Open. Together.

OCP
SUMMIT

Data Center
Facility

Open MDC

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Background

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The OCP Project Process

Specifications

Starting the process

The idea,
a Modular Data Center!

Optimized for,
- OCP HW

to meet the OCP´s criteria
- Maintainability
- Cost and energy efficiency
- Openness
- Scalability

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Specifications

Establishing the Project

The OCP Community
Announced the project!

as a Sub project within
the Data Center Facility
Group at the OCP
Summit in San José

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Specifications

Community Innovation starts

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The OCP Community
Invited the hackers!

Specialists from the
Industry & the end users

- Cooling
- Power & automation
- Telco
- Cloud & Colo

Specifications

Merging the best ideas and experiences

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The OCP Community

Open Innovation model!

Design Thinking

- Iterative progress
- MVP
- Vanity free hardware
- Project steering towards tenets

Specifications

Time to disclose

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Specifications

Standardizing the MDC Specification

The guidelines and specifications for Modular Data Centers optimized for

- OCP HW

To meet the OCP´s criteria

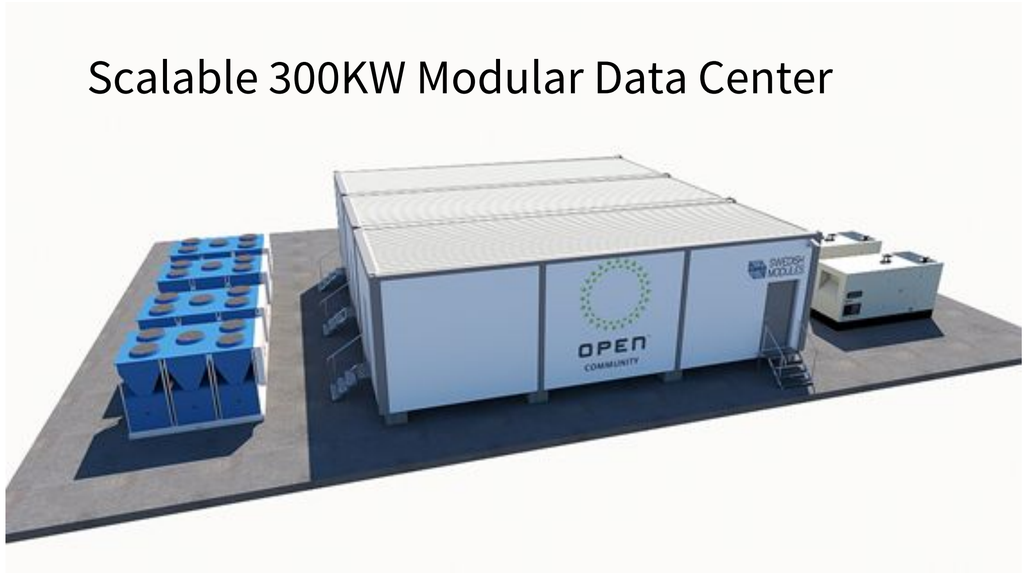
- Maintainability
- Cost and energy efficiency
- Openness
- Scalability

DATA CENTER FACILITIES

Specifications

Product Info

Scalable 300KW Modular Data Center



Standalone 90KW Modular Data Center

Scalable 300KW Modular Data Center

Specifications

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IT Load:

- 300-500 kW with N+1 internal UPS redundancy

Floor Space:

- Racks: 30/ 28 without UPS/with UPS (average density 10kW/Rack)
- Racks: 28/26 without UPS/with UPS (average density up to 18kW/Rack)
- Internal Space (L x W x H): 13.35m x 4.45m x 3.55m

Cooling System:

