

# Balance 5000 EC

Meet the next generation Enterprise Router



## FAQ

Is the Balance 5000 EC suitable for me?  
What is included with the Balance 5000 EC?  
Using the Balance 5000 EC  
Licenses and Accessories  
What can I do if I need support?

P. [2](#)  
P. [6](#)  
P. [8](#)  
P. [8](#)  
P. [9](#)

# FAQ - Balance 5000 EC

## Is the Balance 5000 EC suitable for me?



### What is the Balance 5000 EC?

The Balance 5000 EC is a high-performance enterprise router designed to support thousands of concurrent users. Equipped with edge computing capabilities, it comes in two models—40G and 100G—to meet the demands of large networks and data centers. With up to 110 Gbps throughput and multiple WAN ports, it serves as a robust core for any extensive network infrastructure.



### What are the key differences between the 40G and 100G models?

The main differences lie in their port configurations and throughput capabilities:

- **Balance 5000 EC (40G):**
  - **Throughput:** Up to 70 Gbps.
  - **WAN Ports:** 6-8 x (2.5GE) WAN, 4-8x (25G SFP28) WAN, 1-2x (40G QSFP+) WAN.
  - **LAN Ports:** 3-9 x (2.5GE) LAN, 4-8 (25G SFP28) LAN, 1-2x (40G QSFP+) LAN.
- **Balance 5000 EC (100G):**
  - **Throughput:** Up to 110 Gbps.
  - **WAN Ports:** 6-8 x (2.5GE) WAN, 2x (25G SFP28) WAN, 1x (100G QSFP28) WAN.
  - **LAN Ports:** 3-9 x (2.5GE) LAN, 2x (25G SFP28) LAN, 1x (100G QSFP28) LAN



### How fast is the Balance 5000 EC?

The **Balance 5000 EC (40G)** offers a rated throughput of **70 Gbps**, while the **Balance 5000 EC (100G)** provides up to **110 Gbps**. Both models support SpeedFusion VPN throughput (256-bit AES) of **30 Gbps**, ensuring secure and high-speed VPN connections.



### How many concurrent users can the Balance 5000 EC handle?

Both models can manage over 20,000 users simultaneously, making them ideal for environments with heavy network traffic and a high volume of connected sessions.

# FAQ - Balance 5000 EC



## Does the Balance 5000 EC support edge computing?

Yes, the "EC" in Balance 5000 EC stands for "Edge Computing." The device is recognized for its edge computing capabilities, supporting native apps (Python), containers (Docker), and hypervisors (KVM). This allows you to run applications directly on the router, reducing latency and enhancing performance. Natively, both models of the Balance 5000 EC come with 2x 1TB SSD storage.



## Does the Balance 5000 EC support LAN bypass?

LAN Bypass is a fault-tolerance feature that protects your essential business communications in the event of a power outage and allows you to safely connect all routers in a daisy-chain configuration. 2 LAN Bypass is available for internet traffic from LAN 1 to WAN 3 and from LAN 2 to WAN 4.



## What certifications does the Balance 5000 EC have?

The Balance 5000 EC has TAA, FCC, CE, and RoHS certifications.



## How many ways can the Balance 5000 EC connect to the Internet?

The Balance 5000 EC offers multiple WAN connectivity options, including:

- **Ethernet WAN Ports:** Up to 8x 2.5GE ports.
- **Fiber WAN Ports:**
  - **40G Model:** 4-8x 25G SFP28 WAN, 1-2x 40G QSFP+ WAN.
  - **100G Model:** 2x 25G SFP28 WAN, 1x 100G QSFP28 WAN.

This flexibility allows for various Internet connections, including high-speed fiber optics and traditional Ethernet.

- **USB WAN Ports:** The two USB port on the front of the router can be used as a connection point for a USB cellular modem or a USB-Ethernet adapter ([show tested compatible modems](#)). The Ethernet adapters which we have tested are discussed [here](#).

# FAQ - Balance 5000 EC



## What are the SFP28 and QSFP28 WAN LAN ports used for?

The **SFP28** and **QSFP28** ports are used for high-speed fiber optic connections:

- **SFP28 Ports:** Support 25 Gbps data rates, making them ideal for high-bandwidth WAN or LAN connections over longer distances.
- **QSFP28 Ports:** Support 100 Gbps data rates, providing ultra-high-speed connectivity suitable for data centers and backbone networks.

Additionally, in an enterprise or campus network, the distance between buildings and departments often exceeds 100 meters. Using fiber allows for longer transmission distances between points—something copper cables cannot achieve. Moreover, fiber offers a more reliable and secure connection due to its inherent properties.



## Can SFP / SFP+ transceivers work in an SFP28 port?

Yes, SFP / SFP+ transceivers are generally compatible with SFP28 ports since both use the same form factor, but the link will be limited to the respective transceiver speeds (10Gbps).



## Can QSFP+ (40G) transceivers work in a QSFP28 (100G) port?

No. QSFP28 (100G) ports support 100G QSFP28 transceivers only. They are not compatible with QSFP+ (40G), SFP28, SFP+, or SFP transceivers.

If you need 40G connectivity, use the Balance 5000 EC (40G) model, which has dedicated QSFP+ ports. If you need 100G connectivity, use the Balance 5000 EC (100G) model with QSFP28 transceivers.



