

# Vertiv™ SmartIT for OCP ORV3



## Key features

- Pre-engineered architecture based on the OCP ORV3 HPR V1 platform.
- Up to 142 kW of power capacity per compute rack.
- 21-inch OCP, 44 OU rack format for OCP-standardized environments.
- DC power architecture with up to eight 33 kW Vertiv™ PowerDirect shelves and a 1,400 A / 50 V DC busbar.
- Compute- and network-agnostic design for the OCP ecosystem.
- Direct-to-chip liquid cooling with Vertiv™ CoolChip CDU options.
- Optional monitoring, control and leak-detection capabilities.

## Deployment environments and use cases

### Environments

- Hyperscale, cloud, colocation and enterprise running OCP-standardized infrastructure

### Use cases

- AI training, high-density inference, generative AI, HPC, and ML workloads, multi-rack OCP deployments; standalone or integrated into larger facility builds

## Overview

Vertiv™ SmartIT for OCP ORV3 brings rack-level power, direct-to-chip liquid cooling and system monitoring into a pre-engineered package based on the OCP ORV3 HPR V1 platform. Designed to support NVIDIA GB300 NVL72 deployments, the solution provides up to 142 kW of rack power capacity with an approximate 85% liquid and 15% air cooling split.

Compute and network rack configurations support standalone or multi-rack deployments for organizations adopting OCP-standardized infrastructure for high-density AI and high-performance computing applications.

## Technical specifications

| Parameter                  | Specification                                                                                           |
|----------------------------|---------------------------------------------------------------------------------------------------------|
| Rack platform              | OCP ORV3 HPR V1 — 21" OCP standard                                                                      |
| Rack dimensions            | 600 mm (W) × 2,286 mm (H) × 1,200 mm (D)                                                                |
| Rack units                 | 44 OU                                                                                                   |
| Max it load (compute rack) | Up to 142 kW                                                                                            |
| DC busbar                  | 1,400A / 50V                                                                                            |
| DC power shelves           | 33 kW per shelf, 1 OU (up to 8 per Compute Rack)                                                        |
| Power whips                | 2 × 30A per shelf (not included with rack)                                                              |
| Cooling split              | ~85% liquid / ~15% air                                                                                  |
| In-rack manifold           | 41 OU, blind-mate; UQD804 quick connector; 2 × 1" FD83 supply / 2 × 1" FD83 return; top and bottom feed |
| CDU Options                | Vertiv™ CoolChip[SM1.1] CDU 121 (121 kW, in-rack) / CDU1350 (external) / CDU2300 (external)             |
| Platform validation        | NVIDIA Blackwell GB300[SM2.1] NVL72 on OCP ORV3 HPR V1                                                  |
| Warranty                   | 1-year limited hardware warranty                                                                        |

## Components by rack type

| Component                                       | Function                                   | Compute  | Network  |
|-------------------------------------------------|--------------------------------------------|----------|----------|
| Vertiv™ Open Rack for OCP ORV3 (21" OCP, 44 OU) | OCP-compliant rack enclosure               | 1        | 1        |
| Vertiv™ PowerDirect Shelf (33 kW, 50 VDC, 1 OU) | DC power conversion                        | 8        | 2        |
| DC Busbar (1,400A / 50V)                        | In-rack DC power distribution              | 1        | 1        |
| In-rack manifold (41 OU, blind-mate, UQD804)    | Coolant distribution                       | 1 pair   | —        |
| Vertiv™ CoolChip CDU 121 (optional)             | Direct-to-chip liquid cooling              | Optional | —        |
| Vertiv™ Avocent® ACS²                           | System monitoring & iSN control management | Optional | Optional |
| Leak detection                                  | In-rack liquid leak sensing                | Optional | Optional |

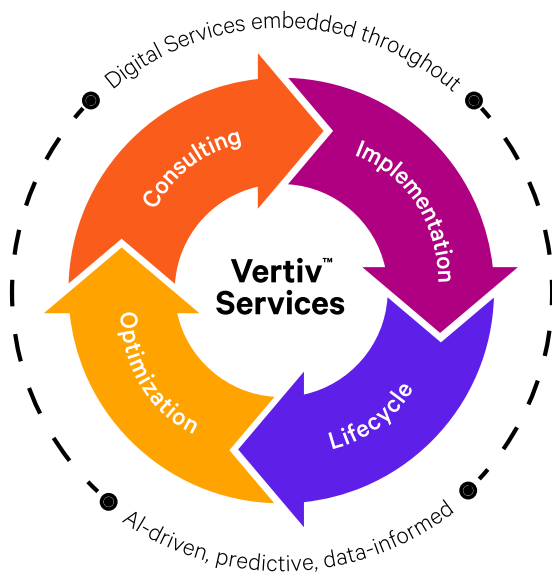


# SKU configurations

| SKU                  | Description                                    | Rack type | Power                                   | Cooling                              |
|----------------------|------------------------------------------------|-----------|-----------------------------------------|--------------------------------------|
| IRO672-36B-VQ000-N00 | Vertiv™ SmartIT for OCP ORV3<br>- Compute Rack | Compute   | Up to 142 kW DC<br>(8 shelves + busbar) | In-rack manifold + CDU<br>(optional) |
| IRO672-36A-V0000-N00 | Vertiv™ SmartIT for OCP ORV3<br>- Network Rack | Network   | DC<br>(2× PowerDirect shelves)          | CDU housing                          |

# Vertiv lifecycle services

Vertiv™ lifecycle services are available to support planning, installation, commissioning and maintenance for Vertiv™ SmartIT deployments. Service scope and availability vary by region. Contact your Vertiv representative for details, including available service options.



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