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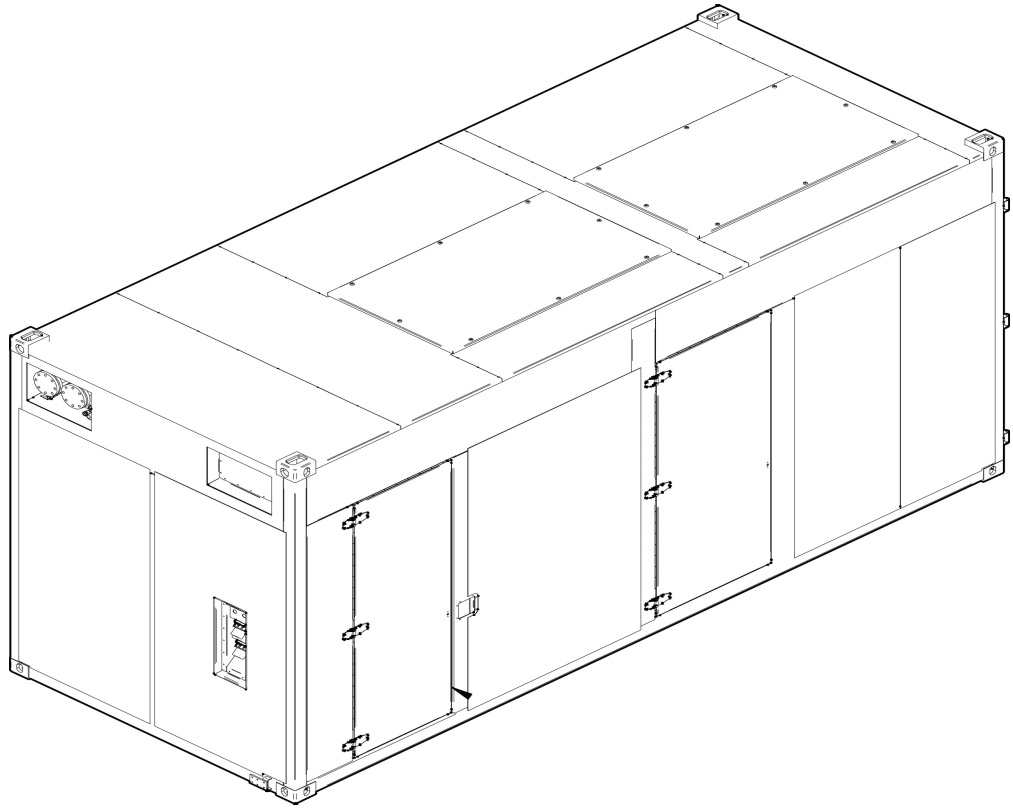
QuickSpecs

HP Performance Optimized Datacenter (POD) 20ce

Overview



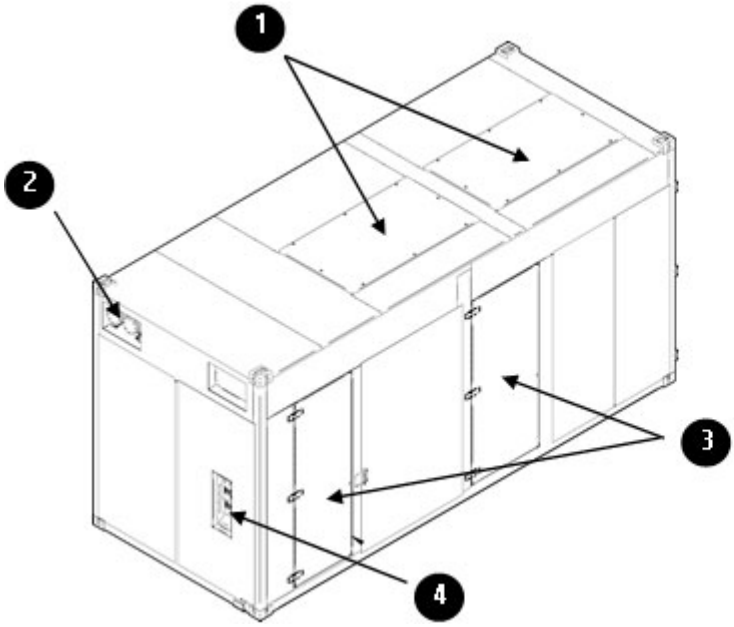
The HP Performance-Optimized Data Center (HP POD) is a containerized datacenter equipped with power infrastructure, cooling and IT power distribution. The HP POD can be deployed within weeks instead of months or years typically associated with brick-and-mortar datacenters and offers advanced cooling infrastructure that is more energy-efficient than typical datacenter build-outs.