## Can QSFP28 (100G) transceivers work in a QSFP+ (40G) port?

No. QSFP+ (40G) ports support 40G QSFP+ transceivers only. They are not compatible with QSFP28 (100G), SFP28, SFP+, or SFP transceivers. Inserting a higher-speed QSFP28 transceiver into a QSFP+ port risks link issues or no connection.

# FAQ - Balance 5000 EC



## What is the best use case for the Balance 5000 EC?

The Balance 5000 EC is ideal for large enterprises, data centers, and multi-site networks requiring high bandwidth, multiple WAN connections, and advanced edge computing capabilities. It's perfect for scenarios that demand robust network performance, scalability, and reliability.



## What are the physical dimensions and weight of the Balance 5000 EC?

Both models share the same physical characteristics:

- **Dimensions:** 17.2 x 25.6 x 1.73 inches (438 x 650 x 44 mm)
- **Weight:** 52.8 pounds (24 kg)
- **Form Factor:** 1U rack-mountable



## Can I run custom applications on the Balance 5000 EC?

Yes, thanks to its edge computing capabilities, you can run custom applications using:

- **Native Apps (Python)**
- **Containers (Docker)**
- **Hypervisors (KVM)**

This allows for versatile deployment of services directly on the router.

# FAQ - Balance 5000 EC

## What is included with the Balance 5000 EC?



### What is included in the package box with the Balance 5000 EC?

Each unit comes with:

- **1x Balance 5000 EC Router** (40G or 100G model)
- **2x Power Cords**
- **1x RJ45 LAN Cables**
- **1x Rack Mount Rail**
- **1x Slide Rail**
- **1x Short Ear Rack Mount Kit with Screws**



### Is a warranty included with this product?

**Yes**, the Balance 5000 EC comes with a **1-Year Limited Warranty**. You can extend the warranty by purchasing a **PrimeCare Plan W** or **PrimeCare+ Plan W**, available through Peplink Certified Partners or the Peplink eStore.



### What is the difference between PrimeCare Plan W and PrimeCare+ Plan W?

- **PrimeCare Plan W:** Includes standard warranty services, firmware upgrades, and access to InControl 2 cloud management.
- **PrimeCare+ Plan W:** Offers all the benefits of PrimeCare Plan W, plus advanced hardware replacement and priority support.



### What is SpeedFusion Connect?

SpeedFusion Connect is Peplink's global network of SpeedFusion endpoints. With an active CarePlan or SpeedFusion Connect Usage data plan, you can utilize SpeedFusion wherever you are, eliminating the need for any additional hardware. Unsure of what you need? Check out this useful [post](#).

# FAQ - Balance 5000 EC



## Does the Balance 5000 EC employ Peplink's SpeedFusion technology or SpeedFusion VPN?

SpeedFusion VPN is included in all products.

For the Balance 5000 EC, you can fully utilize Peplink's SpeedFusion technology, including Hot Failover, Smoothing, and Bandwidth Bonding without purchasing additional licenses.



## What is SpeedFusion technology, and does the Balance 5000 EC support it?

**SpeedFusion** is Peplink's patented VPN technology that enables:

- **Hot Failover**
- **Smoothing**
- **Bandwidth Bonding**

These features provide unbreakable connectivity by utilizing multiple Internet connections simultaneously. **Yes**, the Balance 5000 EC fully supports SpeedFusion technology without the need for additional licenses.



## How can I purchase a license for SpeedFusion Connect with higher traffic speed and additional usage?

Easy. Look [here!](#)

# FAQ - Balance 5000 EC

## Using the Balance 5000 EC



### What is the typical power consumption and the maximum power consumption?

For the Balance 5000 EC (40G), nominal power consumption is 196W, and maximum power consumption is 596W.

For the Balance 5000 EC (100G), nominal power consumption is 203W, and maximum power consumption is 595W.



### Can the Balance 5000 EC be remotely managed?

Yes, the Balance 5000 EC comes with a complimentary 1-year PrimeCare subscription, which includes InControl 2.

InControl 2 has helped thousands of users save configuration time, minimize truck rolls, stay on top of network status, and proactively resolve emerging issues with speed and precision.

## Licenses and Accessories



### How can I subscribe to InControl 2 services?

The Balance 5000 EC comes with a 1-year subscription to **InControl 2** as part of the warranty package. Extending your **PrimeCare Plan W** or upgrading to **PrimeCare+ Plan W** will continue your access to InControl 2.



### Can I connect the Balance 5000 EC to an OpenVPN server from a commercial VPN provider (ExpressVPN, ProtonVPN, etc)?

Yes. An optional license ([LIC-OPN-WAN](#)) will enable the OpenVPN WAN functionality.

# FAQ - Balance 5000 EC

## What can I do if I need support?



### **Does Peplink offer support for this product? What if I have difficulties setting it up?**

Peplink Partners provide support to the users of the products they have sold, so always reach out to the place of purchase first.

For those who prefer self-service, Peplink has a very active [forum](#). Among the regular forum users are Peplink partners, Peplink employees, and many very knowledgeable users. Generally, folks with questions get answers rather quickly. In the unlikely event of a suspected hardware or firmware issue, you can enter a [support ticket](#) with Peplink directly. In the latter case, you will receive attention from some of our best engineers. Peplink supports its users like no other.



### **I can't access the Internet via the Balance 5000 EC, what can I do?**

Visit [this link](#) (troubleshooting section) for a basic software walkthrough and troubleshooting guide. If that doesn't work, reach out on [our forum](#) and the team will get you online.