 provides a secure, primary or backup connection to the internet.

With features like failover/failback, secure VPN, multiple encryption modes, dual band WiFi broadcast (2.4 GHz or 5 GHz), guest networks, and WiFi as WAN, the MBR1400 can meet all your business needs.

The MBR1400 is compatible with all major corporate network environments like Cisco, Juniper, SonicWall, and others. It also fully supports all 802.11 a/b/g/n client adapters for WiFi networking.

Our web-based configuration and status tool supports Windows XP, Windows Vista, Windows 7, Mac OS X, and most of the Linux distributions - allowing you to manage the router in most common environments.

The MBR1400 web-based administration allows you to manage settings, backup and restore, implement the latest firmware upgrades, plus get a complete log of diagnostic and status events for advanced troubleshooting.
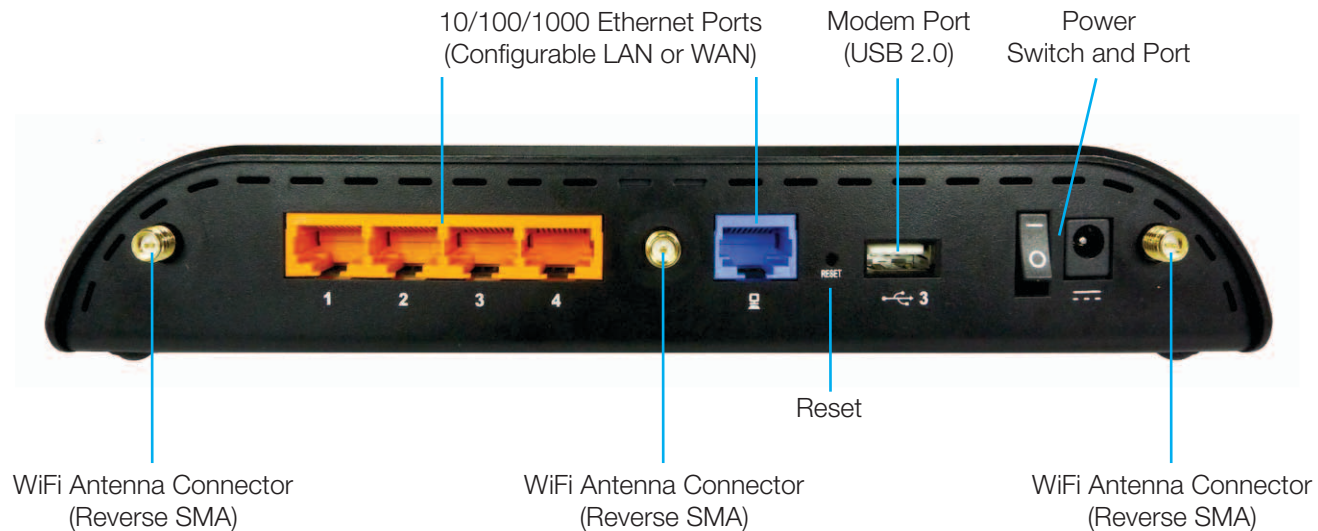
The router supports custom DNS configuration with OpenDNS, DHCP server and configuration, and dual-band WiFI options with multiple network names (SSIDs), 802.11 a/b/g/n modes, and broadcast channel selection. This guide will cover additional features of Advanced Configuration, starting on page 12.

