



RELEASE NOTES
cnPilot Home Router
System Release 4.7.1



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Contents

Contents	3
Supported Platforms	4
Introduction	5
Managing device via cnMaestro	5
Overview	6
Supported Features	7
New Features Supported in this Release	13
Resolved Issues, Known Issues, and Limitations	14
Resolved issues	14
Known issues	15
Limitations	16
Appendix A: Reference Information	17
Specifications	17
Cambium Networks	17
Feedback	18
Contacting Cambium Networks	18

Supported Platforms

The cnPilot Home Router family includes the following platforms:

- r201, r201P, r201W
- r200, r200P
- r190W, r190V



Note

This release 4.7.1 does not support cnPilot Home Router r195P.

Introduction

This document provides details on cnPilot Home Router's System Release 4.7.1-R4. There is no new platform added in this release and fixes multiple issues.

Also this release System Release 4.7.1-R4 includes the features and functionalities from 4.7 and several important bug fixes that are noted in [Resolved issues \(System Release 4.7.1-R4\)](#).



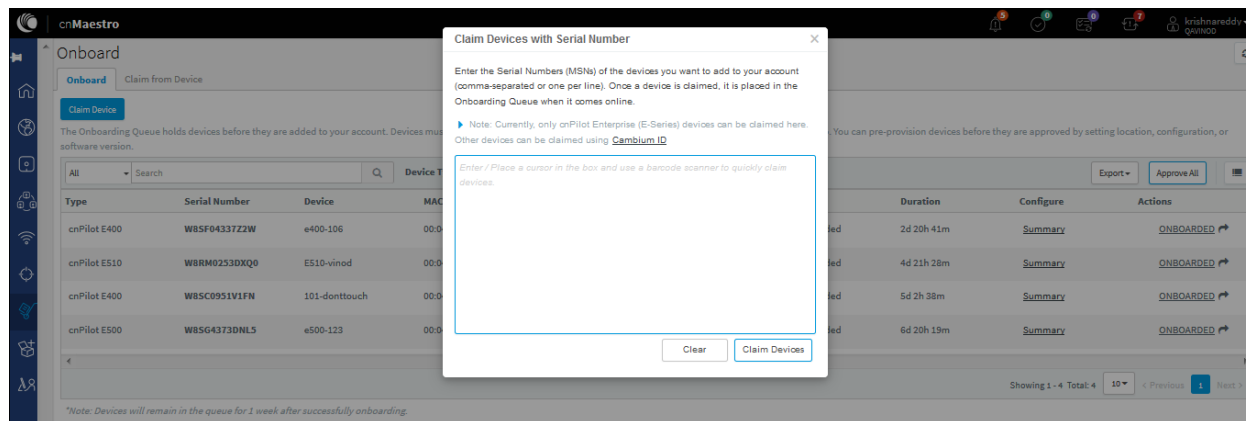
Note

1. By default, http access is disabled. Only https is allowed.
2. By default, the web access from WAN interface is disabled from 4.3.3 release onwards for security reasons for r190/r200/r201. In r195W, UI can be accessed via WAN by setting non default admin credentials.
3. By default, SNMP access over WAN interface is disabled for security concerns. Can be enabled if required.

It is recommended to change the Administrator/Normal/Basic user and Read/write community passwords before enabling any one of the above.

Managing device via cnMaestro

cnPilot Home Routers can easily be managed/configured/upgraded using cnMaestro. The devices can be onboarded to your cloud account using the unique device serial number available on the back label of the unit or by using your Cambium-id and password. Devices can be pre-provisioned during the onboarding process itself.



Note

Due to a newer flash memory layout used in 4.3 firmware, upgrades from older versions to 4.3, and beyond, need to be done twice. This is automatically detected and performed during upgrades initiated from cnMaestro.

Devices running with Firmware version older than 4.3 must not be directly upgraded to the latest version to avoid device inaccessibility. First upgrade the Firmware version to 4.4.2-R2 (perform twice) and then upgrade from 4.4.2-R2 to the latest version.

For more information on onboarding and upgrading the device using cnMaestro, refer **Onboarding Devices** chapter in [cnMaestro User Guide](#).

Overview

The cnPilot Home Router with VoIP is a managed device (that yet has the ability to act as a standalone router if desired). In addition to WiFi, this product provides high quality voice calls as well as the optional ability to power Cambium's ePMP series subscriber module or the PMP450 series subscriber module by supporting Cambium's (Canopy) PoE. For voice calls, the product is fully compatible with the SIP industry standard and is able to interoperate with many other SIP devices and software on the market.