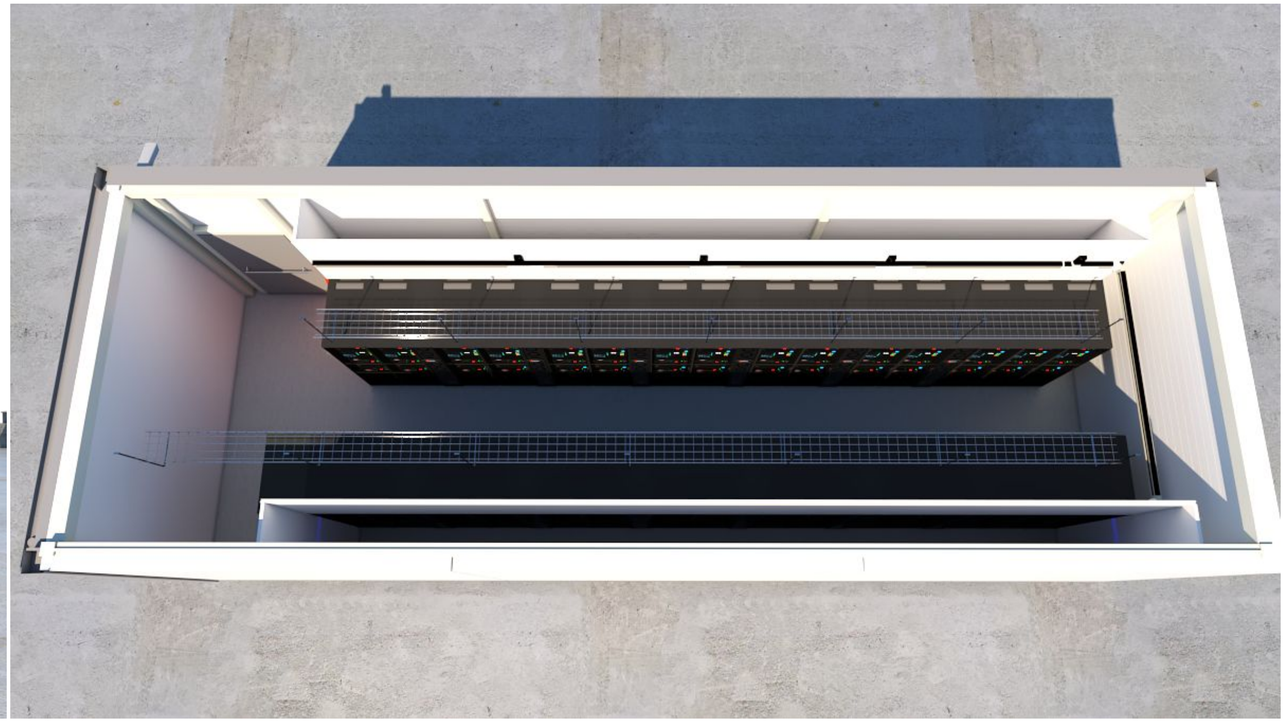
- CW system with InRow Coolers @ N+1 Redundancy

Module Weight [kg]:

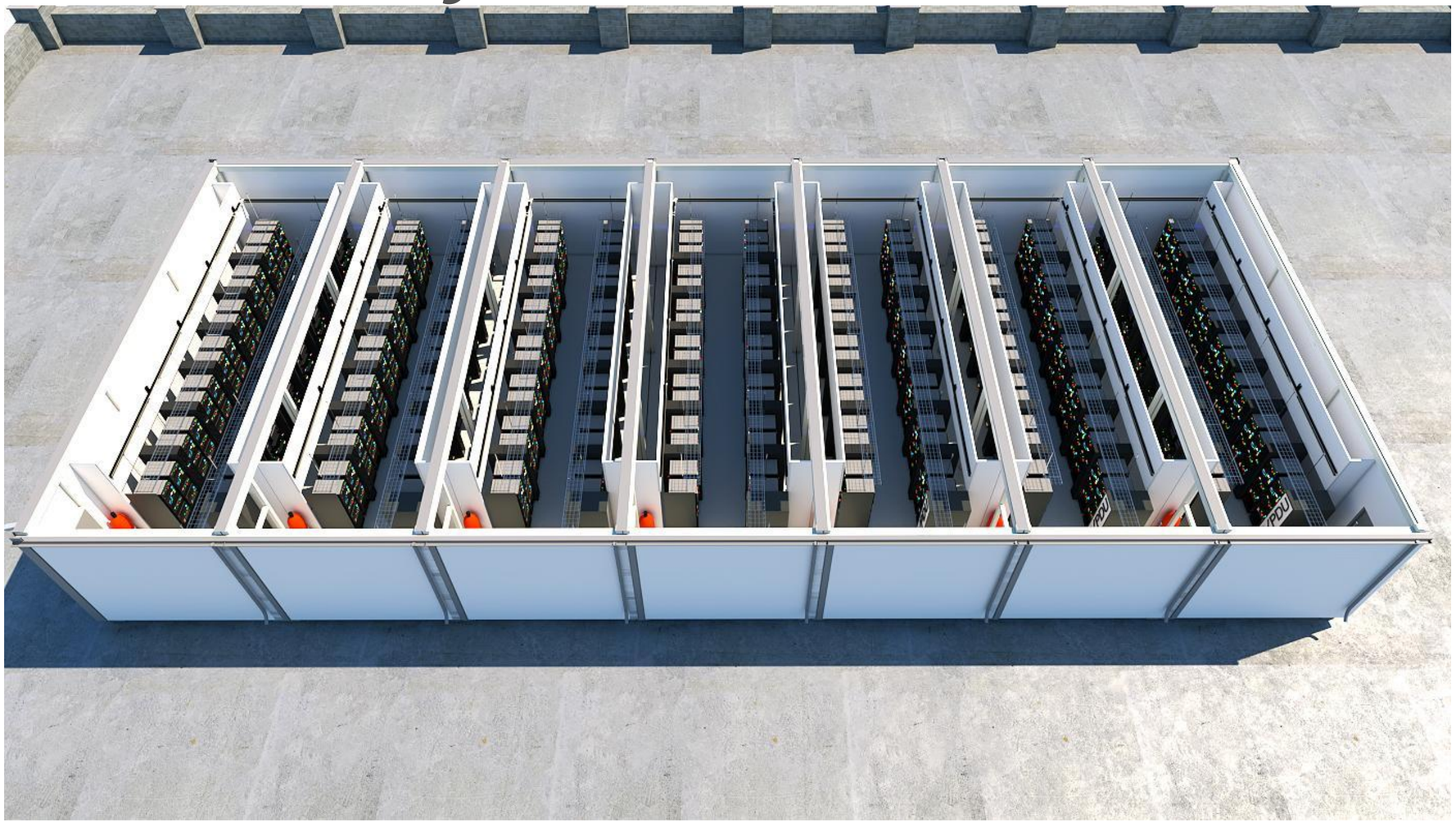
- 20 350/57 350 Empty no racks or IT equipment/Fully equipped racks