With an MBR1400, you have the power and flexibility you need for the most demanding small business, branch office, retail, or home environment. Optimized for 5-20 users, the MBR1400 is a flexible, dependable router you can trust.
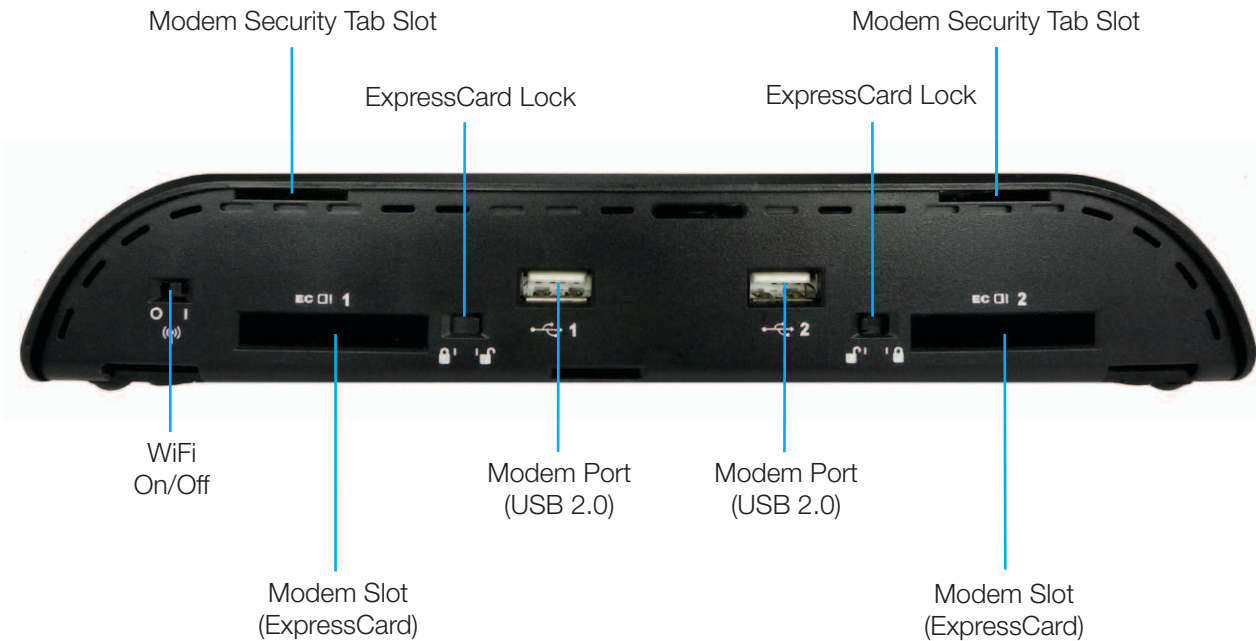
10/100/1000 Ethernet Ports
(Configurable LAN or WAN)

Modem Port
(USB 2.0)

Power
Switch and Port

Reset

WiFi Antenna Connector
(Reverse SMA)

WiFi Antenna Connector
(Reverse SMA)

WiFi Antenna Connector
(Reverse SMA)

Modem Security Tab Slot

Modem Security Tab Slot

ExpressCard Lock

ExpressCard Lock

WiFi
On/Off

Modem Port
(USB 2.0)

Modem Port
(USB 2.0)

Modem Slot
(ExpressCard)

Modem Slot
(ExpressCard)

1. Connect the Router to a Modem / Data Source.

Keep the router in the OFF position until the modem is securely connected. Connect a CradlePoint Business Grade Modem, or a supported USB or ExpressCard modem to the router in their appropriate port or slot. Connect a Cable or DSL modem to the Blue Ethernet WAN port. (see page 4)

2. Connect the WiFi Antennas.

Attach the three included WiFi antennas to the connectors for maximum WiFi broadcast. Antennas are jointed, which enables you to position them for optimal WiFi broadcast. To attach, hold the antenna straight and twist the base of the antenna to connect, folding the joint if needed. Please note that 2.4GHz antennas are provided. 5GHz antennas are available as an accessory.

3. Connect to a Power Source.

Connect the router to the provided power supply (12V DC Wall). When you flip the power switch to the ON position, watch for the appropriate modem LED to illuminate. Ensure the connected modem LED is lit with a solid green light, which indicates that the modem is properly connected. For other LED states, please see descriptions on page 10.

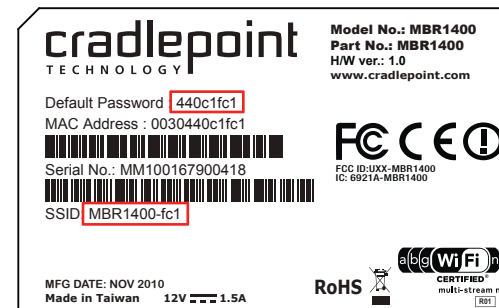## 4. Connect to a Computer or other Network Equipment.