Supported Features

The following table lists the major features that are supported in **cnPilot** Home Router:

Features	r190W	r190V	r195W	r200	r200 P	r201W	r201	r201 P	r195 P
KEY INTERFACES									
WAN	1 x 10/100 RJ45		1 x GigE, RJ45 - 195	1 x 10/100 RJ45		1 x GigE, RJ45			
LAN	4 x 10/100Base T, RJ45	3 x 10/100Base T, RJ45	4 x GigE, RJ45	4 x 10/100BaseT, RJ45		4 x GigE, RJ45			
USB	X	X	X	1 USB 2.0 Host Port for shared storage		1 USB 2.0 Host Port for shared storage			
Wi-Fi	2x2 Single band 11n 2.4 GHz		2x2 Dual band 11ac 2.4 (11n) and 5 GHz (11ac)	2x2 Single band 11n 2.4 GHz		2x2 Dual band 11ac 2.4 (11n) and 5 GHz (11ac)			
Telephone Interfaces 2 FXS ports, RJ11	X	✓	X	✓		X	✓		
SSIDs 4 Per Radio	4		4+4	4		4+4			
Max Data Rate (Throughput)	300 Mbps		1.16 Gbps across 802.11ac (5 GHz and 802.11n (2.4 GHz)	300 Mbps		1.16 Gbps across 802.11ac (5 GHz and 802.11n (2.4 GHz)			
PoE OUT for PMP 450 and ePMP Subscriber Module	X	X	X	X	✓	X	X	✓	✓

Features	r190W	r190V	r195W	r200	r200 P	r201W	r201	r201 P	r195 P
IPV6	✓								
Factory Reset Button	✓								
WPS button device	X	X	✓	X	X	X	X	X	✓
LED Indicators: Power	✓								
WLAN	✓								
NETWORK									
Protocol DHCP/ PPPoE/ Static IP	✓					NA	✓		
PPTP/L2TP VPN	✓								
Dynamic DNS/DNS SRV (RFC 1706 and RFC 2782)	✓								
DMZ	✓								
NAT Traversal (Static NAT Route or by STUN)	✓								
DHCP Client and DHCP server	✓								
MAC address Clone	✓								
IP Conflict Detection	✓								
Route Mode Route/Bridge, customer configurable Support IEEE 802.1Q VLAN/802.1p Layer 3 (DSCP) settings for	✓								

Features	r190W	r190V	r195W	r200	r200 P	r201W	r201	r201 P	r195 P
SIP, RTP and Data									
Quality Of Service Support IEEE 802.1Q VLAN/802.1p Layer 3 (DSCP) settings for SIP, RTP and Data	✓								
WIRELESS INTERFACES									
Protocol	802.11 b/g/n	802.11 b/g/n	802.11 ac 2x2 b/g/n	802.11 b/g/n	802.11 b/g/n/ac				
Security WEP, WPA-PSK (TKIP), WPA-PSK (AES), WPA2- PSK (TKIP), WPA2-PSK	✓								
Others AP isolation, MBSSID AP isolation, WMM, MAC Filter, WDS, WPS	✓								
CALL FEATURES									
IP Signaling SIP V2 (RFC3261/3262/ 3263/3264)	X	✓	X	✓	✓	X	✓	✓	✓
Voice Codec G.711 (A-law, Q-law), G.722, G.723, G.729, OPUS	X	✓	X	✓	✓	X	✓	✓	✓
Fax Over IP Real Time FAX	X	✓	X	✓	✓	X	✓	✓	✓

Features	r190W	r190V	r195W	r200	r200 P	r201W	r201	r201 P	r195 P
over IP via T.38									
T.30 Fax with G.711	X	✓	X	✓	✓	X	✓	✓	✓
Voice Features	X	✓	X	✓	✓	X	✓	✓	✓
Adaptive jitter buffer management									
Voice Activity Detection	X	✓	X	✓	✓	X	✓	✓	✓
Comfort Noise Generation	X	✓	X	✓	✓	X	✓	✓	✓
Echo Cancellation	X	✓	X	✓	✓	X	✓	✓	✓
Call Features	X	✓	X	✓	✓	X	✓	✓	✓
3-way Conference									
Call hold, Call forwarding, Call transfer, Call waiting	X	✓	X	✓	✓	X	✓	✓	✓
Speed dial, Hotline, Dial plan	X	✓	X	✓	✓	X	✓	✓	✓
Caller ID, Black list, Call log	X	✓	X	✓	✓	X	✓	✓	✓
NETWORK MANAGEMENT									
Integrated Management - cnMaestro Cloud Based Management	✓								
Configuration - Web GUI interface	✓								
Interactive Voice Response (IVR)	X	✓	X	✓	✓	X	✓	✓	✓

Features	r190W	r190V	r195W	r200	r200 P	r201W	r201	r201 P	r195 P
Auto Provisioning TFTP, HTTP	✓								
SNMP v2	✓								
TIME Sntp	✓								
ADMIN - Administrator and User	✓								
ALT MGMT TR069	✓								
SYSLOG Local, Remote	✓								
POWER SUPPLY									
AC/DC Adaptor	AC INPUT: 100 ~240V, 50-60 Hz DC OUTPUT: 5V, 1A	AC INPUT: 100 ~240V, 50-60 Hz DC OUTPUT: 12V, 2A	AC INPUT: 100 ~240V, 50-60 Hz DC OUTPU T: 12V, 1A	AC INPUT: 100 ~240V, 50-60 Hz DC OUTPUT: 12V, 3A	AC INPUT: 100 ~240V, 50-60 Hz DC OUTPU T: 12V, 3A	AC INPUT: 100 ~240V, 50-60 Hz DC OUTPU T: 12V, 2A	AC INPUT: 100 ~240V, 50-60 Hz DC OUTPUT: 12V, 3A		
ENVIRONMENTAL									
Operation Temp +5°C to +45°C 5°C to +45°C	✓								
Storage Temp -25°C to +85°C	✓								
Relative Humidity 10%-90% No Condensing	✓								
Weight	0.5KG	0.5KG	0.5KG	0.75 kg		0.8 kg			
DIMENSION (H x W x D)	180 mm x 110 mm x 30 mm			180 mm x 110 mm x 30 mm		175 mm x 155 mm x 35 mm			

