Peplink Balance and MediaFast

User Manual

Peplink Products:

One/One Core/Two/20/20X/30 LTE/30 Pro/210/310/310X/310 5G/310 Fiber 5G/
305/380/380X/580/580X/710/1350/2500/EPX/SDX/SDX Pro/
MediaFast 200/500/750

Peplink Balance Firmware 8.1.3
August 2021

Table of Contents

Introduction and Scope

Peplink Balance routers provide link aggregation and load balancing across multiple WAN connections. We develop products and technologies that can help you build SD-WAN networks with unbreakable connection resilience, unmatched deployment flexibility, and intuitive ease of use.

Our product and technology focus has always been on WAN virtualization and the intelligent use of multiple WAN links at the same time to increase reliability and bandwidth whilst reducing costs. We have two key WAN virtualization technologies, Intelligent load balancing for Internet access and SpeedFusion VPN Bonding for secure branch to branch connectivity.

The Peplink MediaFast series are a range of routers capable of content caching. Designed with education and entertainment in mind, MediaFast downloads and accelerates video, iTunes iOS updates, app downloads, and other content for uninterrupted learning and fun anytime. The MediaFast can prefetch content during off-peak hours, saving connectivity costs and reducing network burden during busy times.

This manual applies to the following Peplink Balance products:
- Peplink Balance One
- Peplink Balance Two
- Peplink Balance 20
- Peplink Balance 20X
- Peplink Balance 30 LTE/Pro
- Peplink Balance 210
- Peplink Balance 310
- Peplink Balance 310X
- Peplink Balance 310 5G
- Peplink Balance 310 Fiber 5G
- Peplink Balance 380
- Peplink Balance 380X
- Peplink Balance 580
- Peplink Balance 580X
- Peplink Balance 710
- Peplink Balance 1350
- Peplink Balance 2500
- Peplink MediaFast 200/500/750
- Peplink EPX
- Peplink SDX
- Peplink SDX Pro

The manual covers setting up your Peplink Balance or MediaFast and provides a collection of case studies detailing the advanced features of the Peplink Balance.

1   Glossary

The following terms, acronyms, and abbreviations are frequently used in this manual:

Term	Definition
3G	3rd generation standards for wireless communications (e.g., HSDPA)
4G	4th generation standards for wireless communications (e.g., LTE)
DHCP	Dynamic Host Configuration Protocol
DNS	Domain Name System
EVDO	Evolution-Data Optimized
FQDN	Fully Qualified Domain Name
HSDPA	High-Speed Downlink Packet Access
HTTP	Hyper-Text Transfer Protocol
ICMP	Internet Control Message Protocol
IP	Internet Protocol
LAN	Local Area Network
MAC Address	Media Access Control Address
MTU	Maximum Transmission Unit
MSS	Maximum Segment Size
NAT	Network Address Translation
PPPoE	Point to Point Protocol over Ethernet
QoS	Quality of Service
SNMP	Simple Network Management Protocol
TCP	Transmission Control Protocol
UDP	User Datagram Protocol
VPN	Virtual Private Network

VRF	Virtual Routing and Forwarding
VRRP	Virtual Router Redundancy Protocol
WAN	Wide Area Network
WINS	Windows Internet Name Service
WLAN	Wireless Local Area Network
210+	Refers to Peplink Balance 210/310/380/580/710/1350/2500
380+	Refers to Peplink Balance 380/580/710/1350/2500

2   Product Comparison Charts

2.1   Balance   Routers   (for   Small   Office   /   Branch)

	20	20X	30 LTE	30 PRO	ONE	TWO	210	310X
Product Code	BPL-021	BPL-021X-LTE	BPL-031-LTE	BPL-031-LTEA	BPL-ONE	BPL-TWO	BPL-210	BPL-310X
Capacity								
Ethernet WAN Ports	2 (GE) +	1 (GE)	2 (GE)	2 (GE)	2/5 (GE) #	2 (GE)	2 (GE) +	2 (GE)
LAN Ports	4 (GE)	4 (GE)	4 (GE)	4 (GE)	8/5 (GE) #	4 (GE)	7 (GE)	9 (GE)
Simultaneous Dual-Band 802.11ac/a/b/g/n Wi-Fi AP	No	Yes	No	Yes	Yes	No	No	No
Embedded 4G LTE	No	Yes	Yes	Yes	No	No	No	Yes
SIM Card Size	No	Mini-SIM (2FF)	Mini-SIM (2FF)	Mini-SIM (2FF)	No	No	No	Mini-SIM (2FF)
USB WAN Modem Port	1	1	1	1	1	1	1	2
Recommended Users	1-60	1-60	1-60	1-60	1-60	25-150	25-150	50-500
Stateful Firewall Throughput	150Mbps	900Mbps	200Mbps	400Mbps	600Mbps/ 400Mbps #	1Gbps	350Mbps	2.5Gbps

A full product comparison for Balance routers is available at:
http://www.peplink.com/products/balance/model-comparison/

2.2 Balance Routers (for for Enterprise / Headquarters)

	305	310X	380	380X	580	580X	710	1350	2500
Product Code	BPL-305	BPL-310X	BPL-380	BPL-380X	BPL-580	BPL-580X	BPL-710	BPL-135	BPL-2500 *
Capacity									
Ethernet WAN Ports	3 (GE)	2 (GE)	3 (GE)	3 (GE)	5 (GE)	5 (GE)	7 (GE)	13 (GE)	12 (GE)/4 (GE) & 2 (10G SFP+) *
LAN Ports	3 (GE)	9 (GE)	3 (GE)	3 (GE)	3 (GE)	3 (GE)	3 (GE)	3 (GE)	8 (GE)/ 2 (10G SFP+) *
Simultaneous Dual-Band 802.11ac/a/b/g/n Wi-Fi AP	No	No	No	No	No	No	No	No	No
Embedded 4G LTE	No	Yes	No	No	No	No	No	No	No
SIM Card Size	No	Yes	No	No	No	No	No	No	No
USB WAN Modem Port	1	2	1	1	1	1	1	1	1
Recommended Users	50-500	50-500	50-500	50-500	300-1000	300-1000	500-2000	1000-5000	5000-20000+
Stateful Firewall Throughput	1Gbps	2.5Gbps	1Gbps	3Gbps	1.5Gbps	4Gbps1	2.5Gbps	5Gbps	8Gbps

A full product comparison for Balance routers is available at:
http://www.peplink.com/products/balance/model-comparison/

2.3 MediaFast Routers

-	MediaFast 200	MediaFast 500	MediaFast 750
Product Code	MFA-200-W	MFA-500-B	MFA-750-B
WAN Interface	2x GE (Only WAN 1 is activated.)	5x GE	7x GE
Wi-Fi Interface	Simultaneous Dual-Band 802.11a/b/g/n Access Point	-	-
Embedded 3G/4G LTE	-	-	-
USB WAN Modem	1	1	1
LAN Interface	8x GE; 802.3af PoE Output	3x GE	3x GE
Recommended Users	25-150	300-1000	500-2000
Router Throughput	200Mbps	800Mbps	1.5Gbps
Disk Drive	120GB SSD	500GB SSD	1TB SSD
Load Balancing & Failover	Yes	Yes	Yes
PepVPN	Yes	Yes	Yes
SpeedFusion Hot Failover	Optional Feature	Yes	Yes
SpeedFusion WAN Smoothing	Optional Feature	Yes	Yes
SpeedFusion Bandwidth Bonding	Optional Feature	Yes	Yes
Number of PepVPN/SpeedFusion Peers	2	50	300
PepVPN/ SpeedFusion Throughput	50Mbps	200Mbps	400Mbps
Built-in AP Controller	Yes	Yes	Yes
Maximum Number of AP Support	50	100	250
PoE Input	-	-	-
PoE Output	8x 802.3af (optional feature)	-	-
Dimensions	292 x 177 x 44 mm	431 x 305 x 44 mm	426 x 365 x 44 mm

Gross Weight	2.8 kg	6.6 kg	5.5 kgs

A full product comparison for MediaFast routers is available at:
https://www.peplink.com/products/mediafast-specifications/

3 Product Features

Peplink Balance Series products enable all LAN users to share broadband Internet connections and provide advanced features to enhance Internet access. The following is a list of supported features:

WAN

- Multiple public IP support (DHCP, PPPoE, static IP address)
- Static IP support for PPPoE
- 10/100/1000Mbps Ethernet connection in full/half duplex
- Built-in HSPA and EVDO cellular modems
- USB mobile connection **(only one USB modem can be connected at a time)**
- Drop-in mode on selectable WAN port with MAC address passthrough **n**etwork address translation (NAT) / port address translation (PAT)
- Inbound and outbound NAT mapping
- Multiple static IP addresses per WAN connection
- MAC address clone
- Customizable MTU and MSS values
- WAN connection health check
- Dynamic DNS (supported service providers: changeip.com, dyndns.org, no-ip.org,tzo.com, and DNS-O-Matic)
- Ping, DNS lookup, and HTTP-based health check
- WAN throughput and consistency diagnosis
- WAN to WAN speed test
- USB Ethernet Adapter support

LAN

- DHCP server on LAN
- Extended DHCP option support
- Static routing rules
- Local DNS proxy server
- 802.1q VLANs
- Port-based VLANs
- Virtual Network Mapping

VPN

- Secure SpeedFusion™
- SpeedFusion performance analyzer
- X.509 certificate support
- Bandwidth bonding and failover among selected WAN connections
- Ability to route traffic to a remote VPN peer
- Optional pre-shared key setting
- Layer 2 bridging
- Layer 2 Peer Isolation
- SpeedFusion™ throughput, ping, and traceroute tests
- Built-in L2TP / PPTP / OpenVPN VPN server
- Authenticate L2TP / PPTP clients using RADIUS and LDAP servers
- Multi-Site PepVPN Profile
- IPsec VPN for network-to-network connections
- L2TP / PPTP and IPsec passthrough
- Simultaneous L2 & L3 VPN tunnel between the same pair of devices

Inbound Traffic Management

- TCP/UDP traffic redirection to dedicated LAN server(s)
- Inbound link load balancing by means of DNS

Outbound Policy

- Link load distribution per TCP/UDP service
- Persistent routing for specified source and/or destination IP addresses per TCP/UDP service
- Prioritize and route traffic to VPN tunnels with Priority and Enforced algorithms
- Time-based scheduling

AP Controller

- Configure and manage Pepwave AP devices
- Review the status of connected AP

QoS

- Quality of service for different applications and custom protocols
- User group classification for different service levels
- Bandwidth usage control and monitoring on group- and user-level
- Application prioritization for custom protocols and DSL optimization

Firewall

- Outbound (LAN to WAN) firewall rules
- Inbound (WAN to LAN) firewall rules per WAN connection
- Intrusion detection and prevention
- Specification of NAT mappings
- Web blocking
- Application blocking
- Time-based scheduling
- Outbound firewall rules can be defined by destination domain name

Captive Portal

- Social Wi-Fi Hotspot Support
- Splash screen of open networks, login page for secure networks
- Customizable built-in captive portal
- Supports linking to outside page for captive portal

Other Supported Features

- Easy-to-use web administration interface
- HTTP and HTTPS support for web administration interface
- Configurable web administration port and administrator password
- Read-only user for web admin
- Shared-IP drop-in mode
- Authentication and accounting by RADIUS server for web admin
- Firmware upgrades, configuration backups, ping, and traceroute via web administration interface
- Remote web-based configuration (via WAN and LAN interfaces)
- Remote reporting to Peplink Balance reporting server
- Hardware high availability via VRRP, with automatic configuration synchronization

- Real-time, hourly, daily and monthly bandwidth usage reports and charts
- Hardware backup via LAN bypass
- Built-in WINS server
- Time server synchronization
- SNMP
- Email notification
- Syslog
- SIP passthrough
- PPTP packet passthrough
- Active sessions
- Active client list
- WINS client list
- UPnP / NAT-PMP
- Event log is persistent across reboots
- IPv6 support
- Support for USB tethering on Android phones

4 Advanced Feature Summary

4.1 Drop-in Mode and LAN Bypass: Transparent Deployment

As your organization grows, it may require more bandwidth, but modifying your network can be tedious. In **Drop-in Mode**, you can conveniently install your Peplink router without making any changes to your network. For any reason your Peplink router looses power, the **LAN Bypass** will safely and automatically bypass the Peplink router to resume your original network connection.

