

Firmware 8.1.0 RC 2 Release Notes

Release Date: Jul 9, 2020

Devices Supported

This firmware release supports the following devices:

X Series EPX / SDX / MBX / 310X / 20X

Balance 20X / 20 / 30 / 30 LTE / 30 Pro / 50 / One / Two / 210 / 310 / 310X / 305

HW2 / 380 HW6 / 580 HW2-3 / 710 HW3 / 1350 HW2 / 2500 / SDX

MAX BR1 MK2 / BR1 HW2-3 / BR1 Slim / BR1 Mini / BR1 M2M / BR1 ENT / BR1

PRO / BR1 IP67 / BR2 / BR1 IP55 HW2-4 / BR2 IP55 HW2-3 / HD2 / HD2 IP67 / HD2 Mini / HD1 Dome / HD2 Dome / HD4 / HD4 IP67 / Transit /

Transit Duo / Transit Mini / Hotspot / On-The-Go HW2 / 700

UBR UBR LTE

Surf SOHO HW2 / SOHO MK3

MediaFast 200 / 500 / 750 / HD2 / HD4

SpeedFusion Engine SFE / SFE CAM

FusionHub FusionHub



Important Notices

• For the following models, the unit must be upgraded to <u>Firmware 7.1.2</u> first before upgrading to 8.0.0 or above.

Product	Hardware Revision
MAX BR1	HW2-3
MAX BR1 IP67	HW1
MAX BR1 Mini	HW1-2
MAX BR1 Pro	HW2,4-5
MAX BR1 Slim	HW1
MAX BR2	HW2
SOHO	HW2

- PepVPN backward compatibility option is no longer available. By deprecating the old firmware versions, we now have a more secure handshake channel as the default setting, only TLS 1.2 will be accepted, no more TLS 1.0 and 1.1 for the old devices. Thus, if you are using devices running Firmware 6.1 or older, you will no longer be able to form PepVPN tunnels with those devices unless the firmware is updated.
- Internet Explorer 11 is no longer supported by Web Admin.
- Updated minimum version of supported browser:
 - Mozilla Firefox 54
 - o Google Chrome 51
 - o Safari 10
 - Microsoft Edge 15



New Features

Reference	Description	Device Supported
22577	[SpeedFusion Cloud] Added SpeedFusion Cloud support	All Models (Except FusionHub)
22783	[SpeedFusion Cloud & Wi-Fi AP] Added ability to create the new SSID for the SpeedFusion Cloud profile under the new SpeedFusion Cloud page. Wi-Fi clients connect to the newly created SSID will use the related SpeedFusion Cloud link for Internet access	Balance: 30 Pro, One MAX: 700, BR1/2, HD2/4, Transit (Exclude: BR1 ENT, HD2 Mini, HD1/2 Dome) UBR: UBR LTE MediaFast: HD2/4 X Series: MBX, 20X Surf SOHO
22571	[SpeedFusion Cloud] Added ability to connect up to three region of SpeedFusion Cloud	All Models (Except FusionHub)
22779	[SpeedFusion Cloud] Added ability to select the LAN device to route all traffic to the SpeedFusion Cloud link for Internet access	All Models (Except FusionHub)
22876	[SpeedFusion Cloud] Added Dynamic Weighted Bonding algorithm support for SpeedFusion Cloud (To enable this feature, please go to https:// <device's ip="">/cgi-bin/MANGA/support.cgi and choose Traffic Distribution Policy)</device's>	All Models (Except FusionHub)
18006	[SpeedFusion] Added Dynamic Weighted Bonding: a new SpeedFusion bonding algorithm for dynamic bandwidth connections, eg: cellular. (To enable this feature, please go to https:// <device's ip="">/cgi-bin/MANGA/support.cgi and choose Traffic Distribution Policy)</device's>	Balance: B210 or above MAX: 700, HD2/4, Transit UBR: UBR LTE MediaFast: All SFE X Series: EPX, SDX, MBX, 310X FusionHub
19978	[SpeedFusion] Revamped SpeedFusion Chart shows additional statistics	Balance: B210 or above MAX: 700, HD2/4, Transit UBR: UBR LTE MediaFast: All SFE X Series: EPX, SDX, MBX, 310X FusionHub
6181	[NTP Server] Added support for NTP Server	Balance: All MAX: BR1 ENT, 700 HW3,