Features	r190W	r190V	r195W	r200	r200 P	r201W	r201	r201 P	r195 P
REGULATORY									
EMC FCC part 15B Class B, ETSI EN 301 489-1, ETSI EN 301 489-17, EN61000-6-1, EN61000-6-3, CE, RoHS					✓				
Safety IEC 60950-1, UL 60950-1, EN 60950-1					✓				

New Features Supported in this Release

This release also includes several important bug fixes that are noted in [Resolved issues](#) section in this document.

Resolved Issues, Known Issues, and Limitations

This section lists the **Resolved issues**, **Known issues** and **Limitations** in this release of cnPilot Home Router.

Resolved issues

Tracking ID	Product	Description
RBN-450	r190, r201	SIP phone number blacklisting config lost after reboot.
RBN-900	r190, r195, r200, r201	Unable to get the visual indication on the r201 when VMWI enabled-LED Blink.
RBN-932	r190, r195, r200, r201	Memory leak observed during longevity test.
RBN-955	r195	5 Ghz Radio initialization issue.
RBN-1020	r195	PPPoE session gets terminated frequently.
RBN-1045	r201	After 4 days of running SNS, seeing degradation of downlink UDP traffic on 5 GHz.
RBN-1051	r195, r201	PPPoE termination, reconnection failed.
RBN-1068	r195	PPPoE password changes when network configuration is changed.
RBN-1074	r190, r195, r200, r201	R-series PPPoE is not compliant to RFC 2516.
RBN-1075	r200, r201	r200, r201 running at very high CPU continuously.
RBN-1081	r190, r195, r200, r201	With dual stack (IPv4 and IPv6) once PPPoE session terminates not getting reconnected.
CNSSNG-12341	All	Network mode configuration in cnMAestro AP group for 5 GHz radio should be 11vht AC/AN/A instead of 11a/n mixed mode.

Known issues

This section lists the known issues and limitations in this release of cnPilot Home Router:

Tracking ID	Description
RBN-235	Description: Content filtering action "drop" is not working as expected. Workaround: Use content filtering action "Accept".
RBN-409	Description: End to end connectivity issue due to unavailability of default route with IPv6 over PPPoE mode. Workaround: None.
RBN-535	Description: After upgrading from older builds, sometimes manual reboot is required. Workaround: Switch OFF and switch ON the device.
RBN-546	Description: IPV6 address is not renewed when PPPoE is renegotiated/reinitiated (while IPv4 works). Workaround: None.
RBN-653/RBN-697	Description: HTTP redirection does not work from WAN side in multi WAN and PPPOE modes/HTTPS redirection during login does not work with ipv6 address. Workaround: None.
RBN-695	Description: Upgrade from 4.3.4 to 4.5 does not automatically add "Opus codec" which is available, it requires factory reset. Workaround: None.
RBN-696	Description: QoS with PPPoE provides half of the configured speed. Workaround: None.
RBN-720	Description: Not able to access device UI in "https" mode when client has got IP from Interface other in trunk-VLAN. Workaround: None.
RBN-789	Description: [r195] Wireless clients unable to connect with "open wep security". Workaround: None.
RBN-899	Description: To upgrade cnPilot-R series devices running Firmware version older than 4.3 to 4.5-R7, users must follow two steps upgrade procedure to avoid causing device inaccessibility. Workaround: None.
RBN-970	Description: When configuration is pushed from cnMaestro, SIP port is not getting enabled if Pushed config Hostname has whitespaces. Workaround: None.
RBN-1114	Description: Seeing CPU Stall, changing Security from Open(disable) to WPA2-PSK from EZUI.

Tracking ID	Description
	Workaround: Reboot manually.
RBN-1025	Description: cnPilot r200P device with Use Management Interface flag enabled, is not connecting back to cnMaestro when performing software downgrade from 4.7-R1 to any lower version. Workaround: None.
RBN-1055	Description: Last reboot reason not updated in cnMaestro if device is rebooted from GUI. Workaround: None.

Limitations

This section provides information on the limitations of cnPilot Home Router.

- Observed an issue in WAN connectivity if Q-in-Q Multi WAN is configured with same CVLANs and different SVLANs.

Appendix A: Reference Information

Specifications

Please see the Spec Sheets listed on the Cambium Networks website for the most up-to-date specifications:

<https://www.cambiumnetworks.com/resources/>.

Cambium Networks

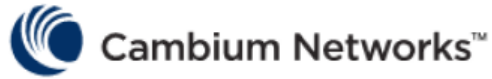
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