4.2 QoS: Clearer VoIP

VoIP and videoconferencing are highly sensitive to latency. With QoS, Peplink routers can detect VoIP traffic and assign it the highest priority, giving you crystal-clear calls.

4.3 Per-User Bandwidth Control
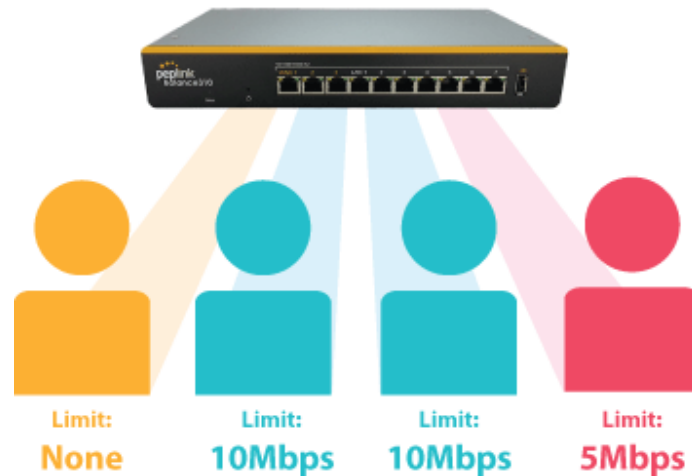
With per-user bandwidth control, you can define bandwidth control policies for up to 3 groups of users to prevent network congestion. Define groups by IP address and subnet, and set bandwidth limits for every user in the group.

4.4 High Availability via VRRP

When your organization has a corporate requirement demanding the highest availability with no single point of failure, you can deploy two Peplink routers in High Availability mode. With High Availability mode, the second device will take over when needed.

4.5   USB Modem and Android Tethering

For increased WAN diversity, plug in a USB LTE modem as backup. Peplink routers are compatible with over 200 modem types. You can also tether to smartphones running Android 4.1.X and above.

By default, the USB port is "USB Modem" mode. If you need to use it to connect to USB Ethernet Adapter, you need to change it to "USB Ethernet" mode,
https://forum.peplink.com/t/can-i-use-ethernet-adapters-on-the-usb-wan/8327

4.6   Built-In Remote User VPN Support

Use OpenVPN or L2TP with IPsec to safely and conveniently connect remote clients to your private network. L2TP with IPsec is supported by most devices, but legacy devices can also connect using PPTP.

Click here for the full instructions on setting up L2TP with IPsec.
Click here for the full instructions on setting up OpenVPN connections

4.7   LACP NIC Bonding
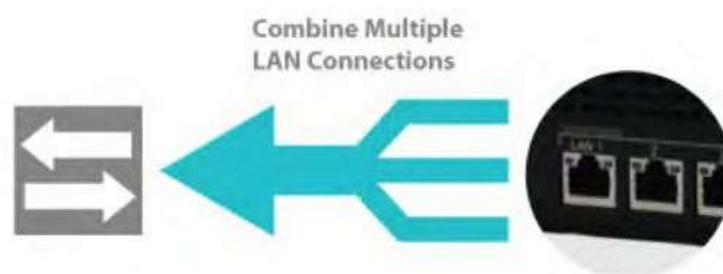
Use 802.3ad to combine multiple LAN connections into a virtual LAN connection. This virtual connection has higher throughput and redundancy in case any single link fails.

4.8   KVM Virtualization
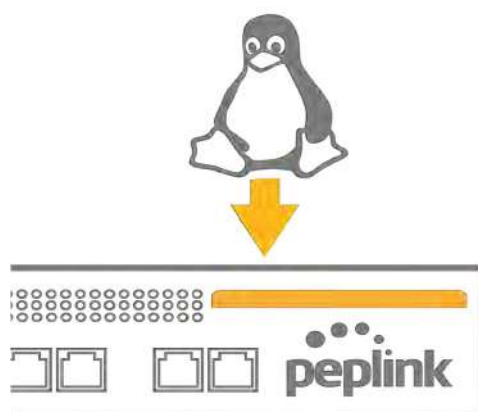
KVM is a virtualisation module that allows administrators using our routers to host a large range of virtual machines. KVM is now supported by some of the Mediafast models.

Click here for the full instructions to set up KVM

4.9   DPI Engine
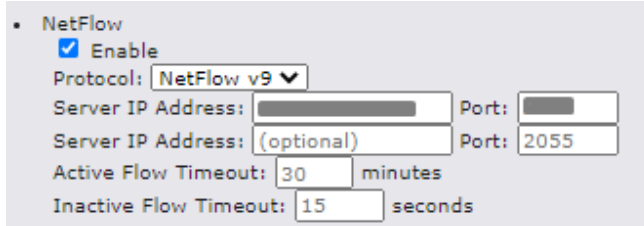
The DPI report written in the updated KB article will show further information on InControl2 through breaking down application categories into subcategories.

https://forum.peplink.com/t/updated-ic2-deep-packet-inspection-dpi-reports-and-everything-you-need-to-know-about-it/29658

4.10 NetFlow

NetFlow protocol is used to track network traffic. Tracking information from NetFlow can be sent to the NetFlow collector, which analyzes data and generates reports for review.

Note: To enable this feature, go to https://<Device's IP>/cgi-bin/MANGA/support.cgi

- NetFlow
  - ☑ Enable
  - Protocol: NetFlow v9 ▼
  - Server IP Address: [_____]   Port: [____]
  - Server IP Address: (optional)   Port: 2055
  - Active Flow Timeout: 30   minutes
  - Inactive Flow Timeout: 15   seconds
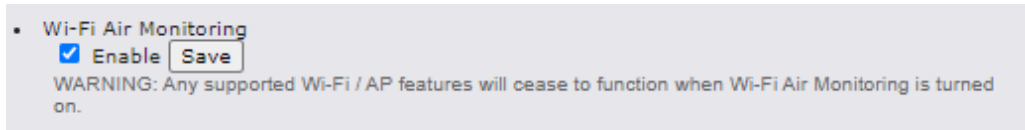
4.11 Wi-Fi Air Monitoring

Peplink routers support Wi-Fi "Air Monitoring Mode" which is used to troubleshoot remotely and proactively monitor Wi-Fi and WAN performance. After enabling Wi-Fi Air Monitoring, reports can be viewed under **InControl 2** > **Reports** > **AirProbe Reports**.

Note: To enable this feature, go to https://<Device's IP>/cgi-bin/MANGA/support.cgi

- Wi-Fi Air Monitoring
  - ☑ Enable [Save]
  - WARNING: Any supported Wi-Fi / AP features will cease to function when Wi-Fi Air Monitoring is turned on.

4.12 SP Default Configuration

The SP Default Configuration feature written in the updated KB article allows for the provisioning of custom made settings (a.k.a. InControl2 configuration) via the Ethernet LAN port and is ideal for those wanting to do a bulk deployment of many Peplink devices.

Note: If you would like to use this feature, please contact your purchase point (Eg.VAD).

5   Package Contents

The contents of Peplink Balance product packages are as follows:

5.1   Peplink Balance One/Two

- Peplink Balance One/Two
- Power adapter
- Information slip

5.2   Peplink Balance 20/30/30 LTE/30 Pro/50

- Peplink Balance 20/30/30 LTE/30 Pro/50
- Power adapter
- Information slip

5.3   Peplink Balance 20X

- Peplink Balance 20X
- 2x LTE Antenna, 1x GPS Antenna, 2x Wi-Fi Antenna
- Power adapter
- Information slip

5.4   Peplink Balance 210/310

- Peplink Balance 210/310
- Power adapter
- Information slip
- Rackmount kit

5.5   Peplink Balance 310X

- Peplink Balance 310X
- 2x LTE Antenna, 1x GPS Antenna
- Power adapter
- Ear L-Mounts kit
- Power cord

5.6   Peplink Balance 310 5G

- Balance 310 5G
- Power adapter
- Power cord
- 4x Rubber foot
- 6x Cellular Antenna

5.7   Peplink Balance 310 Fiber 5G

- Balance 310 Fiber 5G
- Power adapter
- Power cord
- 4x Rubber foot
- 4x Cellular Antenna
- 4x Wi-Fi Antenna

5.8   Peplink Balance 305/380/580/710/1350/2500

- Peplink Balance 305/380/580/710/1350/2500
- Power cord
- Information slip
- Rackmount kit

5.9   Peplink Balance 380X/580X

- Peplink 380X/580X
- Power cord
- 1 Pair of Mounting Brackets

5.10 Peplink MediaFast 200

- Peplink MediaFast 200
- Power adapter
- Information slip

5.11 Peplink MediaFast 500

- Peplink MediaFast 500
- Power cord
- Information slip
- Rackmount kit

5.12 Peplink EPX

- Wireless SD-WAN Powerhouse
- EPX Chassis with LCD
- Optional x LTE-A modules
- Optional x Copper ETH module
- Optional x Fiber ETH module
- Rack mounting kit with brackets and slide

5.13 Peplink SDX

- SDX Base Chassis
- 1U 19″ Rackmount Chassis

5.14 Peplink SDX Pro

- SDX Pro Base Chassis
- 1U 19″ Rack-mount Chassis
- 1x Rubber Foot Pack
- 2x Power Cords
- 1x L-mount Set

6   Peplink Balance Overview

6.1   Peplink Balance One

6.1.1   Panel Appearance

6.1.2   LED Indicators

The statuses indicated by the front panel LEDs are as follows:

Power and Status Indicators	
Status	OFF – Upgrading firmware
	Red – Booting up or busy
	Blinking red – Boot up error
	Green – Ready

LAN and WAN Ports	
Green LED	ON – 1000 Mbps OFF – 10 / 100 Mbps or port is not connected
	Blinking – Data is transferring

Orange LED	OFF – No data is being transferred or port is not connected
Port Type	Auto MDI/MDI-X ports

Wi-Fi Indicators		
Wi-Fi	OFF	Disabled
	Green	Ready

USB Port	
USB Ports	For future functionality

6.2   Peplink Balance Two

6.2.1   Panel Appearance
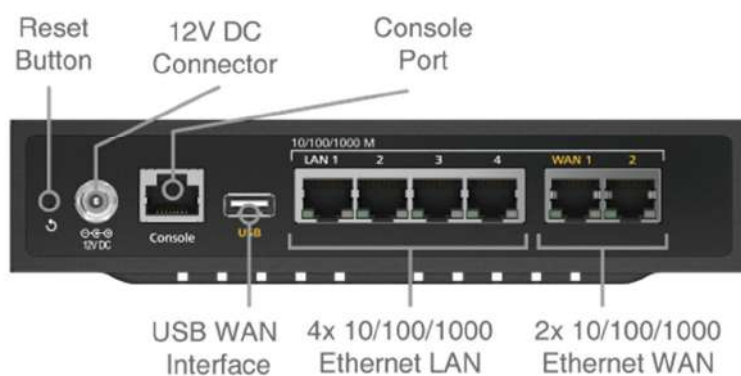
6.2.2   LED Indicators

The statuses indicated by the front panel LEDs are as follows:

Power and Status Indicators		
Power	OFF – Power off	
	Green – Power on	
	OFF – Upgrading firmware	

Status	Red – Booting up or busy
	Blinking red – Boot up error
	Green – Ready

LAN and WAN Ports	
Green LED	ON – 1000 Mbps OFF –10 / 100 Mbps or port is not connected
Orange LED	Blinking – Data is transferring
	OFF – No data is being transferred or port is not connected
Port Type	Auto MDI/MDI-X ports

USB Port	
USB Ports	For connecting a 4G/3G USB modem

6.3　Peplink Balance 20

6.3.1　Panel Appearance

6.3.2　LED Indicators

The statuses indicated by the front panel LEDs are as follows:

Power and Status Indicators	
Power	OFF – Power off
	Green – Power on
Status	OFF – Upgrading firmware
	Red – Booting up or busy
	Blinking red – Boot up error
	Green – Ready

LAN and WAN Ports	
Green LED	ON – 10 / 100 / 1000 Mbps
Orange LED	Blinking – Data is transferring
	OFF – No data is being transferred or port is not connected
Port Type	Auto MDI/MDI-X ports

USB Port

USB Ports	For connecting a 4G/3G USB modem

6.4   Peplink Balance 20X

6.4.1   Panel Appearance

6.4.2   LED Indicators

The statuses indicated by the front panel LEDs are as follows:

Power and Status Indicators	
Status	OFF – Upgrading firmware
	Red – Booting up or busy
	Blinking red – Boot up error
	Green – Ready

LAN and WAN Ports	
Green LED	ON – 1000 Mbps OFF – 10 / 100 Mbps or port is not connected
Orange LED	Blinking – Data is transferring
	OFF – No data is being transferred or port is not connected
Port Type	Auto MDI/MDI-X ports

Wi-Fi AP Indicators		
Wi-Fi AP	OFF	Disabled
	ON	Enabled

USB Port	
USB Ports	For connecting a 4G/3G USB modem

6.4.3 Flex Module Mini

1x LTE-A Module	
Interface	1x Embedded LTE-A Cellular Modems with Redundant SIM Slots
Antenna Connectors	2x SMA Cellular Antenna Connectors
Downlink / Uplink Datarate	300Mbps/50Mbps (CAT-6) 600Mbps/150Mbps (CAT-12)

Power Consumption	10W
Weight	0.83 pounds | 375 grams

1xLTE-A Module	
Interface	1x Embedded LTE-A Cellular Modems with Redundant SIM Slots
Antenna Connectors	4x SMA Cellular Antenna Connectors
Downlink / Uplink Datarate	1.2 Gbps/150 Mbps (CAT-18)
Power Consumption	10W
Weight	0.83 pounds | 375 grams

1x VDSL Module	
Interface	1x RJ11 Connector, 1x Status LED
Power Consumption	9W
Weight	0.44 pounds | 200 grams

6.5   Peplink Balance 30 LTE

6.5.1   Panel Appearance

6.5.2   LED Indicators

The statuses indicated by the front panel LEDs are as follows:

Power and Status Indicators	
Power	OFF – Power off
	Green – Power on
Status	OFF – Upgrading firmware
	Red – Booting up or busy
	Blinking red – Boot up error
	Green – Ready

LAN and WAN Ports

Green LED	ON – 10 / 100 /1000 Mbps
Orange LED	Blinking – Data is transferring
	OFF – No data is being transferred or port is not connected
Port Type	Auto MDI/MDI-X ports

Cellular WAN Indicators		
Cellular	OFF	Disabled
	Blinking slowly	Connecting to wireless network
	ON	Connected to wireless network

USB Port	
USB Ports	For connecting a 4G/3G USB modem

6.6   Peplink Balance 30 Pro

For certification information, please refer to Appendix F (page 327 ~ 330)

6.6.1   Panel Appearance

6.6.2   LED Indicators

The statuses indicated by the front panel LEDs are as follows:

Power and Status Indicators		
Power	OFF – Power off	
	Green – Power on	
Status	OFF – Upgrading firmware	
	Red – Booting up or busy	
	Blinking red – Boot up error	
	Green – Ready	

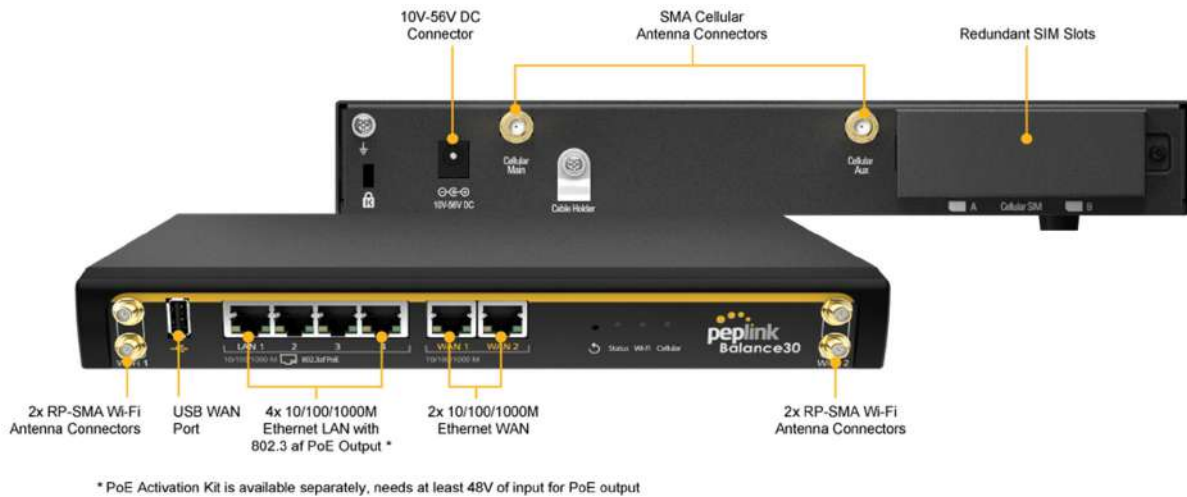| WAN Ports	
Green LED	ON – 1000 Mbps OFF -10 / 100 Mbps or port is not connected
Orange LED	Blinking – Data is transferring
	OFF – No data is being transferred or port is not connected
Port Type	Auto MDI/MDI-X ports

LAN Ports	
Green LED	ON – POE Enabled OFF - POE Disabled
Orange LED	Blinking – 10 / 100 / 1000 Mbps with activity
	OFF – No data is being transferred or port is not connected
Port Type	Auto MDI/MDI-X ports

Wi-Fi AP Indicators		
Wi-Fi AP	OFF	Disabled
	ON	Enabled

Cellular WAN Indicators		
Cellular	OFF	Disabled
	Blinking slowly	Connecting to wireless network
	ON	Connected to wireless network

USB Port	
USB Ports	For connecting a 4G/3G USB modem

6.7 Peplink Balance 50

6.7.1 Front Panel Appearance

6.7.2 LED Indicators

The statuses indicated by the front panel LEDs are as follows:

Power and Status Indicators	
Power	OFF – Power off
	Green – Power on
Status	OFF – Upgrading firmware
	Red – Booting up or busy
	Blinking red – Boot up error

Green – Ready

LAN and WAN Ports	
Green LED	ON – 10 / 100 /1000 Mbps
Orange LED	Blinking – Data is transferring
	OFF – No data is being transferred or port is not connected
Port Type	Auto MDI/MDI-X ports

USB Port	
USB Ports	For connecting a 4G/3G USB modem

6.8   Peplink Balance 210

6.8.1   Front Panel Appearance

6.8.2   LED Indicators

The statuses indicated by the front panel LEDs are as follows:

Power and Status Indicators	
Status	OFF – Upgrading firmware
	Red – Booting up or busy
	Blinking red – Boot up error
	Green – Ready

LAN and WAN Ports	
Green LED	ON – 10 / 100 / 1000 Mbps
Orange LED	Blinking – Data is transferring
	OFF – No data is being transferred or port is not connected
Port Type	Auto MDI/MDI-X ports

USB Port	
USB Ports	For connecting a 4G/3G USB modem

6.9 Peplink Balance 305

6.9.1 Front Panel Appearance

6.9.2 LED Indicators

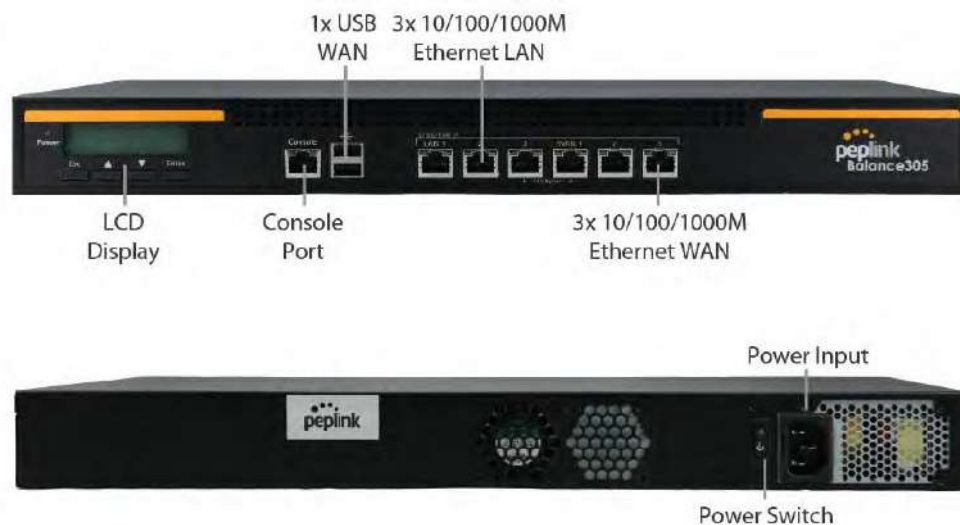The statuses indicated by the front panel LEDs are as follows:

Power and Status Indicators	
Power LED	OFF – Power off
	GREEN – Power on

LAN Port, WAN 1 – 3 Ports	
Right LED	ORANGE – 1000 Mbps
	GREEN – 100 Mbps
	OFF – 10 Mbps
Left LED	Solid – Port is connected without traffic
	Blinking – Data is transferring
	OFF – Port is not connected
Port Type	Auto MDI/MDI-X ports

Console and USB Ports	
Console Port	Reserved for engineering use
USB Ports	For connecting a 4G/3G USB modem

6.10 Peplink Balance 310

6.10.1 Front Panel Appearance

6.10.2 LED Indicators

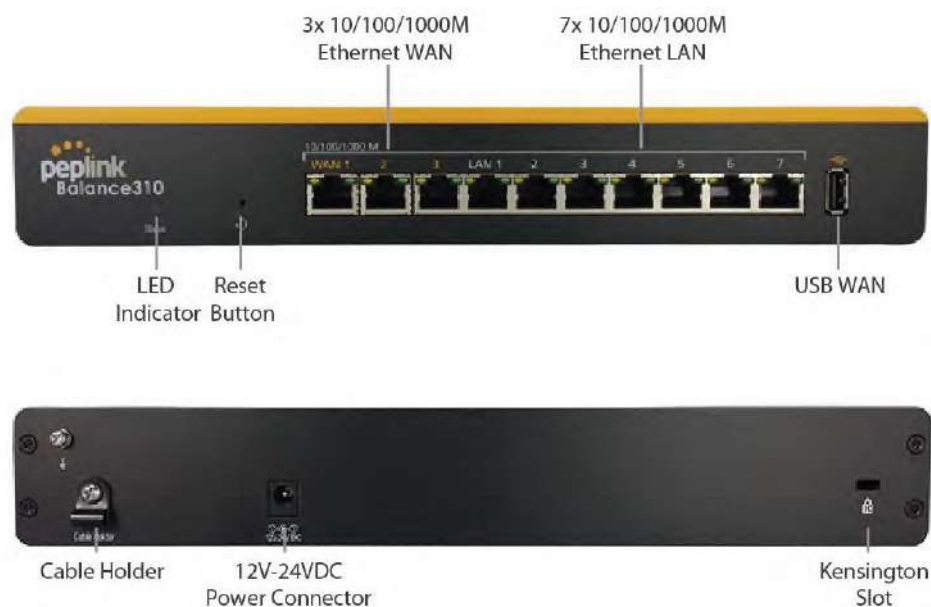The statuses indicated by the front panel LEDs are as follows:

Power and Status Indicators	
Status	OFF – Upgrading firmware
	Red – Booting up or busy
	Blinking red – Boot up error
	Green – Ready

LAN and WAN Ports	
Green LED	ON – 10 / 100 / 1000 Mbps
Orange LED	Blinking – Data is transferring
	OFF – No data is being transferred or port is not connected

Port Type	Auto MDI/MDI-X ports

USB Port	
USB Ports	For connecting a 4G/3G USB modem

6.11 Peplink Balance 310X

6.11.1   Front Panel Appearance

6.11.2   LED Indicators

The statuses indicated by the front panel LEDs are as follows:

Power and Status Indicators		
Power	OFF – Power off	
	Green – Power on	
Status	OFF – Upgrading firmware	
	Red – Booting up or busy	
	Blinking red – Boot up error	
	Green – Ready	

WAN Ports	
Green LED	ON - 1000 Mbps OFF – 10 / 100 Mbps or port is not connected
Orange LED	Blinking – Data is transferring
	OFF – No data is being transferred or port is not connected
Port Type	Auto MDI/MDI-X ports

LAN Ports	
Green LED	ON – 1000 Mbps OFF – 10 / 100 Mbps or port is not connected
Orange LED	Blinking – 10 / 100 / 1000 Mbps with activity
	OFF – No data is being transferred or port is not connected
Port Type	Auto MDI/MDI-X ports

Cellular WAN Indicators		
Cellular	OFF	Disabled
	Blinking slowly	Connecting to wireless network
	ON	Connected to wireless network

Wi-Fi AP Indicators		
Wi-Fi AP	OFF	Disabled
	ON	Enabled

USB Port	
USB Ports	For connecting a 4G/3G USB modem

6.12 Peplink Balance 310 5G

6.12.1 Front Panel Appearance

6.12.2 LED Indicators

The statuses indicated by the front panel LEDs are as follows:

Power and Status Indicators		
Power	OFF – Power off	
	Green – Power on	
Status	OFF – Upgrading firmware	
	Red – Booting up or busy	
	Blinking red – Boot up error	
	Green – Ready	

WAN Port	
Right LED	GREEN - 1000 Mbps ORANGE - 100 Mbps OFF – 10 Mbps or port is not connected
Left LED	Blinking – Data is transferring
	OFF – Port is not connected

Port Type	Auto MDI/MDI-X ports

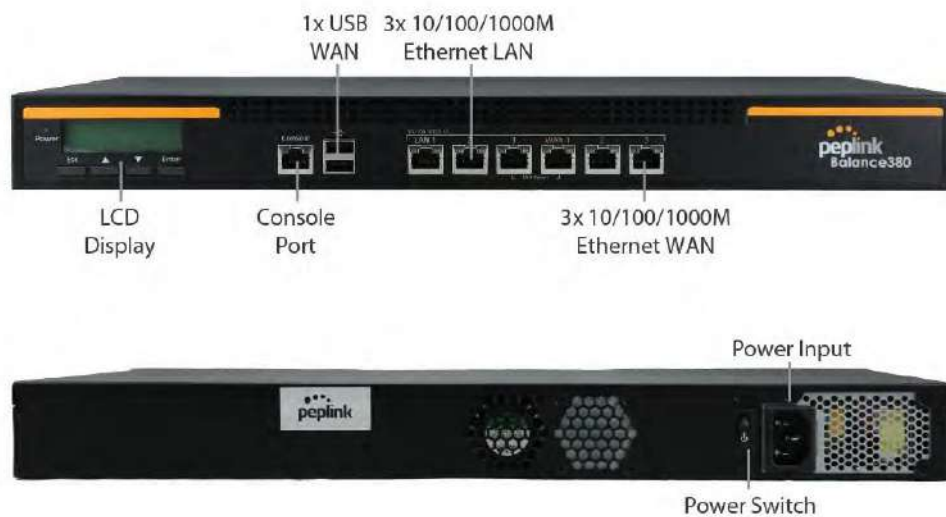| LAN Ports	
Right LED	GREEN – 1000 Mbps ORANGE - 100 Mbps OFF – 10 Mbps or port is not connected
Left LED	Blinking – Data is transferring
	OFF – Port is not connected
Port Type	Auto MDI/MDI-X ports

Cellular WAN Indicators		
Cellular	OFF	Disabled
	Blinking slowly	Connecting to wireless network
	ON	Connected to wireless network

USB Port	
USB Ports	For connecting a 4G/3G USB modem

6.13 Peplink Balance 310 Fiber 5G

6.13.1 Front Panel Appearance

6.13.2 LED Indicators

The statuses indicated by the front panel LEDs are as follows:

Power and Status Indicators	
Power	OFF – Power off
	Green – Power on
Status	OFF – Upgrading firmware
	Red – Booting up or busy
	Blinking red – Boot up error
	Green – Ready

WAN Port	
Right LED	GREEN - 1000 Mbps ORANGE - 100 Mbps OFF – 10 Mbps or port is not connected
Left LED	Blinking – Data is transferring
	OFF – Port is not connected
Port Type	Auto MDI/MDI-X ports

LAN Ports	
Right LED	GREEN – 1000 Mbps ORANGE - 100 Mbps OFF – 10 Mbps or port is not connected
Left LED	Blinking – Data is transferring
	OFF – Port is not connected
Port Type	Auto MDI/MDI-X ports

Cellular WAN Indicators		
Cellular	OFF	Disabled
	Blinking slowly	Connecting to wireless network
	ON	Connected to wireless network

Wi-Fi AP Indicators		
Wi-Fi AP	OFF	Disabled
	ON	Enabled

USB Port	
USB Ports	For connecting a 4G/3G USB modem

6.14 Peplink Balance 380

6.14.1 Panel Appearance

6.14.2 LED Indicators

The statuses indicated by the front panel LEDs are as follows:

Power and Status Indicators	
Power LED	OFF – Power off
	GREEN – Power on

LAN Port, WAN 1 – 3 Ports	
Right LED	ORANGE – 1000 Mbps
	GREEN – 100 Mbps
	OFF – 10 Mbps
Left LED	Solid – Port is connected without traffic
	Blinking – Data is transferring
	OFF – Port is not connected

Port Type	Auto MDI/MDI-X ports

Console and USB Ports	
Console Port	Reserved for engineering use
USB Ports	For connecting a 4G/3G USB modem

6.15 Peplink Balance 380X

6.15.1 Panel Appearance
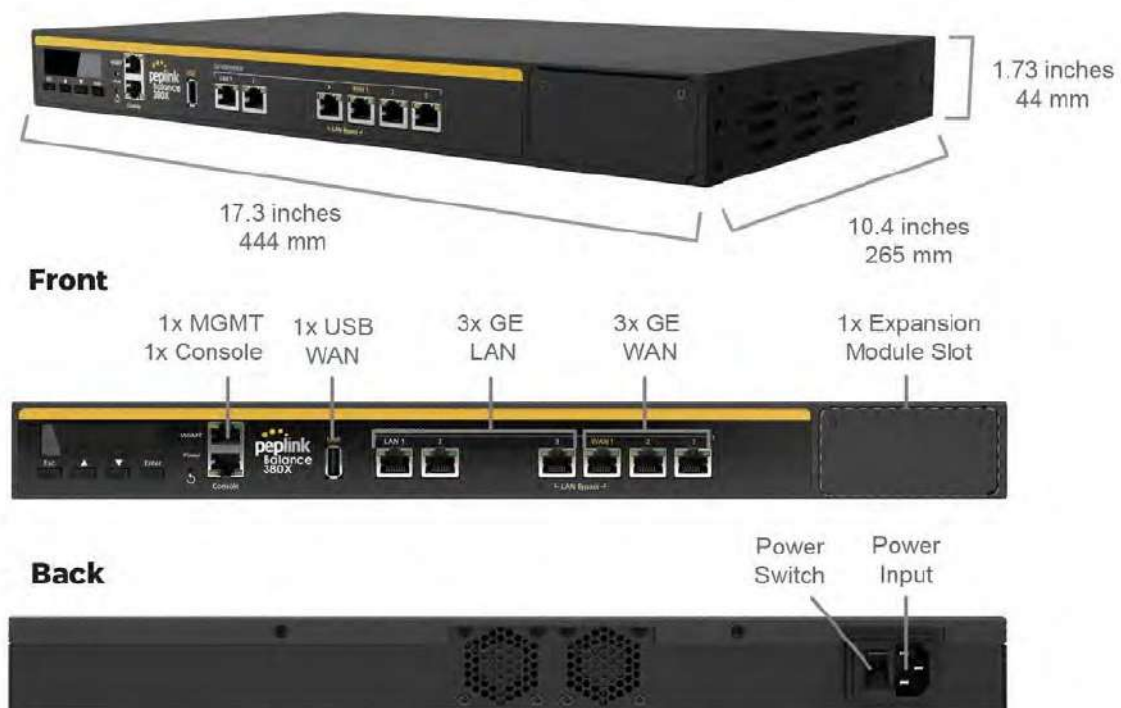
6.15.2 LED Indicators

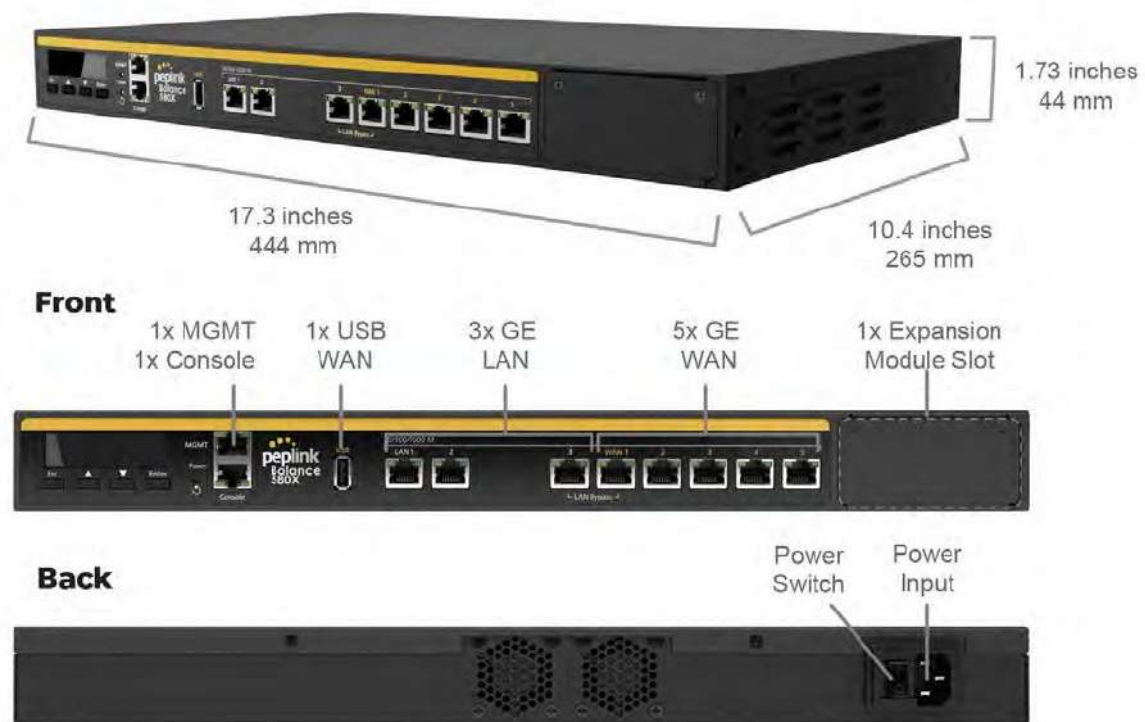The statuses indicated by the front panel LEDs are as follows:

Power and Status Indicators	
Power LED	OFF – Power off
	GREEN – Power on

LAN Port, WAN 1 – 3 Ports	
Right LED	GREEN – 1000 Mbps
	OFF – 10 / 100 Mbps
Left LED	Solid – Port is connected without traffic
	Blinking – Data is transferring
	OFF – Port is not connected
Port Type	Auto MDI/MDI-X ports

Console and USB Ports	
Console Port	Reserved for engineering use
USB Ports	For connecting a 4G/3G USB modem

6.15.3 Flex Module Mini

1x LTE-A Module

Interface	1x Embedded LTE-A Cellular Modems with Redundant SIM Slots
Antenna Connectors	2x SMA Cellular Antenna Connectors
Downlink / Uplink Datarate	300Mbps/50Mbps (CAT-6) 600Mbps/150Mbps (CAT-12)
Power Consumption	10W
Weight	0.83 pounds | 375 grams

### 1xLTE-A Module

Interface	1x Embedded LTE-A Cellular Modems with Redundant SIM Slots
Antenna Connectors	4x SMA Cellular Antenna Connectors
Downlink / Uplink Datarate	1.2 Gbps/150 Mbps (CAT-18)
Power Consumption	10W
Weight	0.83 pounds | 375 grams

6.16 Peplink Balance 580

6.16.1 Panel Appearance

6.16.2 LED Indicators

The statuses indicated by the front panel LEDs are as follows:

Power and Status Indicators	
Power LED	OFF – Power off
	GREEN – Power on

LAN Port, WAN 1 – 5 Ports	
Right LED	ORANGE – 1000 Mbps
	GREEN – 100 Mbps
	OFF – 10 Mbps
	Solid – Port is connected without traffic

Left LED	Blinking – Data is transferring
	OFF – Port is not connected
Port Type	Auto MDI/MDI-X ports

Console and USB Ports	
Console Port	Reserved for engineering use
USB Ports	For connecting a 4G/3G USB modem

6.17 Peplink Balance 580X

6.17.1 Panel Appearance

6.17.2   LED Indicators

The statuses indicated by the front panel LEDs are as follows:

Power and Status Indicators	
Power LED	OFF – Power off
	GREEN – Power on

LAN Port, WAN 1 – 5 Ports	
Right LED	GREEN – 1000 Mbps
	OFF – 10 / 100 Mbps
	Solid – Port is connected without traffic

Left LED	Blinking – Data is transferring
	OFF – Port is not connected
Port Type	Auto MDI/MDI-X ports

Console and USB Ports	
Console Port	Reserved for engineering use
USB Ports	For connecting a 4G/3G USB modem

6.17.3   Flex Module Mini

1x LTEA Module	
Interface	1x Embedded LTE-A Cellular Modems with Redundant SIM Slots
Antenna Connectors	2x SMA Cellular Antenna Connectors
Downlink / Uplink Datarate	300Mbps/50Mbps (CAT-6) 600Mbps/150Mbps (CAT-12)
Power Consumption	10W
Weight	0.83 pounds | 375 grams

1xLTEA Module	
Interface	1x Embedded LTE-A Cellular Modems with Redundant SIM Slots
Antenna Connectors	4x SMA Cellular Antenna Connectors
Downlink / Uplink Datarate	1.2 Gbps/150 Mbps (CAT-18)
Power Consumption	10W
Weight	0.83 pounds | 375 grams

6.18 Peplink Balance 710

6.18.1 Front Panel Appearance
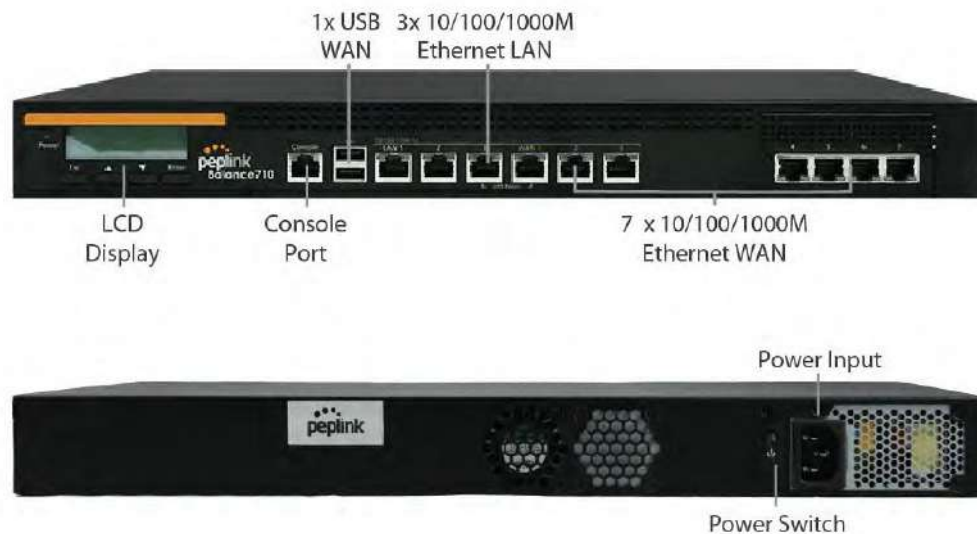
6.18.2 LED Indicators

Status indicated in the front panel is as follows:

LED Indicator	
Power LED	OFF – Power off
	GREEN – Power on

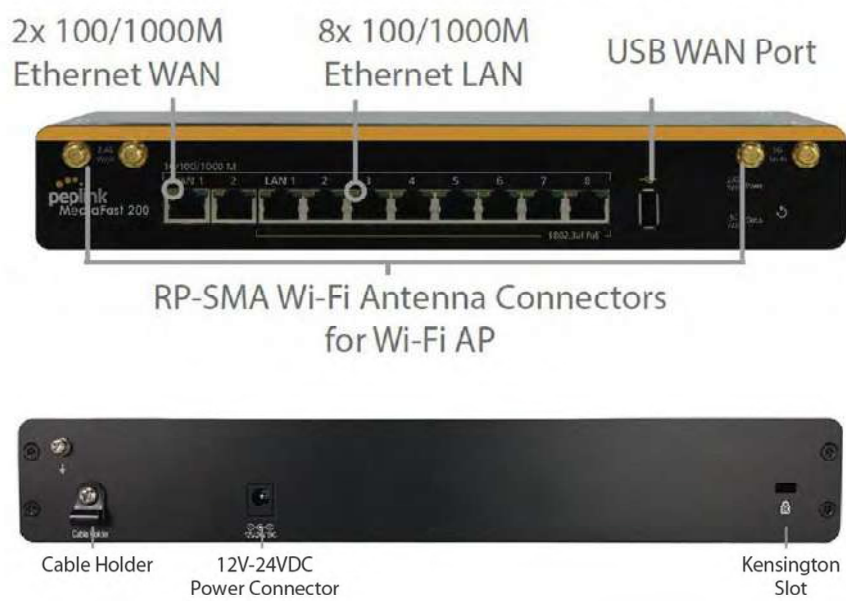| LAN Port, WAN 1 – 7 Ports	
Green LED	ORANGE – 1000 Mbps
	GREEN – 100 Mbps
	OFF – 10 Mbps
Orange LED	Solid – Port is connected without traffic
	Blinking – Data is transferring
	OFF – Port is not connected
Port Type	Auto MDI/MDI-X ports

Console & USB Ports	
Console Port	Reserved for engineering use
USB Ports	For connecting a 4G/3G USB modem

6.19 Peplink Balance 1350

6.19.1 Panel Appearance
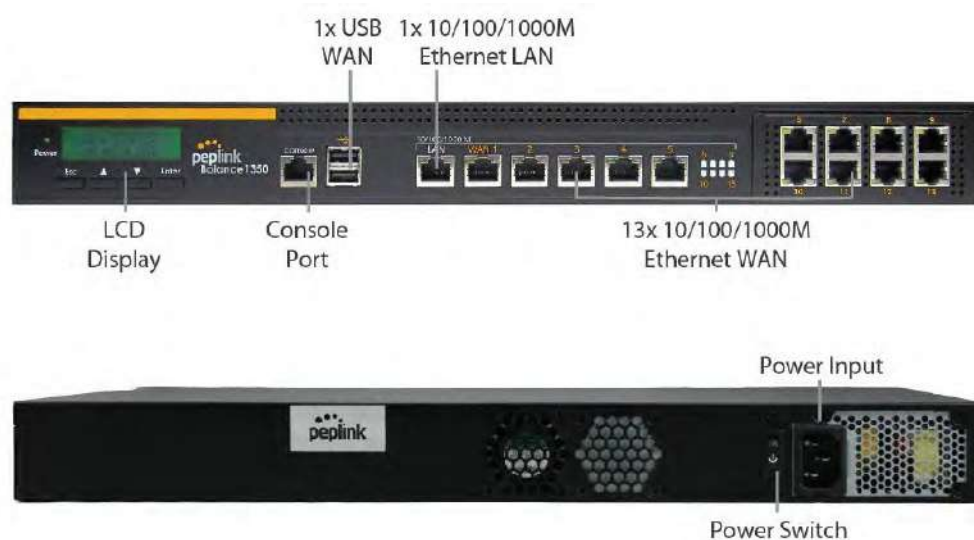
6.19.2 LED Indicators

Status indicated in the front panel is as follows:

LED Indicator	
Power LED	OFF – Power off
	GREEN – Power on

LAN Port, WAN 1 – 13 Ports

Right LED	ORANGE – 1000 Mbps
	GREEN – 100 Mbps
	OFF – 10 Mbps
Left LED	Solid – Port is connected without traffic
	Blinking – Data is transferring
	OFF – Port is not connected
Port Type	Auto MDI/MDI-X ports

Console & USB Ports	
Console Port	Reserved for engineering use
USB Ports	For connecting a 4G/3G USB modem

6.20 Peplink Balance 2500

6.20.1 Panel Appearance
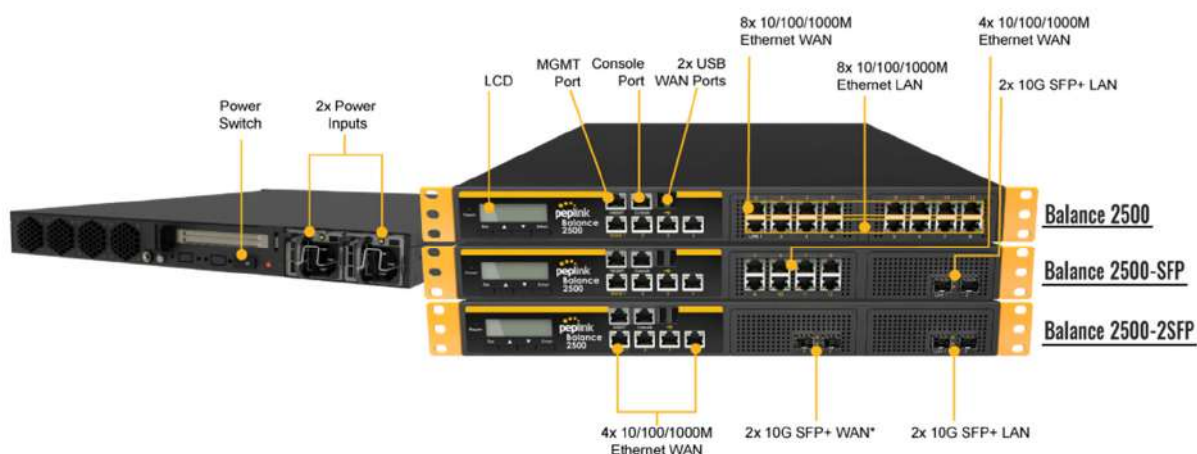
*Balance 2500 is available in two configurations with different LAN interfaces.