		HD2/4, Transit MediaFast: All X Series: All
22032	[NetFlow] Added NetFlow Support (To enable this feature, please go to https:// <device's ip="">/cgi-bin/MANGA/support.cgi)</device's>	Balance: 30 LTE/Pro, One/Two, 210/310 HW4 or above, 305/380 or above MAX: BR1 ENT, Transit, 700 HW3 or above, HD2 HW5 or above, HD4 MediaFast: All X Series: EPX, SDX, MBX, 310X, 20X FusionHub
21868	[Drop-in Mode] Added Drop-in mode support	Balance: All MAX: All UBR: UBR LTE MediaFast: All X Series: All
22773	[GPS] Added support for GPS time as time sync source and able to select GPS as the primary time sync source under System > Time	MAX: BR1/2, HD2/4, Transit UBR: UBR LTE MediaFast: HD2/4 X Series: EPX, SDX, MBX, 310X, 20X
20270	[MediaFast & KVM] Added KVM support	MediaFast: 500, 750
22279	[Wi-Fi WAN & WPA3] Added support for WPA3 security policy	MAX: BR1 MK2, Transit, 700 HW3 or above, HD2 HW5 or above, HD4 MediaFast: HD2/4 X Series: MBX Surf SOHO: SOHO MK3



Feature Improvements

Reference	Description	Device Supported
21609	[AP Controller & WPA3] Added WPA3 support in AP Controller	Balance: All MAX: 700, HD2/4, Transit MediaFast: All X Series: EPX, SDX, MBX
22145	[AP Controller] Added support for 802.11k neighbor report base on Wireless SSIDs	Balance: All MAX: 700, HD2/4, Transit MediaFast: All X Series: EPX, SDX, MBX
22264	[API & Cellular] Added the ability to receive SMS messages through cellular connections	Balance: 20X, 30 LTE/Pro, 310X MAX: BR1/2, HD2/4, Transit UBR: UBR LTE MediaFast: HD2/HD4 X Series: EPX, SDX, MBX
22263	[API] Added the ability to send USSD codes via cellular connections	All Models
22300	[API] Added the ability to set a new Billing Cycle	All Models
20308	[BGP] The Status display now shows exported routes	All Models
22058	[Captive Portal & Enterprise models] Added Support for 16 Captive Portal Profiles in enterprise-grade models	Balance: 305/380 or above X Series: EPX, SDX
21866	[Cellular] Added custom hosts for ping target on SmartCheck	Balance: 30 LTE/Pro MAX: BR1/2, HD2/4, Transit UBR: UBR LTE MediaFast: HD2/HD4 X Series: EPX, SDX, MBX, 310X, 20X
22376	[Cellular] Added support for prioritizing cellular carriers	Balance: 30 LTE/Pro MAX: BR1/2, HD2/4, Transit UBR: UBR LTE MediaFast: HD2/HD4 X Series: EPX, SDX, MBX, 310X, 20X
21352	[Cellular] An Icon will be displayed on Cellular status of Dashboard when Bandwidth Allowance Monitor usage hits 100% and "Reserve for management traffic" option is enabled	Balance: 30 LTE/Pro MAX: BR1/2, HD2/4, Transit UBR: UBR LTE MediaFast: HD2/HD4