At 6 meters in length, the HP POD 20ce contains (8) 46U racks that are protected from the elements by an airlock system providing an easy way to enter and exit the POD separating the IT from rain, snow, dust, etc. The HP POD 20ce supports maximum IT capacity of 200kW non-redundant (25kW/Rack at N) or 100kW redundant (12.5kW/Rack at 2N) configurations. Additionally, the HP POD 20ce has a movable floor and combined with the POD airlock system, it allows for easy access to the front and the rear of the IT racks without having to leave the POD or introduce any outside elements into the IT. The POD Power and Cooling Modules allow simple and efficient power and cooling utility connections to streamline costs and speed up deployments.

The HP POD delivers best-in-class technology to provide flexible and energy-efficient data centers that can ship fully integrated and tested with IT from an HP factory in as little as 6 weeks - slashing the time for data center build-out and IT deployment. The POD portfolio offers configurations optimized for power density and efficiency, enabling you to quickly upgrade or extend the capacity of your existing data centers.

HP POD 20ce Overview

Overview



HP 20ce POD

1. Heat Exchangers
2. Chilled Water Connections
3. Entry/Exit Doors
4. Power Connections

Product Features

IT Capacity	• Average load of up to 25kW per rack non-redundant (N) or 12.5kW per rack redundantly (2N). • 200kW Non-Redundant/100kW Redundant IT power/cooling capacity • 368U of available rack space - (8) 480mm industry standard 46U racks.
IT Flexibility	• Racks are standard 480mm (19") universal RETMA rails • Supports HP and third-party industry-standard hardware with front-to-back air flow. **NOTE:** Customers can install IT with side to side airflow with option part number AT960A • Racks can be fully integrated, tested and installed through Factory Express
Power System	• POD uses a Bus Power Distribution System and Monitored and/or Remotely Manageable Rack Power Distribution Units • Up to 200kW in Non-Redundant (N) power configuration • Up to 100kW in Redundant (2N) power configuration
Cooling and Energy Efficiency	• Efficient chilled water system with redundant and non-redundant configurations. • Hot and Cold Aisle Containment, Close-Coupled Cooling to match heat removal with IT loads • Power Usage Effectiveness (PUE) ratio as low as 1.08 when using HP Cooling Module • Multi-Speed Fan Technology, allocates only 4 percent of power to the cooling fans • Close-coupled temperature control allows use of higher chilled water supply temperatures, which delivers improvements in energy efficiency
Standard Datacenter Building Controls	• Fire panel/suppression system (NOVEC 1230), smoke detection system (VESDA ASSD), and alarms are included as standard. • Environmental Control System (ECS) for monitoring and management of power, cooling and other critical systems • Emergency Power Off (EPO) system enables immediate POD shut-down
Location and Site Provisions	• 20m^2 footprint for POD and required clearances • NEMA 3R Construction - Outdoor or Indoor Installation. • Standard operating temperature -29°C to 54°C (Artic Weather Options are Available)
Serviceability	• The HP POD 20ce features a Moving Rack System that allows access to the front and the back of the IT rack from inside the POD without opening any doors. • The HP POD 20ce includes an airlock system that separates outdoor elements from the IT section. • The power and cooling system are modular for simple component maintenance. • The POD Environmental Control System (ECS) alerts the user when servicing needs to occur. • HP offers a full portfolio of POD Infrastructure Services, ranging from basic deployment and commissioning services to complete solution maintenance and management.
Rack Information	• (8) 480mm (19") industry standard full depth 46U racks • 1,587kg loading capacity