Specifications

Design



Scalability



Efficiency

Module Specification Summary

Description	Specification	Comments
IT-load [kW] (total capacity)	300-500	CW InRow Coolers and N+1 redundancy
Number of Racks (total capacity)	28 / 30 26 / 28	@300 kW With UPS / Without UPS @500 kW With UPS / Without UPS
Average Density (kW/Rack)	10-18	CW InRow Coolers specified to meet airflow capacity requirements
Maximum Density (kW/Rack)	20	
Module Size[mm] (LxWxH)	13650 x 4750 x 4100	Outside dimensions
Module Size[mm] (LxWxH)	13350 x 4450 x 3550	Internal dimensions
Module Weight [kg] (*Empty/Full)	20 350 / 57350	Empty = no IT racks or equipment Full = 30 racks @ 1500 kg
Input Power Type	400V, 5 wire, 500 amp	AC Low Voltage
Cooling System	InRow CW, N+1	DX options available
pPUE example 1 City Stockholm SE	1.070 / 1.178	With CW free cooling chiller / With DX
pPUE example 2 City Dubai	1.227 / 1.224	With CW free cooling chiller / With DX
Scalable Yes/ No	Yes	Easy deployment and scalability on site side by side or stackable three stories high

Planning to deploy OCP HW?

By this design you are reaching good efficiency on these areas:

- **Energy use**
- **Floor Space**
- **IT-load flexibility**
- **Foot print of the DC**

Standalone 90KW Modular Data Center

Specifications

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IT Load:

- Up to 90kW with N+1 internal UPS redundacy. 100kW with no UPS.

Floor Space:

- Racks: 12-14 with UPS or without UPS (density 6.4-7.5kW/Rack)
- Internal Space (L x W x H): 13.5m x 3.1m x 3.4m

Cooling System:

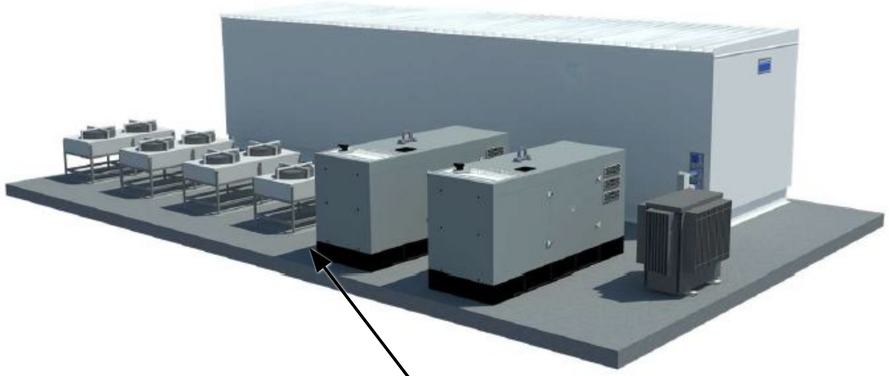
- DX system with InRow Coolers @ N+1 Redundancy

Module Weight [kg]:

- 25 000/44 636 Empty no racks or IT equipment/Fully equipped racks

Specifications

Design



Modular PDU or Overhead Busway

Optional UPS & Batteries

Hot/Cold Aisle Containment

Site Works – Condensers, Gensets, Transformer

Entrance Lobby and Electrical room
Includes:
- 400A Main Panel
- Fire Suppression and control panel
- Auxiliary electrical panel
- ATS and controller
- Optional EPO

12-14 42U racks

In-Row DX Close Coupled Cooling

Repeatability, Flexibility, and Speed

Smaller solutions (less than 100kW) are not typically intended to scale

An All-In-One Modular Data Center dramatically simplifies design and construction

Often these units support single deployments, or multiple deployments in a repeatable design

Common applications include:

Retail warehousing
Universities
Telco and IoT
Industrial

Call to Action

How to get involved in the project

Mailing list: https://ocp-all.groups.io/g/OCP-MDC

DATA CENTER FACILITY

Link to Contribution on OCP website

Where to see: https://www.opencompute.org/contributions

Where to find additional information (URL links)

Project Wiki: https://www.opencompute.org/wiki/Data_Center_Facility/MDC

Specifications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