6.20.2 LED Indicators

Status indicated in the front panel is as follows:

LED Indicator	
Power LED	OFF – Power off
	GREEN – Power on

LAN and WAN Ports	
Right LED	ORANGE – 1000 Mbps
	GREEN – 100 Mbps
	OFF – 10 Mbps
Left LED	Solid – Port is connected without traffic
	Blinking – Data is transferring
	OFF – Port is not connected
Port Type	Auto MDI/MDI-X ports

Console & USB Ports	
Console Port	Reserved for engineering use
USB Ports	For connecting a 4G/3G USB modem

7 Peplink MediaFast Overview

7.1 Peplink MediaFast 200

7.1.1 Panel Appearance

7.1.2 LED Indicators

Status indicated in the front panel is as follows:

LED Indicator	
Power LED	OFF – Power off
	GREEN – Power on

LAN 1-3 Ports, WAN 1-5 Ports	
Right LED	ORANGE – 1000 Mbps
	GREEN – 100 Mbps
	OFF – 10 Mbps

Left LED	Solid – Port is connected without traffic
	Blinking – Data is transferring
	OFF – Port is not connected
Port Type	Auto MDI/MDI-X ports

Console & USB Ports	
Console Port	Reserved for engineering use
USB Ports	For connecting 4G/3G USB modems

7.2   Peplink MediaFast 500

7.2.1   Panel Appearance

7.2.2 LED Indicators

Status indicated in the front panel is as follows:

LED Indicator	
Power LED	OFF – Power off
	GREEN – Power on

LAN 1-3 Ports, WAN 1-5 Ports	
Right LED	ORANGE – 1000 Mbps
	GREEN – 100 Mbps
	OFF – 10 Mbps
Left LED	Solid – Port is connected without traffic
	Blinking – Data is transferring
	OFF – Port is not connected
Port Type	Auto MDI/MDI-X ports

Console & USB Ports	
Console Port	Reserved for engineering use
USB Ports	For connecting 4G/3G USB modems

7.3 Peplink MediaFast 750

7.3.1 Panel Appearance

7.3.2 LED Indicators

Status indicated in the front panel is as follows:

LED Indicator	
Power LED	OFF – Power off
	GREEN – Power on

LAN 1-3 Ports, WAN 1-5 Ports	
Right LED	ORANGE – 1000 Mbps
	GREEN – 100 Mbps
	OFF – 10 Mbps
Left LED	Solid – Port is connected without traffic
	Blinking – Data is transferring
	OFF – Port is not connected

Port Type	Auto MDI/MDI-X ports

Console & USB Ports	
Console Port	Reserved for engineering use
USB Ports	For connecting 4G/3G USB modems

8   Peplink Flex-Module Supported Models

8.1   Peplink EPX

The EPX is a rapidly deployable, powerful, and versatile SD-WAN router that connects a wide range of WAN options from LTE-A, satellite modems, to fixed line networks this can be used simultaneously to allow bonding using our SpeedFusion technology.

With its modular construction, the EPX is suitable for any deployment.

8.1.1   Main Chassis

EPX Main Chassis	
Power Input	AC Input 100V - 240V
Power Consumption (Main Chassis only)	215W
Throughput	30Gbps
PepVPN/SpeedFusion Throughput (256-bit AES)	2Gbps
Dimensions	18.9 x 21.7 x 3.6 inches - 480 x 550 x 90 mm
Weight (No Modules)	31.3 pounds - 14.2 kilograms
Operating Temperature	32° – 113°F (0° – 45°C)
Humidity	5% – 90% (non-condensing)
Certifications	FCC, IC, CE-RED EN 50155: Railway Applications EN 61373:1999 IEC 61373:1999 : Shock and Vibration Resistance EN 50121: Rolling Stock EMC, Signalling and Telecom Apparatus
Warranty	1-Year Limited Warranty

8.1.2 Panel Appearance

Front

8x GE PoE+ Module 4x SFP+ Module 3x LTE-A/LTE-A Pro Module 5G Future Technology

Back

1x Console

2x Power Inputs

2x USB 1x GE LAN

8.1.3 LED Indicators

Status indicated in the LAN/WAN port module is as follows:
Note: some EPX configurations are not shipped with this module

LED Indicator	
Power LED	OFF – Power off
	GREEN – Power on

| LAN Port, WAN Ports	
Right LED	ORANGE – Enabled as WAN port
	GREEN – PoE enabled
	OFF – PoE is disabled
Left LED	Solid – Port is connected without traffic
	Blinking – Data is transferring
	OFF – Port is not connected
Port Type	Auto MDI/MDI-X ports

Console & USB Ports	
Console Port	CLI Console connection
USB Ports	For connecting a 4G/3G USB modem

8.2   Peplink SDX

The SDX is a Modular Enterprise Grade Router. In addition to popular features such as SpeedFusion SD-WAN and InControl centralized management, the SDX has an expandable module that you can change according to your needs.
The SDX includes two integrated SFP+ WAN Ports, as well as eight PoE-enabled LAN Ports.
These ports are available no matter which module you use.

8.2.1   Main Chassis

SDX Main Chassis	
Power Input	AC Input 100V - 240V
Power Consumption	80W System* , 330W PoE+ Power Budget
Throughput	12 Gbps
PepVPN/SpeedFusion Throughput	No Encryption: 1 Gbps 256-bit AES: 600 Mbps
Dimensions	17.2 x 13.3 x 1.7 inches - 438 x 340 x 44 mm
Weight (No Modules)	11.7 pounds - 5.3 kilograms
Operating Temperature	32° – 104°F (0° – 40°C)
Humidity	5% – 90% (non-condensing)
Certifications	FCC, IC, CE

* 80W consumption for the main chassis, 20W consumption for the optional module.

8.2.2   Panel Appearance

Front:
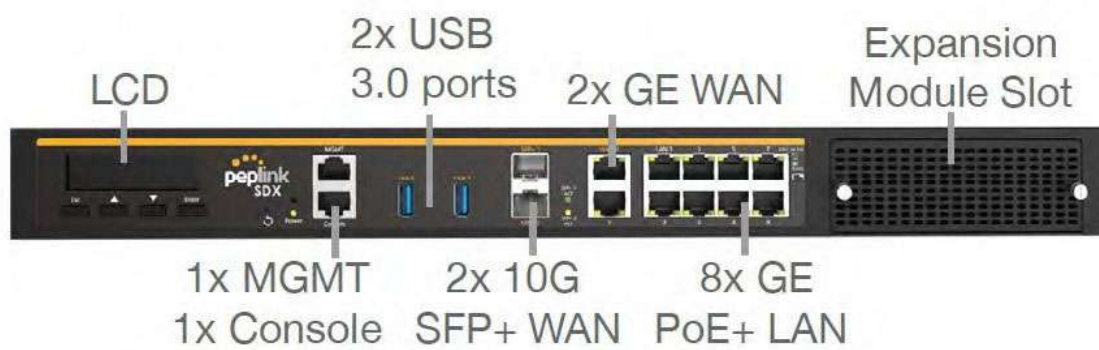
BPL-SDX

Back:

8.2.3   LED Indicators

LED Indicator	
Power LED	OFF – Power off
	GREEN – Power on

WAN Ports	
Right LED	GREEN – 1000 Mbps
	OFF – 10 Mbps / 100 Mbps or the port is not connected
Left LED	Solid – Port is connected without traffic
	Blinking – Data is transferring
	OFF – Port is not connected
Port Type	Auto MDI/MDI-X ports

LAN Ports	
Right LED	GREEN – PoE enabled
	OFF – PoE is disabled
Left LED	Solid – Port is connected without traffic
	Blinking – Data is transferring
	OFF – Port is not connected
Port Type	Auto MDI/MDI-X ports

Console, MGMT & USB Ports

Console Port	CLI console connection
USB Ports	For connecting 4G/3G USB modems for additional WAN connections
MGMT Port	Management port

8.3 Peplink SDX Pro

In addition to the power of the SDX, the SDX Pro offers greater flexibility and functionality. It has two FlexModule slots, enabling you to customize the device with different modules to suit any deployment. It supports edge computing so it can deliver websites, applications, and docker containers to connected devices.

8.3.1 Main Chassis

SDX Pro Main Chassis	
Power Input	AC Input 100V - 240V
Power Consumption	140W System* , 420W PoE+ Power Budget
Throughput	24 Gbps
PepVPN/SpeedFusion Throughput	No Encryption: 1 Gbps 256-bit AES: 600 Mbps
Dimensions	17.2 x 13.8 x 1.7 inches - 438 x 350 x 44 mm
Weight (No Modules)	15.9 pounds - 7.2 kilograms
Operating Temperature	32° – 104°F (0° – 40°C)
Humidity	10% – 85% (non-condensing)
Certifications	FCC, IC, CE

* 140W consumption for the main chassis, 20W consumption for the optional module.