		X Series : EPX, SDX, MBX, 310X, 20X
22884	[CLI] Added support for performing ping / traceroute from specific LAN or WAN Interfaces	All Models
22965	[CLI] The CLI now uses the "Device Name" instead of the "Router Name" when responding to the "get system" command.	All Models
22516	[Client List] Added ability to disconnect the Wi-Fi and Remote User Access clients	All Models (Except FusionHub)
21994	[DHCP] Fixed an issue where the DHCP server may not reply to DHCP discovery or requests in rare situations	All Models
22364	[DNS Server] Added a maximum length restriction for some DNS settings in accordance to RFC	Balance: 210 or above MediaFast: 500/750
21877	[DPI] Added recognition of new protocols	All Models
22353	[DPI] Added the ability to detect P2P, Gaming categories, and IoT Protocols	All Models
22280	[DPI] Updated the protocols of DPI Report which will be consistent with Web UI	All Models
18403	[Drop-in Mode] Added support for VLAN clients ability to route traffic over Drop-in WAN	Balance: All MAX: All UBR: UBR LTE MediaFast: All X Series: All
16794	[Drop-in Mode] Layer 3 SpeedFusion added compatibility for Drop-in Mode with Shared IP	Balance: All MAX: All UBR: UBR LTE MediaFast: All X Series: All
22430	[E-mail Notification] Added support of STARTTLS	All Models
20914	[EPX] Added support for jumbo frame on LAN	X Series: EPX
18215	[EPX] Added support for MediaFast / ContentHub / Docker	X Series: EPX
22159	[HD4 MBX] Added voltage and current threshold information to Event Log. (To enable this feature, please go to https:// <device's ip="">/cgi-bin/MANGA/support.cgi)</device's>	MAX: HD4 X Series: MBX
22113	[IP Passthrough] Added the ability to define custom DNS for IP Passthrough WAN	Balance: 30 Pro MAX: BR1, Transit



		UBR: UBR LTE Surf SOHO: SOHO HW2 / MK3
		X Series: 20X
21301	[LAN / SDX] Enhanced the LAN Port Setting page	X Series: SDX
21610	[MediaFast 500/700] Added support for SpeedFusion Bonding by default	MediaFast: 500, 750
22005	[MediaFast] Updated the MediaFast Certificate to support macOS 10.15 and iOS 13 clients	MediaFast: All
22486	[OpenVPN] Added ability to push WINS server directly to clients	All Models
22522	[OpenVPN] Added the ability to define port number and to choose whether to use UDP or TCP mode	All Models
22185	[OpenVPN] Added the ability to push DHCP Option 15 to client	All Models
21683	[OpenVPN] Custom DNS Servers in LAN DHCP Server can now be pushed to client	All Models
20763	[Outbound Policy] Added web filtering categories to Outbound Policy for SpeedFusion / PepVPN Sub-Tunnel	All Models (Except FusionHub)
15948	[SNMP] Added the ability to define the Allowed WAN Interface for SNMP under System > WAN Connection Access Settings	All Models
21048	[SNMP] Updated Cellular and Wi-Fi MIB files	All Models
21209	[SpeedFusion] Added the ability to use an external TCP Accelerator to support the WAN connections	Balance: B210 or above MAX: 700, HD2/4, Transit UBR: UBR LTE MediaFast: All SFE X Series: EPX, SDX, MBX, 310X FusionHub
21947	[SpeedFusion] QoS Individual Bandwidth Limits can now be applied to SpeedFusion profiles	Balance: B210 or above MAX: 700, HD2/4, Transit UBR: UBR LTE MediaFast: All SFE X Series: EPX, SDX, MBX, 310X FusionHub
22024	[System] Added support for ECDSA certificates in the Certificate Manager	All Models



22222	[System] Added Support for Session Logging	All Models
	[System] Added support of telnet command inside SSH	All Ploucis
22762	CLI	All Models
22039	[System] Added the ability to access CLI from the WAN via LAN/VLAN IP in IP Forwarding mode	All Models
22780	[System] Added UDP protocol supporting for Custom Service Forwarding	All Models
12265	[System] IP Forwarding WAN supports NAT for Multiple LAN network	All Models
21720	[System] Support TACACS+ for web admin access authentication	All Models
21888	[System] Updated Daylight Saving Time support for "Pacific/Fiji" and "Australia/Lord_Howe" regions	All Models
22846	[UART] Added CLI support for getting UART status and statistics	MAX: BR1 Slim/Mini/M2M/ENT, Transit, HD2 Mini
21774	[URL Logging] URL Logging has been relocated from Content Blocking page to System > Event Log. If Server/Port information is not specified for URL or Session Logging, Remote Syslog server settings will be used	All Models
22565	[WAN Analysis] Added support for UDP tests of up to 2 Gbps bandwidth	All Models
21969	[WAN] Added support for using the default LAN IP address as the outgoing IP for Local Services	All Models
22584	[Web UI] Added a TB scale in addition to MB, GB in Usage Reports	All Models
19916	[Web UI] Added the Ability to access Web Admin page from IP Forwarding WAN via LAN/VLAN IP	All Models
22320	[Web UI] After pressing Apply Changes, the WebUI will now stay on the same page and display a message instead of going to the Dashboard page	All Models
21732	[Web UI] The Firewall Log will now put in its own page rather than in the Event Log	All Models
22962	[Web UI] The Web UI now uses the "Device Name" instead of the "Router Name" on the Status and System pages	All Models
22285	[Web UI] Updated supported browsers: Mozilla Firefox 54 Google Chrome 51	All Models