Product Features

Rack PDU Info	• 3-phase 400V power; 32-amp power input feed with 230V output • Local or Secure Remote Input Current Monitoring • Remote Outlet Control/Management Available • PDUs available with a variety of C13 or C19 outlets
HP POD Environmental control system (ECS)	• Stand-alone system designed for monitoring and controlling HP POD Environmental Conditions, Set Points, Alerts, Alarms, POD Power and Cooling Modules. • HP ECS can be customized to integrate with standard existing building management systems (BMS). • Snap in management and monitoring addition of power and cooling utility modules
Fire Detection and Suppression Systems	• The POD solution comes with integrated fire suppression (NOVEC 1230) and smoke detection (VESDA ASSD) systems. • POD is capable of connecting to an existing on-site fire suppression system.
Humidifier	• Humidifier System maintains POD environment within 20-80% relative humidity
POD Cooling Modules	• Containerized chilled water cooling modules from 180kW to 600kW provide simple and efficient POD system deployment. • Modularized design allows for N, N+1 or 2N redundancy configurations of Cooling Module • Optional Connection kit allows for simple and fast deployment • Economizer Option allows for the use of indirect free-cooling and PUE's as low as 1.08 • High/Low Temperature kits allow for the flexibility of deployment in many different regions
POD Power Modules	• Containerized power modules from 350kVA to 1000kVA with integrated Generator, UPS System with 7 minutes of battery, and output power distribution provide simple and efficient POD system deployment. • Modularized design allows for N, N+1 and 2N redundancy configurations • Optional Connection Kit allows for simple and fast deployment • Additional battery and generator runtime modules can be added
Regulation and Certifications	• Listed to UL60950-1, UL50, CSA C22.2#60950-1 • Listed to UL50 and CSA C22.2#94.1; NEMA 3R • Classified to NFPA 70, 2008, National Electric Code
Service and Support	• Product Warranty: Standard POD warranty is 1 Year, Next Business Day Support. **NOTE:** Optional Expedited Service Response is available for certain coverage areas. • Additional Services such as IT and Facilities planning, deployment and installation can be included by HP Technology Services.

Models and Options

Performance Optimized Datacenter (POD)	HP POD 20ce, 6m (20'), 200kW (N) /100kW POD (2N)	F0H15A
POD Racks And Rack Accessories	HP POD 46U Rack **NOTE:** Eight required for each HP POD 20ce.	F0H44A
	HP POD Filler Panel 10 Pack Kit **NOTE:** One Filler Panel required per empty U space.	AQ682A
	HP POD Filler Panel Kit, 100 pack **NOTE:** One Filler Panel required per empty U space.	AS933A
	HP Performance Optimized Datacenter (POD) Switch Enclosure Sideplane Kit **NOTE:** Modifies airflow for network switches with side cooling.	AT960A
	HP Performance Optimized Datacenter (POD) Filter Replacement Kit **NOTE:** One Air Filer per heat exchanger set, a complete replacement is qty. 2	AT979A
POD Rack PDUs	C13 PDU, (24) C13 Outlets, 32A 22kW, Metered, Switchable Outlets **NOTE:** PDU's are required, minimum 1 per rack	QL174A
	C13 Drop Box **NOTE:** 1 Required for C13 PDU Installation	BD921A
	C19 PDU (18) C19 Outlets, 32A, 22kW, Metered, Switchable Outlets **NOTE:** PDU's are required, minimum 1 per rack	QL173A
	C19 Outlet Drop Box **NOTE:** Required for C19 PDU Installation	QL175A
	HP POD PDU Rack Bracket Kit (Contains 1 Left and 1 Right Bracket)	QL181A
POD Cooling Modules	HP POD Cooling Module 180 **NOTE:** 20 foot module, 180kW Cooling, Pumps, Buffer Tank	F0H18A
	HP POD Cooling Module 180 Economizer	F0H26A
	HP POD Cooling Module 180 High Temperature Kit	F0H27A
	HP POD Cooling Module 180 Connection Kit	F0H28A
	HP POD Cooling Module 360 **NOTE:** 20 foot Module, 360kW Cooling, Pumps, Buffer Tank	F0H19A
	HP POD Cooling Module 360 Economizer	F0H29A
	HP POD Cooling Module 360 High Temperature Kit	F0H30A
	HP POD Cooling Module 360 Connection Kit	F0H31A
	HP POD Cooling Module 600 **NOTE:** 20 foot Module, 360kW Cooling, Pumps, Buffer Tank	F0H20A
	HP POD Cooling Module 600 Economizer	F0H32A
	HP POD Cooling Module 600 High Temperature Kit	F0H33A
	HP POD Cooling Module 6000 Connection Kit	F0H34A