8.3.2 Panel Appearance

* WAN ports are configured as a LAN ports by default, configuration is changeable on the Web Admin

8.3.3 LED Indicators

LED Indicator
OFF – Power off

Power LED	GREEN – Power on

WAN Ports

Right LED	GREEN – 1000 Mbps
	OFF – 10 Mbps / 100 Mbps or port is not connected
Left LED	Solid – Port is connected without traffic
	Blinking – Data is transferring
	OFF – Port is not connected
Port Type	Auto MDI/MDI-X ports

Console, MGMT & USB Ports

Console Port	CLI console connection
USB Ports	For connecting 4G/3G USB modems for additional WAN connections
MGMT Port	Management port

8.4 Flex Module Expansion Modules

3x LTE-A Module

3x LTE-A Module	
Interface	3x Embedded LTE-A Cellular Modems with Redundant SIM Slots
Antenna Connectors	6x SMA Cellular Antenna Connectors 1x SMA GPS Antenna Connector
Power Consumption	20W
Weight	0.83 pounds - 375 grams

8x GE PoE Module

GE PoE+ Enabled
Ethernet Ports
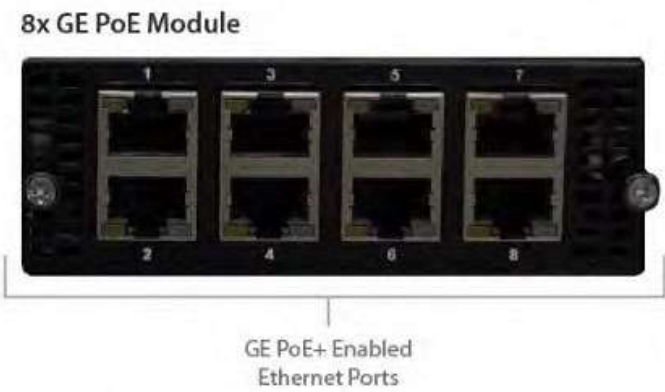
8x GE PoE Module

Interface	8x 10/100/1000M Ethernet Ports Capable of PoE+
Power Consumption	15W (105W max. with 802.3at/af PoE+ Output)
Weight	1.1 pounds 475 grams

4x SFP+ Module
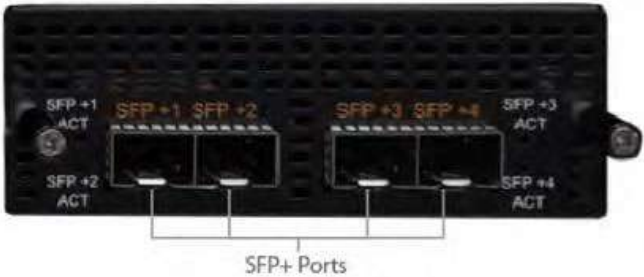
4x SFP+ Module	
Interface	4x SFP+ Ports
Power Consumption	11W
Weight	0.83 pounds - 375 grams

9   LCD Display Menu

> HA State: Master/Slave
        > LAN IP
        > VIP
> System Status
        > System
                > Firmware ver.   (shows firmware version)
                > Serial number   (shows serial number)
                > System time   (shows current time)
                > System uptime   (shows system uptime since last reboot)
                > CPU load   (shows current CPU loading, 0-100%)
                > LAN
                        > Status   (shows LAN port physical status)
                        > IP address   (shows LAN IP address)
                        > Subnet mask   (shows LAN subnet mask)
        > Link status   (shows Connected/Disconnected, IP address list)
                > WAN1
                > WAN2
                > WAN3*
        > VPN status   (shows Connected/Disconnected)
                >*VPN Profile 1*
                >*VPN Profile 2*
                >*…*
                >*VPN Profile n*
        > Link usage
                > Throughput in   (shows transfer rate in Kbps)
                        > WAN1
                        > WAN2
                        > WAN3*
                > Throughput out   (shows transfer rate in Kbps)
                        > WAN1
                        > WAN2
                        > WAN3*
        > Data Transfered   (shows volume transferred since last reboot in MB)
                > WAN1
                > WAN2
                > WAN3*
> Maintenance

> Reboot > Reboot? (Yes/No)	(to reboot the unit)
> Factory default > Factory default? (Yes/No)	(to restore factory defaults)

> LAN config
      > Port speed   (shows port speed: Auto, 10baseT-FD, 10baseT-HD,
            > LAN   100baseTx-FD, 100baseTx-HD, 1000baseTx-FD)
            > WAN1
            > WAN2
            > WAN3*

*Layout continues as such for all available WAN ports

10   Installation

The following section details connecting the Peplink Balance to your network:

10.1 Preparation

Before installing your Peplink Balance, please prepare the following:

- At least one Internet/WAN access account
- For each network connection, one 10/100BaseT UTP cable with RJ45 connector, one 1000BaseT Cat5E UTP cable for the Gigabit port, or one USB modem for the USB WAN port
- A computer with the TCP/IP network protocol and a web browser installed— Supported browsers include Microsoft Internet Explorer 11 or above, Mozilla Firefox 24 or above, Apple Safari 7 or above, and Google Chrome 18 or above.

10.2 Constructing the Network

At the high level, construct the network according to the following steps:

1. With an Ethernet cable, connect a computer to one of the LAN ports on the Peplink Balance. For Peplink Balance models that support multiple connections, repeat with different cables connect up to 4 computers.
2. With another Ethernet cable, connect the WAN/broadband modem to one of the WAN ports on the Peplink Balance. Repeat using different cables to connect from two to 13 WAN/broadband connections or connect a USB modem to the USB WAN port.
3. Connect the provided power adapter or cord to the power connector on the Peplink Balance, and then plug the power adapter into a power outlet.

11   Basic Configuration

11.1   Connecting to the Web Admin Interface

Start a web browser on a computer that is connected with the Peplink Balance through the LAN.

To connect to the web admin of the Peplink Balance, enter the following LAN IP address in the address field of the web browser:

> https://192.168.1.1

(This is the default LAN IP address of the Peplink Balance.) Enter the following to access the web admin interface.

> **Username**: admin
> **Password**: admin
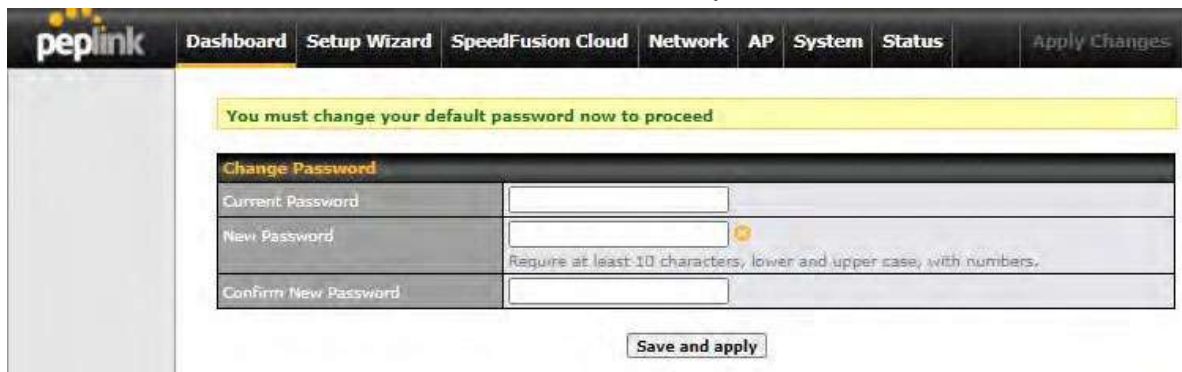
(This is the default admin user login of the Peplink Balance.)

You must change the default password on the first successful logon.

Password requirements are: A minimum of 10 lower AND upper case characters, including at least 1 number.

When HTTP is selected, the URL will be redirected to HTTPS by default.

After successful login, the **Dashboard** of the web admin interface will be displayed.

Important Note
The **Save** button causes the changes to be saved. Configuration changes (e.g., WAN, LAN, admin settings, etc.) take effect after clicking the **Apply Changes** button on each page's top-right corner.

11.2 Configuration with the Setup Wizard

The Setup Wizard simplifies the task of configuring WAN connection(s) by guiding the configuration process step-by-step.

To begin, click **Setup Wizard** after connecting to the web admin interface.

Dashboard	Setup Wizard	Network	AP	System	Status		Apply Changes

Click **Next >>** to begin.

Setup Wizard > WAN Setup > Step 1

Welcome to Setup Wizard!

The Setup Wizard will guide you through the WAN port(s) configuration step by step. This wizard is designed to simplify the process in configuring your device and connecting it to the Internet.

Click *Next* to begin.
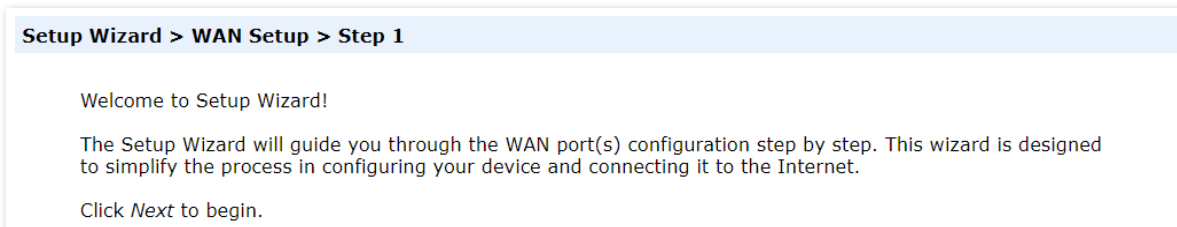
Select **Yes** if you want to set up drop-in mode using the Setup Wizard.

Setup Wizard > WAN Setup > Step 2

Drop-in Mode

Do you want to setup drop-in mode?	◉ Yes ○ No
Which WAN port do you want to enable drop-in mode?	WAN 1 ▾

WAN 1
WAN 2
WAN 3
WAN 4
WAN 5
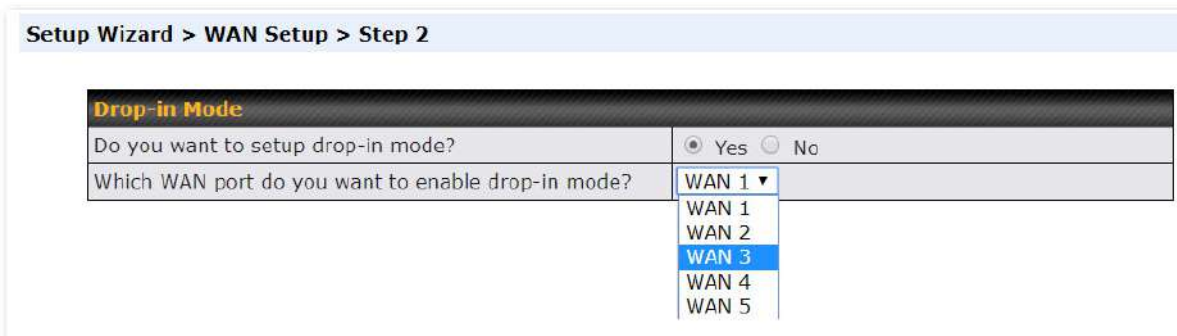
Click on the appropriate checkbox(es) to select the WAN connection(s) to be configured. If you have chosen to configure drop-in mode using the Setup Wizard, the WAN port to be configured in drop-in mode will be checked by default.

Setup Wizard > WAN Setup > Step 3

Choose the WAN port(s) to be configured.

WAN Ports	
WAN 1	☐
WAN 2 (Drop-in)	☑
WAN 3	☐
WAN 4	☐
WAN 5	☐
Mobile Internet	☐

If drop-in mode is going to be configured, the setup wizard will move on to **Drop-in Settings**.

Setup Wizard > WAN Setup > Step 4

Enter the parameters of Drop-in Settings for WAN 2.

Drop-in Settings	
IP Address	
Subnet Mask	255.255.255.0 (/24) ▾
Default Gateway	
DNS Servers	DNS server 1: DNS server 2:
Upload Bandwidth	1000 Mbps ▾
Download Bandwidth	1000 Mbps ▾

If you are not using drop-in mode, select the connection method for the WAN connection(s) from the

following screen:

Depending on the selection of connection type, further configuration may be needed. For example, PPPoE and static IP require additional settings for the selected WAN port. Please refer to **Section 13, Configuring the WAN Interface(s)** for details on setting up DHCP, static IP, and PPPoE.

If **Mobile Internet Connection** is checked, the setup wizard will move on to **Operator Settings**.

If **Custom Mobile Operator Settings** is selected, APN parameters are required. Some service providers may charge a fee for connecting to a different APN. Please consult your service provider for the correct settings.

Click on the appropriate check box(es) to select the preferred WAN connection(s). Connection(s) not selected in this step will be used as a backup only. Click **Next >>** to continue.

Choose the time zone of your country/region. Check the box **Show all** to display all time zone options.

Check in the following screen to make sure all settings have been configured correctly, and then click "**Save Settings**" to confirm.

Setup Wizard > WAN Setup > Final Step

Confirm the WAN connection(s) configuration below. Click *Back* to modify the configuration settings in previous steps. Click *Save Settings* when you are done.

