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# ePMP™ 1000 Hotspot Release Notes

System Release 1.0

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## **Introduction**

This document provides information for the Cambium Networks ePMP 1000 Hotspot System Release 1.0.

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## Supported Platforms

The FCC, EU and ROW versions of ePMP 1000 Hotspot (connectorized SM radios) are supported.

The following table provides details on the supported base units:

Base Unit	Description
C050900A021A	ePMP 1000 hotspot (ROW, no cord) 802.11n 5 GHz Single Band WLAN access point
C050900A023A	ePMP 1000 hotspot (EU) 802.11n 5 GHz Single Band WLAN access point
C058900A122A	ePMP 1000 hotspot (FCC) 802.11n 5 GHz Single Band WLAN access point
C050900A221A	ePMP 1000 hotspot (ROW, EU Cord) 802.11n 5 GHz Single Band WLAN access point
C024900A021A	ePMP 1000 hotspot (US cord) 802.11n 2.4 GHz Single Band WLAN access point
C024900A221A	ePMP 1000 hotspot (EU cord) 802.11n 2.4 GHz Single Band WLAN access point
C058900B052A	ePMP Force 110 PTP - High Performance PTP Radio (FCC)
C050900B053A	ePMP Force 110 PTP - High Performance PTP Radio (EU)
C050900B051A	ePMP Force 110 PTP - High Performance PTP Radio (ROW)

## Features Supported in this Release

The following table lists the features that are supported in this release of ePMP 1000 Hotspot:

Feature	
Capacity	<ul style="list-style-type: none"> <li>• 8 Wireless LANs</li> <li>• 128 Clients</li> </ul>
Security	<ul style="list-style-type: none"> <li>• Open</li> <li>• WPA-PSK, WPA2-PSK (Pre-shared Keys)</li> <li>• WPA-Enterprise, WPA2-Enterprise (802.1x with EAP-TLS, EAP-TTLS, EAP-PEAP, EAP-SIM, EAP-AKA)</li> <li>• MAC Authentication (Static list, RADIUS based)</li> </ul>
Client Traffic Management	<ul style="list-style-type: none"> <li>• Rate limit upstream and downstream per-client, per-WLAN</li> <li>• Scheduled WLAN access (time-based SSID)</li> <li>• VLAN trunking support (Static VLAN, RADIUS assigned VLAN)</li> <li>• Access Control Lists (IP and MAC based ACLs)</li> <li>• DNS based Access Control (DNS based whitelist, blacklist)</li> </ul>
Guest Access	<ul style="list-style-type: none"> <li>• Captive portal splash pages</li> <li>• Multiple authentication options (click-through, RADIUS)</li> <li>• WISPr interoperable</li> </ul>

	<ul style="list-style-type: none"> <li>• Walled Garden Support</li> </ul>
Wired bridging and routing services	<ul style="list-style-type: none"> <li>• NAT, port forwarding</li> <li>• DHCP Server</li> <li>• DNS proxy server</li> <li>• Firewall, DoS attack prevention</li> </ul>
Troubleshooting Tools	<ul style="list-style-type: none"> <li>• Connectivity test tools (ping, traceroute)</li> <li>• Packet Capture for traffic analysis</li> <li>• WiFi Analyzer for radio/802.11 analysis</li> </ul>
Management	<ul style="list-style-type: none"> <li>• Support for cnMaestro cloud based onboarding</li> <li>• Enterprise class CLI accessible over Telnet and SSH</li> <li>• On-Device GUI (http, https)</li> <li>• SNMP v2c, v3 based monitoring</li> </ul>

## Conversion from ePMP 1000 Point-To-Multipoint Firmware

The ePMP 1000 firmware upgrade mechanisms such as pointing to upgrade file from the GUI can be used to convert it to ePMP 1000 Hotspot. Instead of an ePMP 1000 firmware, just point it to the ePMP1000-Hotspot-1.0.tar.gz firmware file.

The screenshot shows the 'Tools > Software Upgrade' page in the Cambium Networks ePMP 1000 GUI. The main software version is 2.4.2 and the firmware version is U-Boot Falcon 1.1.4-g1341cee9-dirty (Jun 9 2015 - 10). The 'Upgrade Options' are set to 'Local File'. The 'Select File' field contains 'ePMP1000-Hotspot-1.0-a0.tar.gz'. A warning message states: 'Warning: Please ensure that power to the device is not interrupted during a software upgrade. Power interruption may cause flash corruption and render the device inoperable.'



**Note**

The upgrade is only supported from ePMP version 2.4 onwards. If your ePMP is running an older version, please upgrade to 2.4 ePMP firmware first, reboot, and from the 2.4 ePMP firmware upgrade to the Hotspot version.

After the firmware upgrade when you reboot the AP it will come up with ePMP Hotspot firmware.

## Known Issues (System Release 1.0)

This section lists the known issues and limitations in ePMP 1000 Hotspot 1.0.

Tracking	Description / Workaround
648	The status of the device is displayed as connected in the <b>show management</b> command even though the device is disconnected. The device is not trying to reconnect to cnMaestro.
643	The packet capture does not indicate cnMaestro the proper output after a timeout of 60 seconds when the packet count is 100.
632	During bi-directional traffic test, Ethernet drops Rx packets exponentially as traffic speed increases above 45 Mbps in each direction. As a result, less throughput value is observed when the traffic is bi-directional.
608	There is no option for configuring rate limit to individual client.
594	Ping with buffer size greater than 90 is not giving any output in cnMaestro for ePMP 1000 Hotspot. In addition, the ping with maximum buffer size and packet size are also not working.
550	The UI application is not supported in mobiles, tabs etc.
464	The DHCP options are not displayed properly in the UI. There is no option for configuring DHCP IP Pool or DHCP relay options.
445	WLAN scheduling with boundary conditions are not supported in the device.
317	In some cases, the AP does not fall back to static IP on factory reset.

## Limitations

- FCC DFS channels are currently disabled. This will be enabled in a future software release.
- cnMaestro onboarding and firmware upgrade is supported. Complete support for enabling statistics after upgrade through cnMaestro will be available in a future release.
- MSN based onboarding into cnMaestro is not supported. You need to configure Cambium-ID and Password.

## Technical Support

For technical support, see

<http://www.cambiumnetworks.com/support/epmp>

For PMP technical support helpdesk phone numbers, see

<http://www.cambiumnetworks.com/support/contact-support>

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