In order to access the MBR1400, establish a connection to the router. Connect wirelessly to the WiFi broadcast, or with an Ethernet cable connected to your computer and then plugged into one of the orange Ethernet ports.

To connect to the WiFi, you will need to input the default password when prompted. The default password is provided on the product label found on the bottom of your router. (see example below)

7. Use.

For most users, the MBR1400 Router can be used immediately without any special configuration changes. If you'd like to change your network name, level of WiFi security, etc. follow the First Time Setup Wizard steps on page 8.

The default WiFi network name broadcast will be seen as "MBR1400_xxx", where "xxx" is the last three characters of your router's MAC address, shown as SSID on the product label.

cradlepoint
TECHNOLOGY

Model No.: MBR1400
Part No.: MBR1400
H/W ver.: 1.0
www.cradlepoint.com

Default Password 440c1fc1
MAC Address : 0030440c1fc1

Serial No.: MM100167900418

SSID MBR1400-fc1

FCC ID:UXX-MBR1400
IC: 6921A-MBR1400

MFG DATE: NOV 2010
Made in Taiwan   12V 1.5A

RoHS

a(b(g WiFi)n
CERTIFIED
multi-stream n

The First Time Setup Wizard will help you customize the name of your wireless network, change passwords to something you choose, and establish an optimal WiFi security mode. The MBR1400 comes out of the box with a unique password at WPA2 WiFi security level.

CradlePoint recommends BEST WPA2 WiFi security.

1) Open a browser window and type **"cp"** or **"192.168.0.1"** in the address bar. Press enter/return.

2) When prompted for your password, type the eight character **Default Password** found on the product label.

3) When you log-in for the first time, you will be automatically directed to the **FIRST TIME SETUP WIZARD**.

4) **STEP 1/4:** If you choose, you can change the router's **DEFAULT ADMINISTRATOR PASSWORD**. Then, select your **TIME ZONE**. Click **NEXT**.

5) **STEP 2/4:** CradlePoint recommends you customize your WiFi Network Name. Type in your personalized Network name here. You can also enable the Guest Network feature (see description on page 14).

Choose the **WIFI SECURITY LEVEL** that best fits your needs: **POOR** for **WEP**, **GOOD** for **WPA1/WPA2** or and **BEST** for **WPA2**. (Make sure your PC or other devices support the mode you choose).

Choose a personalized **WPA PASSWORD or WEP KEY**. This password will be used to reconnect devices to the router's WiFi broadcast once the security settings have been saved. Click **NEXT**.

6) **STEP 3/4:** If you are using a 4G WiMAX modem, you will want to establish the Realm for your carrier. This setting ensures that the modem, when attached to the router, will properly connect to your carrier's wireless broadband service. The MBR1400 will default to the Sprint 3G/4G Realm. Select your carrier from the drop-down menu. Click **NEXT**.

7) **STEP 4/4:** Review the details and record your wireless network name, administrative and wireless WPA password. Move your mouse over the passwords to selectively reveal. Click **APPLY** to save the settings and update them to your router.

NOTE: If you are currently using the MBR1400 WiFi network, reconnect your devices to the network using the new wireless network name and security password.

SIGNAL STRENGTH BUTTON Blue LED bars indicate the active modem's signal strength. Press button to turn on/off. 4 Solid Bars = strongest signal 1 Blinking Bar = weakest signal

POWER The MBR1400 must be powered using an approved 12V DC power source.
Green = Powered On. No Light = Not receiving power. Check that the unit is connected to an outlet.
Amber = Attention. Check router status page.

NETWORK LAN CONNECTION Indicates a connected device on the 1-4 LAN ports on the MBR1400.
Green = Connected to an active 10/100 Ethernet interface. Blinking Green = traffic. Blue = Connected to an active 10/100/1000 Ethernet interface. Blinking Blue = traffic. No Light = not connected, the connection is not configured correctly, router is not configured correctly, or may not be turned on.

