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AgileCore AI Prefab Data Centers

April 18,2026

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Identification before AI Data Center Design

Leading industry with the enhanced protection, deep integration, and optimized configurations

Design Consideration

1. Location, ambient environment status.
2. Data center construction type and Lead time.
3. Power source type and quantity, in order to clarify the Tier Level.
4. server type/models, Rack Density/Load per Rack.
5. Redundancy for Cooling and UPS.
6. UPS type and Battery backup timings.
7. Power distribution type and PDUs.
8. Fire Suppression type
9. Space for outdoor heat rejection units or it’s available.

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Our One-Stop AI Ready Solution Platform

Leading industry with the enhanced protection, deep integration, and optimized configurations

Comprehensive Data Center Architecture

AgileRax™ SmartRacks

AgileHub™ Shelter MDC

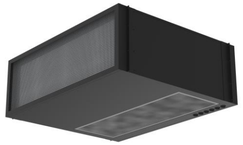
AgileRax™ SmartRow

AgileMod™ Containment Type MDC

AgileCub™ Containerized MDC

Full Portfolio Thermal Management Platform

Rack Cool



Ceiling Cool

Wall Cool

RDHx DX

Rack CDU

Row CDU

L2A Sidecar CDU

Room Cool

Row Cool

Fanwall

RDHx CW

Immersion Cool

Load Bank

Air Cool Platform | Air-to-Liquid Platform | Liquid-to-Liquid Platform

Full Range Leading Critical Power Systems

Floor Modular

- 150-1500kVA

Rack Modular

- 20-200kVA

Rack Monoblock

- 3-60kVA

Tower UPS

- 30-200kVA

Rack PDU

- Basic, Switch type
- Configurable Sockets

Power Distribution

- Schneider Breakers
- Power Meters
- Busway System

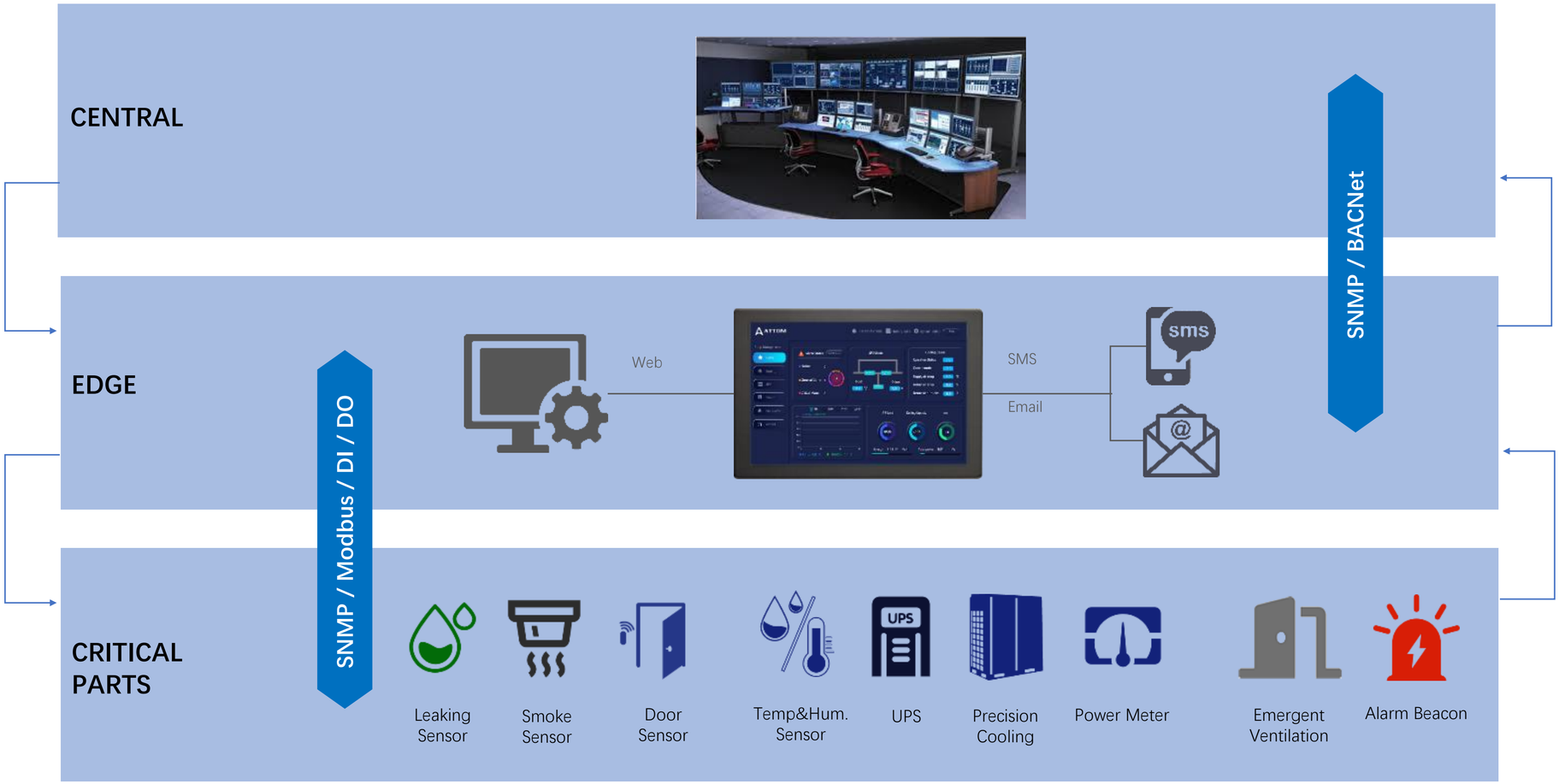
48VDC Rectifier

- 60-1800A

Lithium Battery

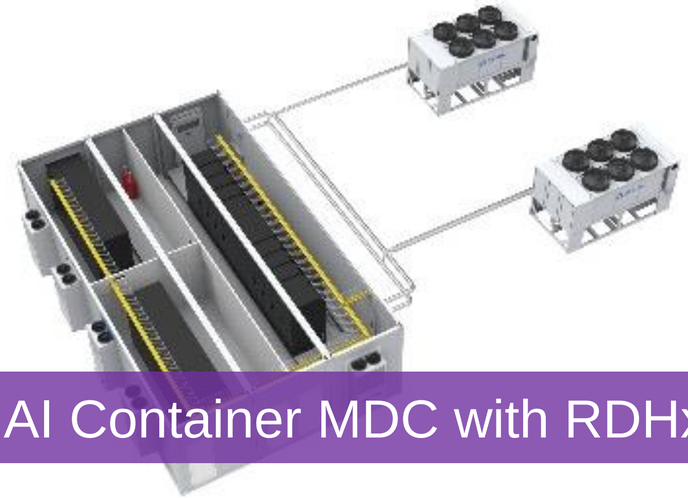
- 25-200AH

Comprehensive Solution Architecture

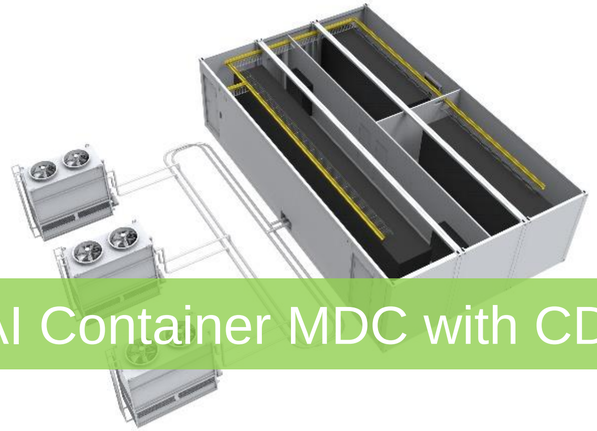


AI Prefab Modular Data Centers

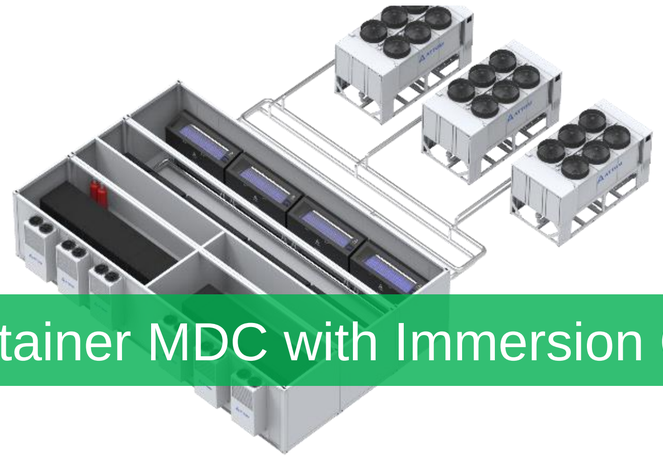
AI Rack MDC with Air Cool



AI Container MDC with RDHx



AI Container MDC with CDU