	Safari 10 Microsoft Edge 15	
21673	[Wi-Fi AP & WPA3] Added WPA3 support in build-in Wi-Fi AP	Balance: 30 Pro, One MAX: BR1 MK2, Transit, 700 HW3 or above, HD2 HW5 or above, HD4 MediaFast: 200, HD2/4 X Series: MBX, 20X Surf SOHO: SOHO MK3
22444	[Wi-Fi WAN] Added support for 802.11w on the Wi-Fi WAN if the associated AP supports 802.11w	MAX: 700, BR1/2, HD2/4, Transit (Exclude: BR1 ENT, HD2 Mini, HD1/2 Dome) UBR: UBR LTE MediaFast: HD2/4 X Series: MBX Surf SOHO

Resolved Issues

Reference	Description	Device Supported
22737	[AP Controller] Fixed an issue where the AP Controller stopped managing APs in rare situations	Balance: All MAX: 700, HD2/4, Transit MediaFast: All X Series: EPX, SDX, MBX
22141	[AP Controller] Fixed an issue where the Client Connection History displays incorrect From / To columns	Balance: All MAX: 700, HD2/4, Transit MediaFast: All X Series: EPX, SDX, MBX
22373	[B310X] Fixed an issue where the Ethernet Port status display showed incorrect information on Balance 310X	X Series: B310X
22669	[Captive Portal] Enhanced HTTPS redirection on the captive portal landing page for deployments using InControl Appliance and a custom certificate	All Models (Except FusionHub)
18932	[Captive Portal] Fixed an issue where "502 Bad gateway" may be shown on Wi-Fi clients when they are accessing the landing page	All Models (Except FusionHub)
22707	[Captive Portal] Fixed an issue where the captive portal splash page cannot be shown	All Models (Except FusionHub)
22293	[Captive Portal] Fixed an issue where throughput limits	All Models



	would not be released after the E-mail address is verified	(Except FusionHub)
	using InControl 2 E-mail Authentication	(Except i distribut)
22636	[Captive Portal] Fixed an issue where Wi-Fi users may get logged out if using InControl 2 to manage the Captive Portal	All Models (Except FusionHub)
20208	[Cellular & Redundant SIM Slots] Fixed an issue where the APN does not show in then WAN Interface on the unit when it does not have a Redundant SIM inserted	Balance: 30 LTE/Pro MAX: BR1/2, HD2/4 (Except HD2), Transit UBR: UBR LTE MediaFast: HD2/HD4 X Series: EPX, SDX, MBX, 310X, 20X
22706	[Cellular & Redundant SIM Slots] SIM cards cannot be detected when only SIM slot B has SIM card	Balance: 30 LTE/Pro MAX: BR1/2, HD2/4 (Except HD2), Transit UBR: UBR LTE MediaFast: HD2/HD4 X Series: EPX, SDX, MBX, 310X, 20X
21353	[Cellular] Fixed an issue where another SIM will not be used when the current SIM reaches its bandwidth quota and becomes restricted to management traffic	Balance: 30 LTE/Pro MAX: BR1/2, HD2/4, Transit UBR: UBR LTE MediaFast: HD2/HD4 X Series: EPX, SDX, MBX, 310X, 20X
22851	[Cellular] Fixed an issue where cellular connections are unable to connect after a cellular reset	Balance: 30 LTE/Pro MAX: BR1/2, HD2/4, Transit UBR: UBR LTE MediaFast: HD2/HD4 X Series: EPX, SDX, MBX, 310X, 20X
22860	[Docker] Fixed an issue where an import error will be prompted when the Docker image name contains unexpected characters.	MediaFast: 500, 750
22158	[DPI] Fixed issues causing system instability when using DPI	All Models
22148	[Drop-in Mode & HA] Fixed an issue where using Drop-in mode with HA will cause the WAN Interface of the Slave unit to reply to ARP requests incorrectly	Balance: 210 or above
22986	[Firmware Upgrade] Fixed a potential issue causing	MAX: BR1/2