WPS WiFi Protected Setup. When you press the WPS button for five seconds, it allows you to use WPS for your WiFi security. Blinking Blue = WPS setting is in progress. Solid Blue = WPS is active.
CradlePoint recommends using WPA2 WiFi Security.

WAN CONNECTION Indicates information about a data source connected to the WAN port (blue Ethernet port.
Green = Connected to an active 10/100 Ethernet interface. Blinking Green = traffic. Blue = Connected to an active 10/100/1000 Ethernet interface. Blinking Blue = traffic. No Light = not connected, the connection is not configured correctly, or switch or router are not configured correctly or turned on.

WiFi BROADCAST Indicates activity on the WiFi broadcast for either the 2.4GHz and 5GHz bands.
Green = 2.4 GHz WiFi is on and operating normally.
Blue = 5GHz WiFi is on and operating normally.
Blinking Red = Error with 2.4GHz or 5GHz connection.
No Light = WiFi is off.

USB MODEMS Indicates the status of any USB modems connected to the MBR1400.
(A connected CradlePoint Business Grade Modem LED information will be shown on LED #2.)
Green = Modem has established an active connection. Blinking Green = Modem is connecting.
Amber = Modem is not active. Blinking Amber = Data connection error. No modem connection possible.
Blinking Red = Modem is in the process of resetting.

EXPRESS CARD MODEMS Indicates the status of any ExpressCard modems connected to the MBR1400.
Green = Modem has established an active connection. Blinking Green = Modem is connecting.
Amber = Modem is not active. Blinking Amber = Data connection error. No modem connection possible.
Blinking Red = Modem is in the process of resetting.

The CradlePoint MBR1400 is a business-grade router specifically designed for retail locations and small/branch offices. Optimized for performance, reliability, and maximum WiFi range, the MBR1400 has access to a cloud-based tool called WiPipe Central, for group-based configuration, management, and monitoring of remotely deployed routers.

Secure Access
The MBR1400 supports WEP, WPA, WPA2 and AES encryption modes to create secure internet connections for up to 128 connected devices via WiFi and unlimited via Ethernet. Prevent unwanted access to computers connected to your networks with an SPI Firewall and NAT (Network Address Translation). Features like URL Filtering, Traffic Filtering, DMZ, Virtual Server, Port Forwarding, and FTP pass-through (passive and active) are also available to enable safe internet access for all connected users.

VPN (Virtual Private Networking)
Create, manage and terminate secure VPN tunnels between remote computers and secure corporate networks with IPSec, L2TP, PPTP. With up to 20 concurrent VPN sessions, the MBR1400 supports both transport and tunnel modes. Provide end-to-end protection of secure company communications with Hash and Cipher encryption algorithm protocols.

Network Failover Support
When multiple internet sources (4G, 3G, DSL, Cable, T1, Fibre, etc) are connected to the MBR1400, it can automatically detect an internet outage and "failover" to a secondary connection and "failback" when the primary data service returns.

HOW TO CONFIGURE: Select **INTERNET** from top tab and **CONNECTION MANAGER** from drop-down menu. Order your connections by failover priority. Select **ADVANCED**, then **FAILOVER CHECK**, then click **ENABLE**. Click **APPLY** to save settings. Select **FAILBACK CONFIGURATION**. Set desired **FAILBACK MODE**.

Load Balancing
When multiple data sources are connected to the MBR1400, the router can be configured to distribute all connected users or device traffic across active data connections. This feature distributes each connected user to the best data source available, relieving congestion and pressure on any single data source.

Dual-Band WiFi WLAN
The MBR1400 provides the option of broadcasting your WiFi network on either the 2.4GHz or 5GHz band. This allows administrators the option to select the less used 5GHz frequency band if desired.

WiFi Networks

The MBR1400 can make two WiFi networks on either the 2.4GHz or 5GHz band. The main (private) SSID is used for your trusted workgroup members. The Guest (public) SSID provides full, secure access to the internet - but users are restricted from accessing the router administration console or any connected devices on the private network. Each network can be configured for QoS for levels like VoIP or other applications. The ability to "Hide" network names (SSIDs) from broadcast is also available.