AI Container MDC with Immersion Cool

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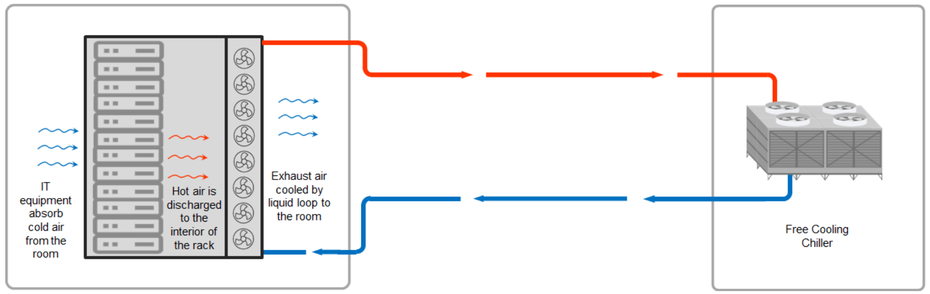
How to Design?

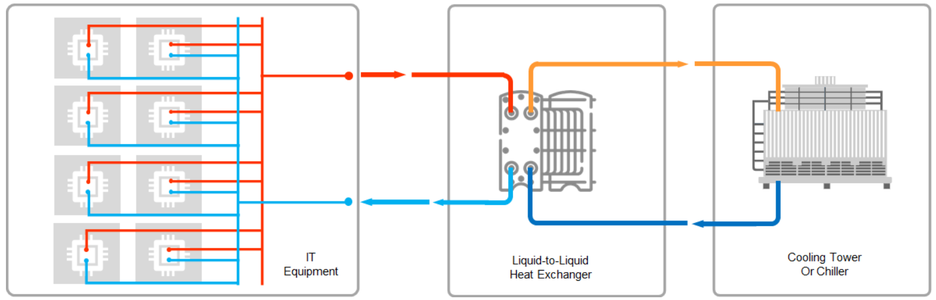
Liquid Cooling Technologies



RDHx Liquid Cool

RDHx (Rear Door Heat Exchanger) liquid cooling can cope with heat density up to 65kW per rack.

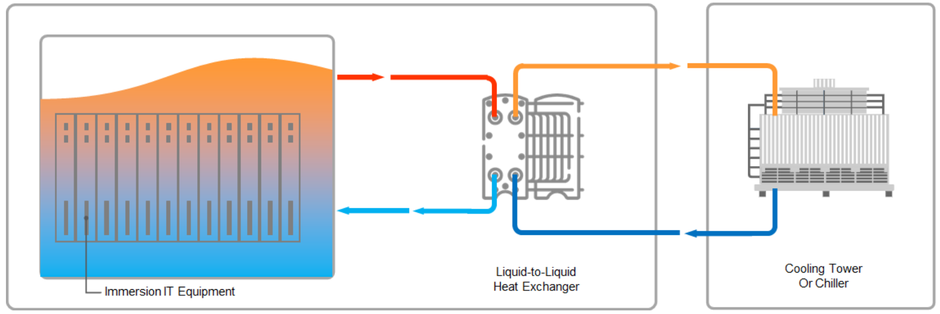
- **RDHx works with Air Cooled AI Server. Easy retrofit in existing DC.**
- **Rear door installation. Occupy less white space from Data Center.**



D2C Liquid Cool

D2C (Direct to Chip) liquid cooling technology uses CDU as heart of the system.

- **High efficiency at W4 working condition, no need DX type chiller.**
- **High density up to 1520kW row CDU.**

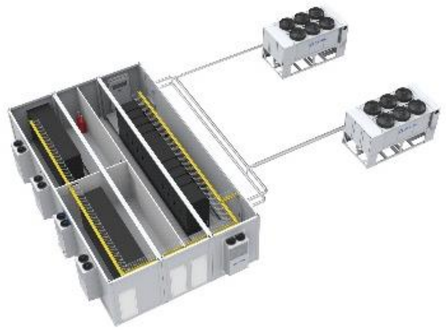
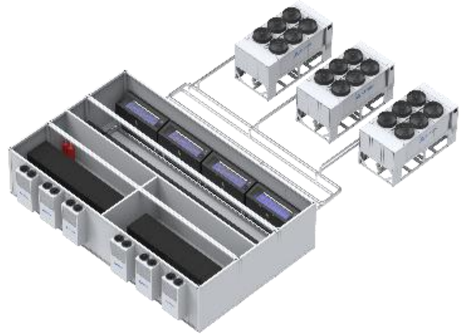
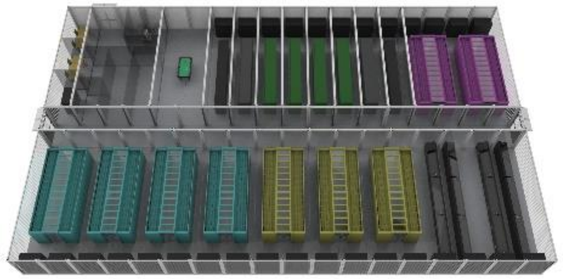


Immersion Liquid Cool

Immersion Cooling sinks servers inside the fluid tank to have better heat transfer effects. It integrates fluid tank and CDU into a compact system.

