



Release Notes for CradlePoint MBR Rev 1.3.1 Firmware

Products supported/tested:

Mobile Broadband Router (MBR1000)
CradlePoint Travel Router (CTR500)

Modems/handsets tested (devices added since 1.2 in blue):

USB modems:

Franklin CDU-550/Sprint
Franklin CDU-680/Sprint and nTelos (GPS - see Known Issues)
[Huawei E220/AT&T](#)
[Novatel MC950D/AT&T](#)
Novatel U720/Sprint and Verizon (GPS – Sprint only)
Novatel U727/Sprint and Verizon (GPS – Sprint only)
Pantech UM150/Verizon and Alltel
[Pantech UM175/Verizon](#)
Sierra Wireless 595U USB/Sprint, Verizon and Telus (GPS – Sprint only)
Sierra Wireless Compass 597U/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](#)
[UTStarcom UM100/Cricket](#)

ExpressCard modems:

Kyocera KPC-680/Sprint, Verizon, and nTelos
Novatel EX720/Sprint (GPS)
Novatel V740/Verizon
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

[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

New Features added in this release:

- Failback to Ethernet. This can be selected under Advanced -> Failover/Load Balance -> Ethernet WAN Failure Detection. If selected, the router will attempt to use the Ethernet WAN port if it is available. If failover is active and modem(s) connections are established, and the Ethernet connection comes back up, the modem(s) will be disconnected and the Ethernet connection re-established.
- Load Balancing across modems. If two or three modems are attached, the router will use multiple connections to transfer data. If only one data connection is being used by an application (for example, a network performance test or a single video download), then only one modem will be used. But if multiple connections are being accessed (for example, a Bittorrent with multiple seeds, different simultaneous video downloads, or a simultaneous web update and email download), the traffic will be balanced among the modems.
 - Note: Load balancing works well with multiple modems that have approximately the same performance. The controlling algorithm assigns new connections to modems in a round-robin fashion. If a modem is attached that is significantly slower than other attached modems, the overall performance will be limited by the slowest modem.
- GPS. Added GPS support for a number of additional USB modems. GPS now works with Google Earth Plus, Microsoft Streets and Maps, and Delorme Street Atlas Plus. At customer request, GPS may be enabled on the WAN interface (previously, it was only enabled on the LAN/WLAN ports). If enabled, someone who knows the IP address of the router and the GPS port can track the movement of the router. Only one connection (up or down) can occur at a time.
- Support for PIN Secured SIM cards. We added PIN support for SIM cards under Advanced -> Modem Settings. The user can store a PIN for his modem along with the password. If the router detects that the attached modem's SIM card requires a PIN, it will use the entered PIN. If the router detects that an attached modem requires a PIN entry and no PIN is entered, a bounce page will be provided to allow the user to enter a PIN without having to go through the Admin pages.
- RNDIS modems added to failover.

Additional UI/usability changes:

- GPS. Added GPS support for a number of additional USB modems. GPS now works with Google Earth Plus and Microsoft Streets and Maps.
- Disabled Advanced -> Traffic Shaping -> Automatic Uplink Speed measurement as a default setting. If Enabled, Uplink Rate Estimation should not cause a modem to lose its connection, which used to happen in some cases.
- Added APN (Access Point Name) entry under Advanced -> Modem Settings. This can be used if your cellular provider requires an APN that isn't associated with one of the profiles on the SIM or modem.
- Added Cellular Signal Strength bars (4 bars maximum) to Status -> Device Info page to quickly

show the signal strength for phones and modems that support diagnostics without disabling the data connection.

- At customer request, added direct RSSI reading to Status -> Modem Info page. This page will now show Signal Strength as a % and as dBm (negative values).
- Status -> Wireless (Wi-Fi) page has been modified to allow easier management of associated wireless clients.
- Added Spanish localization.
- Maximum remembered MAC addresses, DHCP reservations, and IP filter rules increased from 24 to 32 on MBR1000.

Defects fixed:

- GPS now works with Google Earth and MS Streets and Maps.
- Uplink Rate Estimation should not cause a modem to lose its connection, which occurred with some modems before.
- Improved handling of carrier disconnects if modem is idle. For example, AT&T would disconnect a modem after 1.5 hours of no traffic. Our routers didn't always recover from that state correctly.
- Basic -> WAN -> Reconnect Mode "On Demand" working again. It correlates with the modem idle disconnect/reconnect defect above.

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.
- AT&T. These modems appear to block some incoming ports. That affects the ability to use features such as Remote Management.
- Sprint. These modems redirect all DNS traffic to Sprint servers. If you configure OpenDNS or another DNS server, those DNS requests will be handled by Sprint instead of your selected service.

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 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 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. These modems will also not support the APN or SIM PIN settings added in this release.
- BlackBerry 8130 Curve support. These modems will also not support the APN or SIM PIN settings added in this release.
- Load Balancing with Novatel modems. The router can load balance with two Novatel modems, but if three modems (either three Novatel or two Novatel and another brand) are attached the performance will be degraded. This phenomenon has not been seen with three of other brand modems or phones. This limitation will be removed in future firmware releases.
- Load Balancing and multiple VPN sessions are not supported at this time. Load Balancing and one VPN session is supported.