HOW TO CONFIGURE: Enable the Guest Network in Step 2 of the First Time Setup Wizard. It will appear by default as "Guest-XXX" in your available networks list. (XXX = the last three characters of your routers MAC Address).

WiFi as WAN

The MBR1400 can receive an existing WiFi signal and use it to create secure internet access, allowing you to connect up to 128 devices using the MBR1400's security features. The WiFi as WAN feature can be used as a WiFi repeater or as a WiFi to Ethernet adapter for non-WiFi devices. Turning on WiFi as WAN will disable Guest Network if established.

HOW TO CONFIGURE: Enable this feature by logging in to your router (see steps 1 & 2 on page 7) and select **INTERNET** on the top navigation bar and then **WiFi as WAN** settings in the drop-down menu. Click **ENABLED** and **APPLY** to select the WiFi network you'd like to use as your Internet Connection.

WiPipe Central: Efficiently manage the edge of your corporate network.

CradlePoint's cloud-based management service, WiPipe Central, gives you a consolidated router management tool to communicate with and manage dispersed CradlePoint routers. This service allows you to have firmware update and configuration options for the edge of your network, as well as gain information about other data connections (4G/3G/T1/DSL/Cable/etc) across geographies and networks.

Designed to eliminate conflict with existing firewalls (using device-initiated HTTP protocols), WiPipe Central has user-defined groups for quick communication with all grouped devices. It provides remote access to an individual router or pre-defined group for firmware and configuration updates.

CradlePoint has a demonstration of WiPipe Central available for your use.

visit: **www.cradlepoint.com/services**
username: **Demo**
password: **Demo**

NOTE: This account is tied to 15 dedicated routers at CradlePoint Headquarters. The routers and account are live – you may view connection status, update firmware, and change the configuration settings. The routers and management account are reset nightly to original settings.

To learn more about WiPipe Central, contact services@cradlepoint.com

WiFi broadcast and 4G/3G mobile broadband data communication are wireless technologies that must work well together to fully experience the benefits of both signals.

CradlePoint recommends the following antenna positioning for best performance.

ROUTER
Attach the three WiFi antennas to the router connectors and leave straight.

4G MODEM
Attach the modem to one of the USB ports on the MBR1400, without bending USB pivot.

USE
Place flat in an unobstructed area or secure onto a wall using the provided wall mount.

WiFi Antennas

4G Modem

MBR1400

The CradlePoint series of Business-Grade Modems provides the highest level of data throughput at the same location as a standard USB modem. CradlePoint optimizes and intelligently manages the co-existence between the wireless broadband signal and the WiFi broadcast of the router, creating a fast, wide-range, truly business-class modem-based instant network.

CradlePoint recommends the following antenna positioning for best performance.
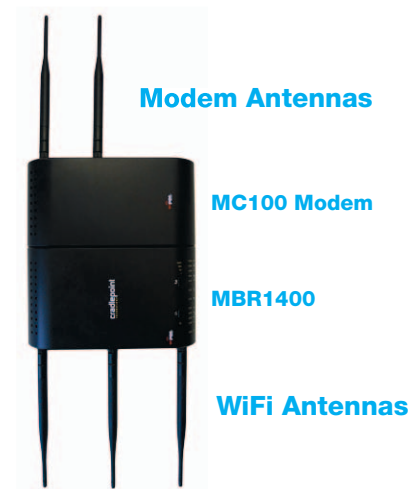
ROUTER
Attach the three WiFi antennas to the router connectors and leave straight.

BUSINESS MODEM
Attach the two Modem antennas to the modem connectors and leave straight.
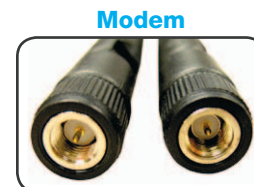
USE
Place flat in an unobstructed area or secure onto a wall using the provided wall mount.

Modem Antennas

MC100 Modem

MBR1400

WiFi Antennas

WiFi

When connecting the provided antennas, review the connection points.

WiFi antennas have flat circular bases.

Modem antennas have protruding pins.