Summary of WAN Port(s) Configuration	
WAN 1	
Connection Method	DHCP
Upload Bandwidth	1000 Mbps
Download Bandwidth	1000 Mbps
Preferred WAN Port(s)	
Ports	WAN 1 WAN 2
Time Zone Settings	
Time Zone	(GMT) Greenwich Mean Time : Dublin, Edinburgh, Lisbon, London

After finishing the last step in the setup wizard, click **Apply Changes** on the page header to allow the configuration changes to take effect.

12 SpeedFusion Cloud

With Peplink products, your device is able to connect to SpeedFusion Cloud without the use of a second endpoint. This service has wide access to a number of SpeedFusion endpoints hosted from around the world, providing your device with unbreakable connectivity wherever you are.*

*SpeedFusion Cloud is supported in firmware version 8.1.0 and above. SpeedFusion Cloud is a subscription basis. SpeedFusion Cloud license can be purchased at **https://store.peplink.com/** **> Cloud Solutions > SpeedFusion Cloud Service**.

12.1 Activate SpeedFusion Cloud Service

You are entitled to a 30-day free period with 100GB of SpeedFusion usage upon activation of the SpeedFusion Cloud service. This offer is limited to once per device. To get your activation key please visit SpeedFusion Cloud.
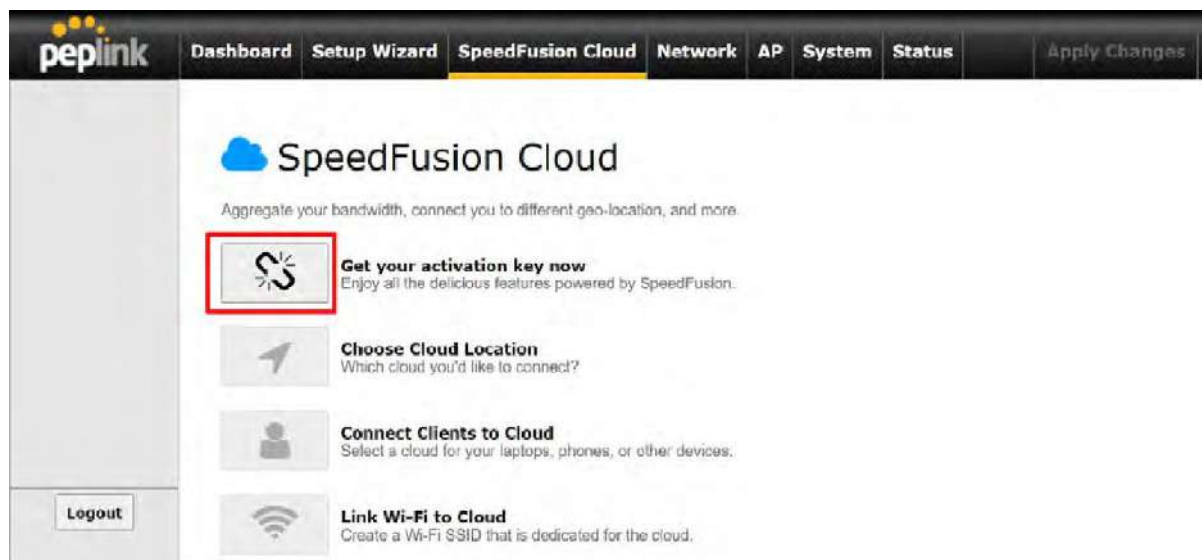
Go to activate.speedfusion.com and select the type of SpeedFusion Cloud service, "Via Free 30-days Trial"

or "Via Care Plans", that you would like to activate. Next, register or login to your account.

Select the devices that you wish to activate SpeedFusion Cloud on and click **ACTIVATE**.
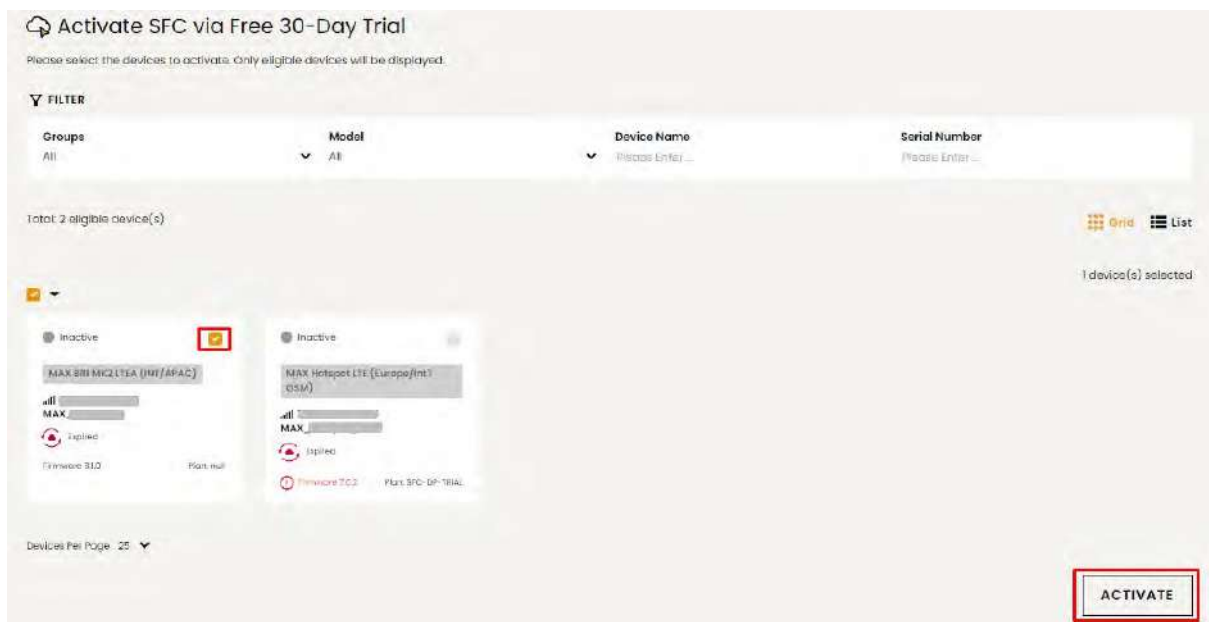
From **System > Features Add-ons**, paste the license key into the window and click on **Activate** once you

have received the license key.
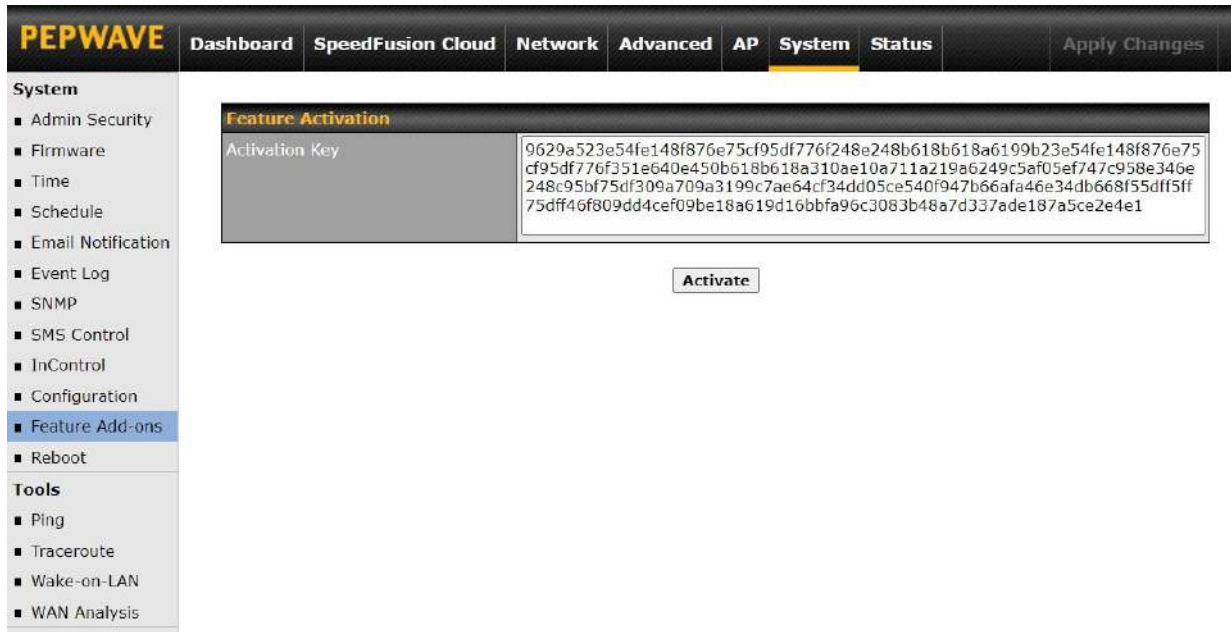
12.2 Enable SpeedFusion Cloud

Enable SpeedFusion Cloud from **SpeedFusion Cloud > Choose Cloud Location**.

Choose **Automatic > Click on the green tick button** to confirm the change.

Click on **Apply Changes** to save the change.

By default, the router will build a SpeedFusion tunnel to the SpeedFusion Cloud

If you are running a latency sensitive service like video streaming or VOIP, a WAN Smoothing sub-tunnel can be created. Navigate to **Speedfusion Cloud > Choose a cloud location > SFC**.
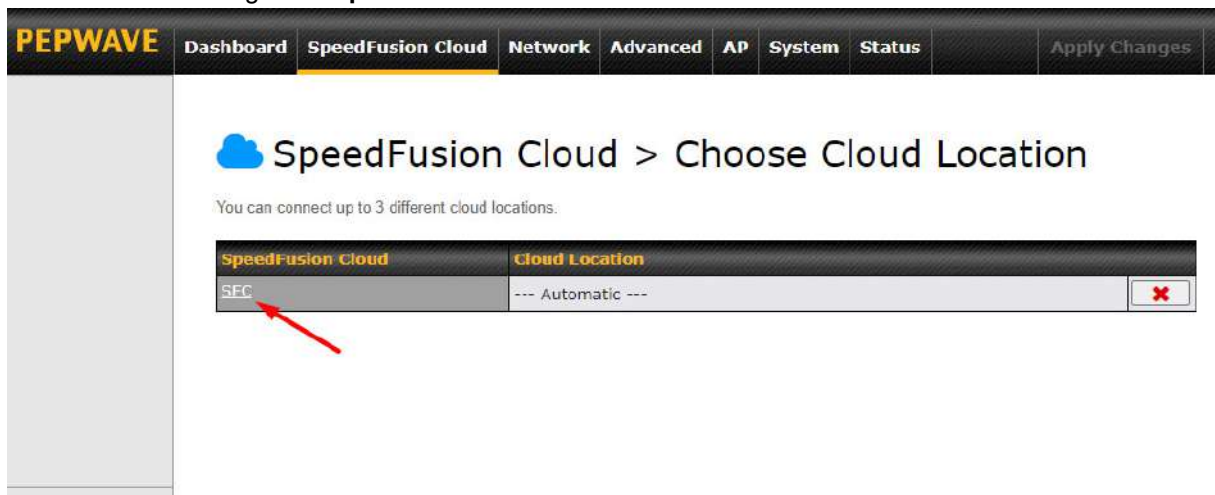
A Speedfusion tunnel configuration window will pop out. Click on the **+** sign to create the WAN Smoothing sub-tunnel.

Click on **Save** and **Apply Changes** to save the configuration. Now, the router has 2 Speedfusion tunnels to the Speedfusion Cloud.

Create an outbound policy to steer the internet traffic to go into Speedfusion Cloud. Please go to **Advanced > Outbound Policy**, click on **Add Rule** to create a new outbound policy.