System Installation Requirements

OPX1000

Document V1.4

Rack Requirements

1.1 Chassis Information

- The chassis is 19" rack-mountable.
- It occupies 3U of vertical rack space.
- The chassis depth is 77 cm.
- We recommend using racks at least 100 cm deep, although shorter racks may also accommodate the chassis.
- The chassis has routing and cable connections on both its front and back sides. For this reason, it is advisable to position the rack beams toward the center of the rack, allowing sufficient space for routing on both sides.
- Two people are required for the installation as the chassis without FEMs weighs over 20kg.
- Since the chassis features a front-to-back airflow design, it is crucial to keep both the front and rear areas clear of any objects that might obstruct the airflow.
- The chassis is designed to operate reliably at ambient temperatures ranging from 10°C to 35°C.

1.2 Mounting Options

1.2.1 Rail system mounting

- A rail system will be provided.
- The rail system is telescopic and supports a 60 – 90cm distance between the front and back vertical installation posts of the rack.
- It is compatible with threadless rack posts (i.e., square holes or similar designs that do not use threaded posts).
- The rack must not contain any obstructions or horizontal bars between the front and back vertical mounting rails in the area where the chassis is to be installed.

1.2.2 Installing on a shelf

- If preferred, the chassis can be installed on a sturdy shelf within the rack. We provide rubber feet that can be easily assembled in this case.
- Note that securing the chassis to threaded rack posts would require adapters, which are not provided by default. Please contact us if these are required.

Power Requirements

2.1 Power Consumption

- The chassis draws approximately 400 W, and each FEM adds approximately 100–150 W. A fully populated chassis draws up to 1.6 kW.
- All consumed power is dissipated as heat, so the same figures apply when planning cooling.
- When multiple power supplies are installed, the load is shared approximately equally between them (within ~10%).
- The per-power-supply current ratings below are the maximum input current of each power supply, which is rated for 2 kW. A power supply only reaches its rated current in case of a catastrophic failure, such as an internal short circuit. We recommend sizing each circuit for the full rating and protecting it with an upstream circuit breaker or PDU fuse.

2.2 For 100–127V mains power line

- With up to 4 FEMs, a single power supply is sufficient, so the two provided power supplies already provide PSU redundancy. If more than 4 FEMs are used, both power supplies must be used simultaneously to provide the system with sufficient power.
- Each power supply is rated for up to 13A, so they must be connected to separate wall outlets.
- A third power supply is available for PSU redundancy and can be purchased separately.

2.3 For 200–240V mains power line

- A single power connection is sufficient.
- The power supply is rated for up to 10A.
- A second power supply is provided for PSU or AC source redundancy, and a third one can be added.

Network Requirements

- 1 x 1Gb Ethernet port per chassis is required for network connectivity.
- The system works both with and without DHCP: it defaults to DHCP, with static IP configuration possible through a GUI.
- If the system becomes unreachable, it can be recovered via a link-local address or a static Recovery IP.

For more detailed information, please refer to our documentation website's

OPX1000 hardware specifications, Network Overview and Configuration, and the OPX1000 installation guide pages. If you have any questions or need help preparing your site, please don't hesitate to contact us. We're here to support you throughout the installation process.

Contact Us

For installation issues and assistance, please contact Quantum Machines support. See the documentation website at http://docs.quantum-machines.co/ for up-to-date support information.