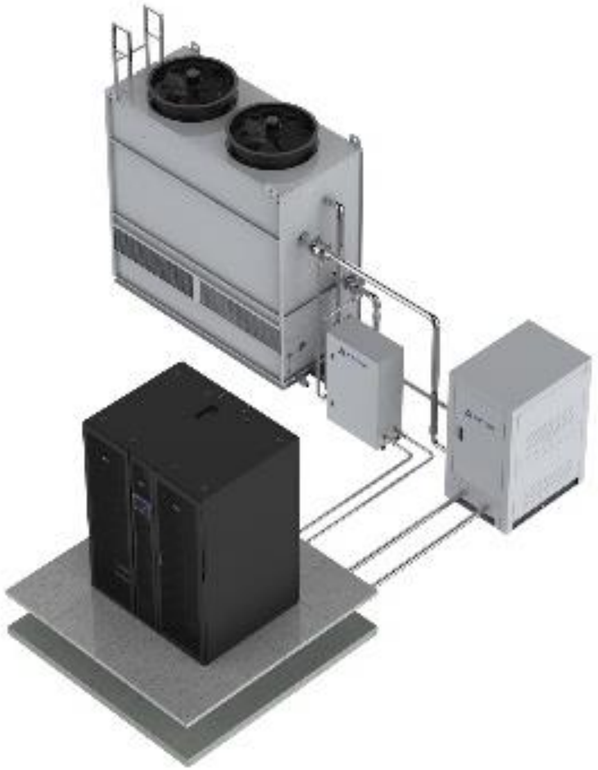
- **High density up to 100kW per tank.**
- **Low noise and best protection with no dust/moisture concern.**

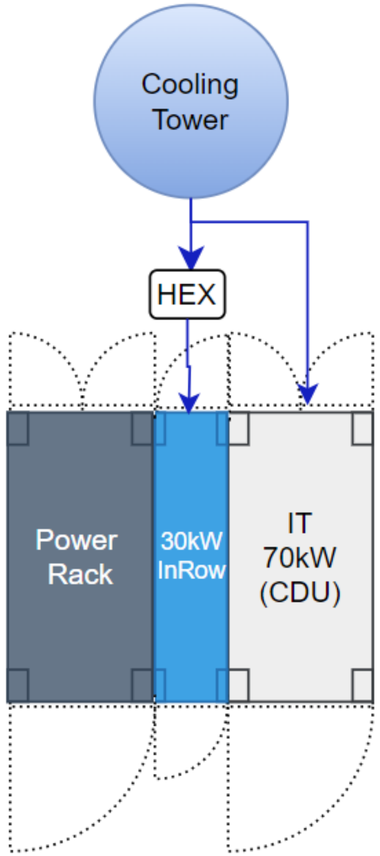
AI Prefab Data Centers Overview

Rack Type AI MDC	Container Liquid Type AI MDC	Container Immersion Type AI MDC	Container Building Type AI Prefab DC
			
Ideal for **AI Startup, AI Pilots and Edge AI**	Ideal for **AI Labs, AI Training Centers**	Ideal for **AI Labs, AI Training Centers**	Ideal for **AI Farm, AI Factory**
• 90kW: D2C and DX Inrow cool • 50kW: RDHx cooling • 30kW: DX Inrow cooling	• 1200kW: D2C and multiple cooling • 800kW: D2C and DX cooling • 500kW: RDHx and DX cooling • T3 redundancy design	• 800kW: 8x Immersion Tank • 400kW: 4x Immersion Tank • T3 redundancy design	• Up to T4 design redundancy • Any density from air cooling to liquid cooling • Container approach quick deployment

