



Release Notes for CradlePoint Rev 1.5 Firmware

Products supported/tested:

Mobile Broadband Router with VPN (MBR1100)

Mobile Broadband Router (MBR1000)

Modems/handsets tested (devices added since 1.4 in blue):

USB modems:

Calcomp a600/Cricket

EMOBILE D02HW/EMOBILE

EMOBILE D11LC/EMOBILE

EMOBILE D12LC/EMOBILE

EMOBILE D21HW/EMOBILE

EMOBILE D21LC/EMOBILE

Franklin CDU-550/Sprint

Franklin CDU-680/Sprint and nTelos (GPS - see Known Issues)

Franklin U300/Sprint (3G support only)

Huawei EC168/Alltel

Huawei E220/AT&T

Huawei EC228/Alltel

Novatel MC930D/AT&T

Novatel MC950D/AT&T (and Rogers, but tested using AT&T network)

Novatel U720/Sprint and Verizon (GPS - Sprint only)

Novatel U727/Sprint and Verizon (GPS - Sprint only)

Novatel U760/Sprint and Verizon (GPS - Sprint only)

Option Quicksilver/AT&T * (see Known Issues)

Pantech UM150/Verizon and Alltel

Pantech UM175/Verizon and Alltel

Sierra Wireless 595U USB/Sprint, Verizon and Telus (GPS – Sprint only)

Sierra Wireless Compass 597U/Sprint (GPS)

[Sierra Wireless Compass 598U/Sprint \(GPS\)](#)

Sierra Wireless 875U USB/AT&T

Sierra Wireless 880U/AT&T

Sierra Wireless 881U USB/AT&T

Sierra Wireless Compass 885U USB/AT&T

Sierra Wireless AT&T USBConnect Mercury/AT&T

UTStarcom UM100/Cricket

[ZTE MF626 \(b-mobile 3G\)/AT&T](#)

[ZTE MF636/Rogers](#)

ExpressCard modems:

[Huawei E870/AT&T](#)

Kyocera KPC-680/Sprint, Verizon, and nTelos

Novatel EX720/Sprint (GPS)

Novatel V740/Verizon

Novatel X950D/(Rogers, but tested using AT&T network)

Option GT Max 3.6 Express/AT&T * (see Known Issues)

Option GT Ultra Express/AT&T * (see Known Issues)

Sierra Wireless 597E/Sprint and Telus (GPS – Sprint only)

Sierra Wireless 880E/AT&T

Handsets:

HP iPaq 910/AT&T

HTC Touch/Sprint

HTC Mogul PPC-6800/Sprint (see usage note under RNDIS below)

HTC Apache PPC-6700/Sprint

LG VX8000 and VX8300/Verizon

LG VX7200/Verizon

LG Musiq/Sprint

LG Fusic LX-500/Sprint
Motorola v3c RAZR/Sprint and Verizon
Motorola RAZR2/Sprint
Motorola Q and Q9c/Sprint
Motorola RAZR v3xx/AT&T
Motorola Q v9h/AT&T
Motorola KRZR/Sprint
Palm 700w/Sprint and Verizon
Palm 700p/Verizon
Palm 755p/Sprint
Palm Centro/Sprint
RIM BlackBerry Curve 8310/AT&T
RIM BlackBerry Curve 8330/Sprint and Verizon
RIM BlackBerry 8703e/Sprint and Verizon
RIM BlackBerry 8830/Sprint and Verizon
RIM BlackBerry Pearl 8130/Sprint and Verizon
[RIM BlackBerry 9530 Storm/Verizon](#)
Samsung ACE/Sprint
Samsung A900/A900M/A920/Sprint
Samsung SCH-i830/Sprint
Samsung SGH-A707/AT&T
Samsung Blackjack (SGH-i607)/AT&T
Samsung SPH-m520/Sprint
Sanyo M1/Sprint
Sanyo SCP-6600 (Katana)/Sprint
Sanyo Katana 2/Sprint
Sanyo SCP-8400/Sprint

Notes:

- Upgrading to this firmware release will cause a factory reset from previous firmware. Please be sure to save your configuration settings (Tools -> Admin menu) before loading this firmware and then restore your configuration afterwards if necessary.

- Devices marked as AT&T were tested using the AT&T network in the United States. The device may or may not work with other UMTS/GSM carriers internationally.

New Features added in this release:

- VPN support for a maximum of 5 endpoints (**MBR1100 only**). Compatibility tested between MBRs, Linksys, and Cisco routers.
 - Key Exchange Method:
 - Pre-Shared Key (with IKE)
 - Manual
 - Encryption
 - DES
 - 3DES
 - AES
 - Hashes
 - MD5
 - SHA1
 - SHA256
 - SHA384
 - SHA512
 - Cisco compatibility

If a particular Cisco router runs these versions of IKE and IPsec, it should be supported by the MBR.

- SSL/IKE microcode: CNlite-MC-IPSEC-Admin-3.03
 - IPsec microcode: CNlite-MC-IPSECm-MAIN-2.03
- Linux compatibility
 - IPsec Tested: Linux 2.6.18 - 2.6.25
 - IKE (racoon) Tested: 0.7.0 and 0.7.1
- Automatic Configuration Saving. When uploading future firmware versions, the router attempts to save off any configuration changes the user has made and then adds those settings to the new firmware's configuration. For safety, it is recommended that you save a copy of your modified configuration to a host PC just in case this does not work correctly for your specific configuration. Note that transitioning from a firmware version < 1.4 to 1.5 will still

require a manual save/restore configuration step.