Modem

You may need to update the CradlePoint MBR1400 firmware to get our latest features or to use with new modems. For more information, visit **www.cradlepoint.com/knowledgebase**

HOW TO DOWNLOAD FIRMWARE

1) Navigate to the product page **www.cradlepoint.com/mbr1400**

2) Scroll to the bottom of the page, mouse over **FIRMWARE**, and download the most current version of the firmware and modem driver.

HOW TO UPDATE FIRMWARE

1) Connect your computer to the CradlePoint router with an Ethernet cable.

2) Open a browser window and type **"cp"** or **"http://192.168.0.1"** in the address bar. Press enter/return.

3) When prompted for your password, type the default password found on the MBR1400 product label.

4) Select **AUTOMATIC (Internet)** if you have an active data source connected to the MBR1400.

5) Otherwise, click **MANUAL FIRMWARE UPLOAD** and click the **BROWSE** button.

6) Select the firmware file you saved to your desktop and click **OPEN**.

7) Click **BEGIN FIRMWARE UPDATE**. Wait a moment while your firmware is updated and the product reboots.

VERIFY THE CARRIER REALM

The Business Grade Modem defaults to a Sprint network data connection.
You may need to modify your 4G realm to match a different carrier network.

1) Log in to the router following Steps 1-3 on Page 18.

2) Click the **INTERNET** tab on the top navigation bar, then **MODEM SETTINGS** in the drop-down menu.

3) Select the 4G Modem you would like to manage, select **CONFIGURE**

4) Select your Wireless Broadband Provider from the **WIMAX REALM** drop-down menu

5) Click **APPLY** then **OK**

6) Select the **INTERNET** tab and then **CONNECTION MANAGER** from the drop-down menu.

7) Click **STOP** next to the modem you selected the realm for, then click **START**.

Ensure that you click STOP and then START on the modem you configured. This properly resets the settings for the attached modem.
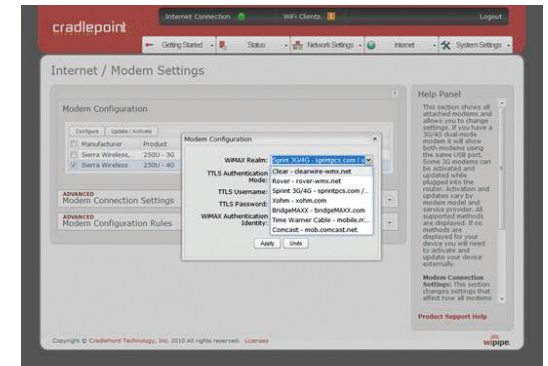
Federal Communication Commission Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against such interference in a residential instal-lation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in ac-cordance with the instructions provided by CradlePoint, may cause harmful interference to radio communications. This device must accept any interference received, including interference that may cause undesired operations. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by using one or more of the following measures:
• Reorient or relocate the receiving antenna.
• Increase the separation between the equipment and receiver.
• Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
• Consult the dealer or an experienced radio or television technician for help.

Changes or modifications not expressly approved by CradlePoint, Inc. could void the user's authority to operate the product.

Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. End users must follow the specific operating instructions for satisfying RF exposure compliance. To maintain compliance with FCC RF exposure compliance requirements, please follow operation instruction as documented in this manual.

Industry Canada Statement

This device complies with RSS-210 of the Industry Canada Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

IMPORTANT NOTE: Radiation Exposure Statement
This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Caution:
1) The device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-channel mobile satellite systems.

2) The maximum antenna gain permitted (for devices in the band 5725-5825 MHz) to comply with the e.i.r.p. limits specified for point-to-point and non point-to-point operations as appropriate, as stated in section A9.2(3).

This device has been designed to operate with an antenna having a maximum gain of 5 dBi. Antenna having a higher gain is strictly prohibited per regulations of Industry Canada. The required antenna impedance is 50 ohms.

Déclaration d'Industrie Canada

Ce dispositif est conforme à la norme CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préju-diciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

NOTE IMPORTANTE (Pour l'utilisation de dispositifs mobiles): Déclaration d'exposition aux radiations
Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de ray-onnement et votre corps.