Models and Options

POD Power Modules	HP POD Power Module 350 **NOTE:** 20 foot module, 350kVA Generator, 200kW UPS 7 Min. Battery	F0H22A
	HP POD Power Module 350 N+1 UPS Option	F0H36A
	HP POD Power Module 350 Connection Kit	F0H37A
	HP POD Power Module 630 **NOTE:** (2) 20 foot modules, 630kVA Generator (F0H23A), 400kW UPS 7 Min. Battery (F0H38A)	F0H23A, F0H38
	HP POD Power Module 630 N+1 UPS Option	F0H39A
	HP POD Power Module 6300 Connection Kit	F0H40A
	HP POD Power Module 1000 **NOTE:** (2) 20 foot modules, 1,000kVA Generator (F0H24A), 750kVA UPS 7 Min. Battery (F0H41A)	F0H24A, F0H41A
	HP POD Power Module 1000 N+1 UPS Option	F0H42A
	HP POD Power Module 1000 Connection Kit	F0H43A

Service and Support, HP Care Pack, and Warranty Information

Service and Support

- Product Warranty: Standard POD warranty is 1 Year, Next Business Day Support.
  NOTE: Optional 4 Hour Response is available for certain coverage areas.
- HP Services offer specialized installation and deployment services which includes: Planning, Deployment and Installation.

Technical Specifications

	HP POD 20ce
Length	6.7 m
Width	2.644 m
Height	3.105 m
Site length requirement	8.59 m
Site width requirement	4.76 m
Site height requirement	3.1 m
Max Container Weight	22,450 kg
Max Weight per Rack	1,587 kg
Power distribution	(2) 225A busway
Container Load Limit	200kW Non-Redundant, 100kW Redundant
Average Power Per Rack (kW)	25kW Non-Redundant, 12.5 kW Redundant
Input power voltage	380-415V 3 phase Wye, 400A, 50-60 Hz
Voltage to rack	380V to 415V
Cooling technology	Chilled Water
Chilled Water Flow rate	303L/min
Max. Inlet Water Temperature	12° to 24°C
Chilled Water Connection Size	PN 16 / DN80
Airflow Per Rack	2,040 CFM Non-Redundant, 1,692 CFM Redundant
Rack Type	Industry Standard, 480mm, 46U
Support for 3rd party IT Equipment	Yes
Number server racks	8
Available U space per rack	46U
Total POD Rack U Space	368U
Smoke Detection	Included, VESDA Air Sampling and Detection System
Fire Suppression	Included, NOVEC 1230
Emergency Power Off (EPO) Switch	Included
Humidity Monitoring	Included
Humidifier	Included
Management System (ECS)	Included
Networking	(12) 6.35cm network pass through (6 on each end)
Security System	Key Locks Standard, Others Optional
Min-Max POD Operating Range	-29°C to 54°C (up to -45?C with Artic Temperature Option)
Operating Humidity Range	0-100%
Maximum Operating altitude	3,048m

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