- Modified modem reset architecture. The routers should be able to better handle a modem that is unresponsive and reset it. Also, router reboots from actions such as configuration changes in the UI are much less likely to require a modem to be replugged.
- Load Balancing. Load Balancing can now balance across the wired WAN port and up to three modems. The router will monitor the amount of available bandwidth on each port and will attempt to use the port with the highest available remaining bandwidth.
- Support for the Franklin u300 modem. This modem can support both WiMAX and EVDO connections, although only one at a time. For this release, the EVDO connection can be made. In a later release the WiMAX mode will also be supported.

Additional UI/usability changes:

- Advanced -> Web Filter. A button is provided to make the filtering rules a “Blacklist” instead of a “Whitelist”. A user can either set up rules of allowed sites and domains, or blocked sites and domains. All rules are either allowed or blocked, you cannot mix between them.
- OpenDNS support on Sprint network under Advanced -> Web Filter. Some carrier’s DNS servers intercept requests to other DNS services. This change provides a workaround to allow the use of the router’s Advanced -> Web Filter -> OpenDNS content filtering functionality or your personal OpenDNS account settings. This implementation works around some of the limitations of the previous implementation (such as not working with load balancing) and provides access to your personal account settings.
 - Note that Custom OpenDNS filtering and load balancing does not work. Custom filtering is tied to a single WAN IP address, and will not work correctly when the router has multiple WAN IP addresses. Standard Cradlepoint content filtering and filter bypass work correctly with load balancing.
- Tools -> Email settings. Added “SMTP Server Port” to allow a user to set a nonstandard port for email.
- Status -> Logs. Modified the Log email to append the Gateway Name (from Tools -> Status) to the log subject so that people with multiple routers can have distinct logs. The default subject for an MBR1000 will be “CradlePoint: MBR-1000 Logs” .

Defects fixed:

- Fixed defect where password was not getting sent to locked Blackberry.
- Improved Multiple/Concurrent PPTP and IPsec VPN pass-through sessions with Load Balancing
- Session timeout error. We believe the cause of this issue was that as the user was logging onto the router another process on his/her computer was trying to access the router in the background and it became the active session. We changed the session handling to take this possibility into account.
- Improved diagnostics information reporting on Novatel modems.

Known issues:

GPS

- GPS and Mapquest. When using Mapquest, the default zoom is out too far to be really useful. While you can zoom in, if you use auto-refresh the loaded page will be zoomed out again. Workaround is to either use one of the other map sites, or do not use auto-refresh with Mapquest.
- GPS, Internet Explorer 7.0, and Yahoo maps. When using IE 7.0 and Yahoo maps, the position on the map would not refresh. The Latitude and Longitude change on the address bar, so this is likely an IE 7.0 issue.
- GPS, Safari 3.04, and Windows Vista. Safari and Windows Vista would not load any of the map sites. Safari worked fine on an Apple Mac.

Carrier

- nTelos. These modems appear to block incoming ports. That affects the ability to use features such as Remote Management, GPS Network port on WAN, and responding to a WAN ping. It will also effect using IPSEC VPN.
- AT&T. These modems appear to block incoming ports and also NATs ports. That affects the ability to use features such as Remote Management and Port Forwarding. It will also effect using IPSEC VPN with two AT&T modems. If you are using one AT&T modem and a Modem from another carrier, IPSEC VPN should work. To resolve the issue of AT&T blocking ports contact your Carrier provider and ask for the Mobile Terminated Data plan.
- Cricket. Cricket NATs the public address, ports, and blocks all incoming ports. So Dynamic DNS, Port Forwarding, and IPSEC VPN is not supported on Cricket modems.

Wireless

- Wi-Fi Protected Setup (WPS). If you are using WPS to enable security from an insecure wireless network (Basic -> Wireless -> Security Mode = None), a WPS-aware client will not be able to attach to the wireless network. If you use WPS from a secure wireless network, a WPS-aware client will attach correctly. If you reboot the router after using WPS to configure wireless security, a WPS-aware client will attach correctly.

Modem/Phone

- Option GT Max and Ultra Express card usage note. The Option cards have relatively large openings on the top of their cards for their SIM card. The ExpressCard bracket retention tabs in an MBR1100 or MBR1000 may slide into the side opening of the Option card when removing the card, apparently locking the card into the router. If this happens, you can get the ExpressCard out of the router by folding a small piece of paper (or cutting a business card to fit the slot) and then sliding it into the top of the slot. This will push the retention tab up so that it cannot contact the opening on the card. A simple workaround is to put a piece of tape over the side opening of the card after inserting the SIM. The CTR500 does not have a bracket, so it will not have this issue. But the Option cards do not have retention slots near the antenna housing (as Sierra and Novatel modems do), so the ExpressCard locking mechanism on a CTR500 will not work with an Option card.
- Option GT and Ultra Express modem support. These modems can take up to 2.5 minutes to make a data connection. In our tests, they appear to spend a long time attempting to get a signal before they can make a data connection. The Ultra seems to connect more quickly in our tests. [Note that the the Ultra Express' performance in the router is not as good as in the PC. This modem works with the router, but if you have a choice any of the other GSM modems such as the Novatel or Sierra Wireless are more compatible.](#)
- Load Balancing and modem with a SIM PIN. If a modem that requires use of a SIM PIN is the Primary WAN connection, Load Balancing will not work correctly. Data will only go in/out of the Primary modem and not any other modem. If the modem with the SIM PIN is not the Primary connection, Load Balancing will work correctly. The Advanced -> Failover/Load Balance -> WAN Interfaces menu allows the end user to adjust modem priority.

IPSec (MBR1100 only)

- VNC over IPSec does not work correctly. Remote Desktop works correctly and may be used until this issue is fixed.