	upgrade failure	UBR: UBR LTE
22040	[HA] Fixed an issue where the Outbound Policy affects the local service of a Slave unit in an HA pair	Balance: 210 or above MAX: BR1/2, HD2/4, Transit UBR: UBR LTE MediaFast: All X Series: EPX, SDX, MBX, 310X
22824	[IC2 Bandwidth Usage] Fixed an issue where the Per-Minute Bandwidth Usage information for some intervals are missing on devices that have more active WANs	Balance: 1350, 2500 EPX
22683	[IP Passthrough] Fixed an issue where the IP Passthrough is not enabled after pressing "Apply Changes" when the WAN is using a Static IP	Balance: 30 Pro MAX: BR1, Transit UBR: UBR LTE Surf SOHO: SOHO HW2 / MK3 X Series: 20X
21976	[LAN / SFE] Fixed an issues where the LAN packet may forward to the wrong interface	SFE: SFE, SFE CAM
21954	[LAN / SOHO MK3] Fixed an issue where the LAN Access Port may not pass traffic on Surf SOHO MK3	Surf SOHO: SOHO MK3
22022	[LAN PoE / IP55] Fixed an issue where PoE ports do not work on BR1/2 IP55	MAX: BR1/2 IP55
22658	[Outbound Policy & Firewall by Hostname] Fixed a compatibility issue with DNS server 1.1.1.1	All Models (Except FusionHub)
22244	[Outbound Policy] Fixed an issue where the Outbound Policy Expert Mode Rules cannot override OSPF/BGP Routes learned from the LAN	All Models (Except FusionHub)
22037	[Outbound Policy] Fixed an issue where the Weighted Balance algorithm with Fall-through does not work on WANs that have failed their Health Check	All Models (Except FusionHub)
22112	[PepVPN] Fixed an issue in Port Forwarding where PepVPN NAT Mode may not work after cold failover	All Models
22853	[PepVPN] Fixed an issue that causes system instability when a WAN within PepVPN goes down.	All Models
20013	[PepVPN] Fixed the issue where the PepVPN profile may randomly fail to establish if there is a large number of PepVPN connection requests from the spoke devices	All Models
14212	[PepVPN] PepVPN will not disconnect if Remote IP Address configuration has been updated by InControl 2	All Models



22561	[PoE & HD4 IP67] Fixed an issue where the PoE port does not work on the MAX HD4 IP67	MAX: MAX HD4 IP67
23002	[Port Mapping] Fixed an issue where Port Mapping rules with Additional WAN IP are unable to remove completely when the WAN is down	All Models
21874	[PPPoE] Fixed an issue where the VLAN WAN which is using PPPoE provides an incorrect MTU value	All Models
21906	[Service Passthrough] Fixed an issue where disabling IPsec NAT-T Passthrough may not work	All Models (Except FusionHub)
23085	[SNMP] Fixed an issue where SNMP may cause the Event Log to stop working	All Models
21756	[SNMP] Fixed an issue where SNMP may consume large amounts of CPU resources when Layer 2 SpeedFusion is established	All Models
22637	[SpeedFusion Cloud] Outbound Firewall Rules is not effective for SpeedFusion Cloud rather than Internal Firewall Rules	All Models (Except FusionHub)
21723	[SpeedFusion] Fixed an issue where FEC is unable to reassemble packets properly	Balance: B210 or above MAX: 700, HD2/4, Transit UBR: UBR LTE MediaFast: All SFE X Series: EPX, SDX, MBX, 310X FusionHub
22479	[SpeedFusion] Fixed an issue where FEC may drop packets when the packet rate is low	Balance: B210 or above MAX: 700, HD2/4, Transit UBR: UBR LTE MediaFast: All SFE X Series: EPX, SDX, MBX, 310X FusionHub
22821	[SpeedFusion] Fixed an issue where the TCP data tunnel does not work on a high latency link	Balance: B210 or above MAX: 700, HD2/4, Transit UBR: UBR LTE MediaFast: All SFE X Series: EPX, SDX, MBX, 310X FusionHub
21614	[SpeedFusion] Fixed an issue where using SpeedFusion FEC causes system instability	Balance: B210 or above MAX: 700, HD2/4, Transit