Précaution
1) Le dispositif fonctionnant dans la bande 5150-5250 MHz est réservé uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux

2) Le gain d'antenne maximal autorisé (pour les appareils dans la bande 5725-5825 MHz) pour se conformer à la pire limites fixées pour les opérations de point à point point à point et non le cas échéant, comme indiqué dans la section A9.2 (3).

Ce dispositif a été conçu pour fonctionner avec une antenne ayant un gain maximal de 5 dBi. Une antenne à gain plus élevé est strictement interdite par les règlements d'Industrie Canada. L'impédance d'antenne requise est de 50 ohms

Open Source Software
This product contains software distributed under one or more of the following open source licenses: GNU General Public License Version 2, NetBSD Foundation License, and PSF License Agreement for Python 3.1.1. For more information on this software, including licensing terms and your rights to access source code, contact CradlePoint at www. CradlePoint.com.

Warranty Information
CradlePoint, Inc. warrants this product against defects in materials and workmanship to the original purchaser (or the first purchaser in the case of resale by an authorized distributor) for a period of one (1) year from the date of shipment. This warranty is limited to a repair or replacement of the product, at CradlePoint's discretion. CradlePoint does not warrant that the operation of the device will meet your requirements or be error free. Within thirty (30) days of receipt should the product fail for any reason other than damage due to customer negligence, purchaser may return the product to the point of purchase for a full refund of the purchase price. If the purchaser wishes to upgrade or convert to another CradlePoint, Inc. product within the thirty (30) day period, purchaser may return the product and apply the full purchase price toward the purchase of another CradlePoint product. Any other return will be subject to CradlePoint, Inc.'s existing return policy.

Limitation of CradlePoint Liability
The information contained in this Product Information and Safety Guide is subject to change without notice and does not represent any commitment on the part of CradlePoint or its affiliates. CRADLEPOINT AND ITS AFFILIATES HEREBY SPECIFICALLY DISCLAIM LIABILITY FOR ANY AND ALL: (A) DIRECT, INDIRECT, SPECIAL, GENERAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE OR EXEMPLARY DAMAGES, INCLUDING WITHOUT LIMITATION FOR LOSS OF PROFITS OR REVENUE OR OF ANTICIPATED PROFITS OR REVENUE ARISING OUT OF THE USE OR INABILITY TO USE THE PHS2000W 4G DEVICE, EVEN IF CRADLEPOINT AND/OR ITS AFFILIATES HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, AND EVEN IF SUCH DAMAGES ARE FORESEEABLE; OR (B) CLAIMS BY ANY THIRD PARTY.

Notwithstanding the foregoing, in no event shall the aggregate liability of CradlePoint and/or its affiliates arising under or in connection with the PHS2000W 4G device, regardless of the number of events, occurrences, or claims giving rise to liability, exceed the price paid by the original purchaser of the PHS2000W 4G device.

Privacy
CradlePoint may collect general data pertaining to the use of CradlePoint products via the Internet including, by way of example, IP address, device ID, operating system, browser type and version number, etc. To review CradlePoint's privacy policy, please visit: http://www.cradlepoint.com/privacy.

Other Binding Documents; Trademarks; Copyright
By using your CradlePoint device, you agree to be bound by CradlePoint's Terms of Use, User License and other Legal Policies, all as posted at www.cradlepoint.com/legal. Please read these documents carefully. CradlePoint, the CradlePoint logo, are trademarks of CradlePoint, Inc. © 2011 CradlePoint, Inc. All Rights Reserved.

Connect a CradlePoint Business-Class Modem (or any supported USB or ExpressCard modem) and 99.99% of the time, you're up and running - instantly.

FEATURES

- Business-Class modems provide optimal data throughput and co-existance

- Establish continuous uptime with optimum total cost of ownership for broad deployment

- Optional Business Grade Modem available for security and highest level of network uptime

- Flexible installation provides highest level of 4G performance

- Standardized platform and centralized remote management

- Enterprise-level security features

- Simple to install, configure and maintain - minimal impact on IT

CradlePoint Business-Grade Modem Series.

WiMAX and EV-DO models available.

To learn more, visit
www.cradlepoint.com/businessmodem

or call **+1 208.908.5054**