		UBR: UBR LTE MediaFast: All SFE X Series: EPX, SDX, MBX, 310X FusionHub
22688	[System] Fix for the CVE-2018-1000517 vulnerability	All Models
22691	[System] Fix for the CVE-2019-1543 vulnerability	All Models
22690	[System] Fix for the CVE-2019-5747 vulnerability	All Models
22687	[System] Fix for the CVE-2019-9169 vulnerability	All Models
22242	[System] Fix for the CVE-2020-8597 vulnerability	All Models
22324	[System] Fixed an issue of User Report is unable to show PepVPN usage per WAN	All Models
22702	[System] Fixed an issue where disconnected WAN connections may still accept routing UDP traffic to the LAN	All Models
16723	[System] Fixed an issue where Local DNS records do not work with Firewall / Outbound Policy by Hostname	All Models
22837	[System] Fixed an issue where SIP packets may be dropped if its CSeq field equal to 0	All Models
22420	[System] When a default route is exists on a LAN-based Static Route, the Client Usage report may display incorrect usage	All Models
22854	[UART] Fixed an issue where TCP Client mode may make multiple TCP connections to the server	MAX: BR1 Slim/Mini/M2M/ENT, Transit, HD2 Mini
21840	[USB WAN] Fixed an issue where the WebUI is unable to display IMSI and ICCID	Balance: All MAX: BR1 ENT, HD2/4 Indoor Series MediaFast: All X Series: EPX, SDX, MBX, 310X Surf SOHO
21644	[WAN as LAN & HA & Modular] Fixed an issue where the WAN Port as LAN Port feature does not work after HA failover	X Series : EPX, SDX, 310X
22276	[Web UI / BR1 IP55 HW4] Fixed an issue where the Web UI cannot save changes to cellular antenna selection on the BR1 IP55 HW4	MAX: BR1 IP55 HW4
23005	[Web UI] Fixed an issue of unexpected files can be downloaded from Web Admin	All Models



22733	[Wi-Fi AP] Fixed an issue where incorrect SSID usage caused the device to lose the ability to connect to IC2	Balance: 30 Pro, One MAX: 700, BR1/2, HD2/4, Transit (Exclude: BR1 ENT, HD2 Mini, HD1/2 Dome) MediaFast: HD2/4 X Series: MBX, 20X Surf SOHO
21647	[Wi-Fi AP] Fixed an issue where the Client List may show 0.0.0.0 for Wi-Fi Client	Balance: 30 Pro, One MAX: 700, BR1/2, HD2/4, Transit (Exclude: BR1 ENT, HD2 Mini, HD1/2 Dome) MediaFast: HD2/4 X Series: MBX, 20X Surf SOHO
22059	[Wi-Fi AP] Fixed an issue where using InControl 2 to manage the Wi-Fi AP would cause an unexpected 5GHz channel to be used if the Channel is set to "Auto"	Balance: 30 Pro, One MAX: 700, BR1/2, HD2/4, Transit (Exclude: BR1 ENT, HD2 Mini, HD1/2 Dome) MediaFast: HD2/4 X Series: MBX, 20X Surf SOHO
22049	[Wi-Fi WAN] Fixed an issue where the Wi-Fi WAN Channel Width will display "20 MHz" after being configured to "20/40/80 MHz"	MAX: 700, BR1/2, HD2/4, Transit (Exclude: BR1 ENT, HD2 Mini, HD1/2 Dome) UBR: UBR LTE MediaFast: HD2/4 X Series: MBX Surf SOHO

Report an Issue

To report an issue, please open a support ticket at: https://ticket.peplink.com/

For the latest development news and known issues, take a look at our forums: https://forum.peplink.com/