Rack Type AI Prefab DC

ATM-90-AL | D2C



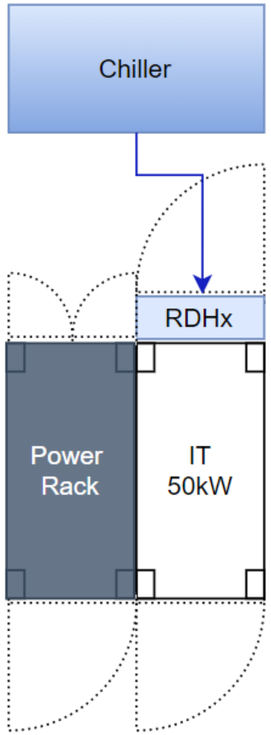


Design Summary

- **Total IT Load:** 90kW, 1x IT rack
- **Cooling:**
  - **Direct to chip liquid cooling** with 100kW rack CDU**;**
  - **Air cooling with 30kW Inrow water cooled** covering server and UPS heat load.
  - **Cooling tower** heat rejection for CDU and Inrow.
- **Power:** rack mount modular UPS and rack mount battery pack.
- **AgileView local DCIM** with insights of power, cooling and full sensors.
- **AgileRax 2.0 self-contained platform.** IP55 protection. 3 in 1 access control.

Rack Type AI Prefab DC

ATM-50-AD | RDHx

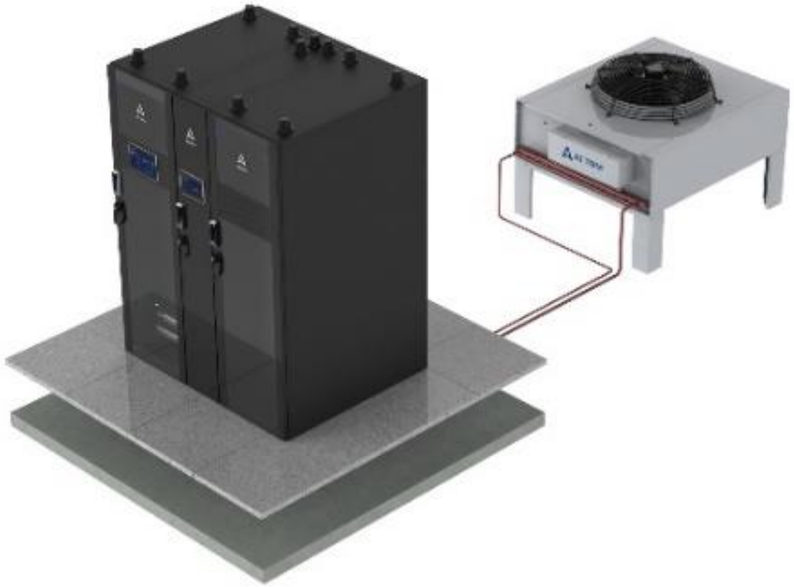


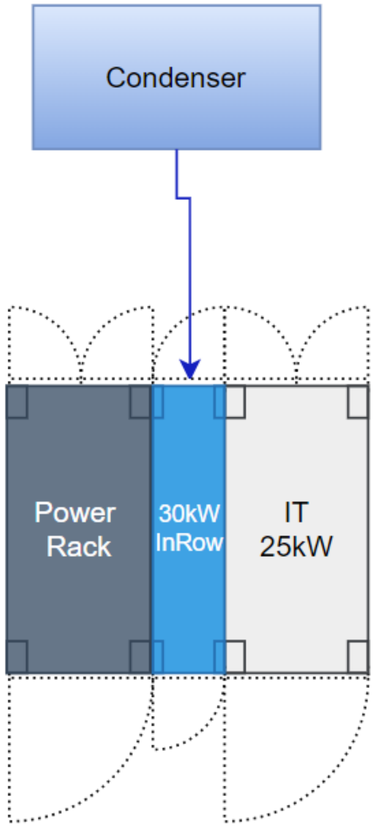
Design Summary

- **Total IT Load:** 50kW, 1x IT rack
- **Cooling System:**
  - **Rear door heat exchanger 65kW;**
  - **Air cooled free cooling chiller** heat rejection for RDHx
- **Power System:** rack mount modular UPS and rack mount battery pack.
- **AgileView local DCIM** with insights of power, cooling and full sensors.
- **AgileRax 2.0 platform** perforated rack with 3 in 1 access control.

Rack Type AI Prefab DC | Inrow

ATM-30-AR | INROW





Design Summary

- **Total IT Load:** 25kW, 1x IT rack
- **Cooling:**
  - **Inrow DX 30kW**
  - **Air cooled condenser**. Optional with free cooling.
- **Power:** rack mount modular UPS and rack mount battery pack.
- **AgileView local DCIM** with insights of power, cooling and full sensors.
- **AgileRax 2.0 self-contained platform.** IP55 protection. 3 in 1 access control.

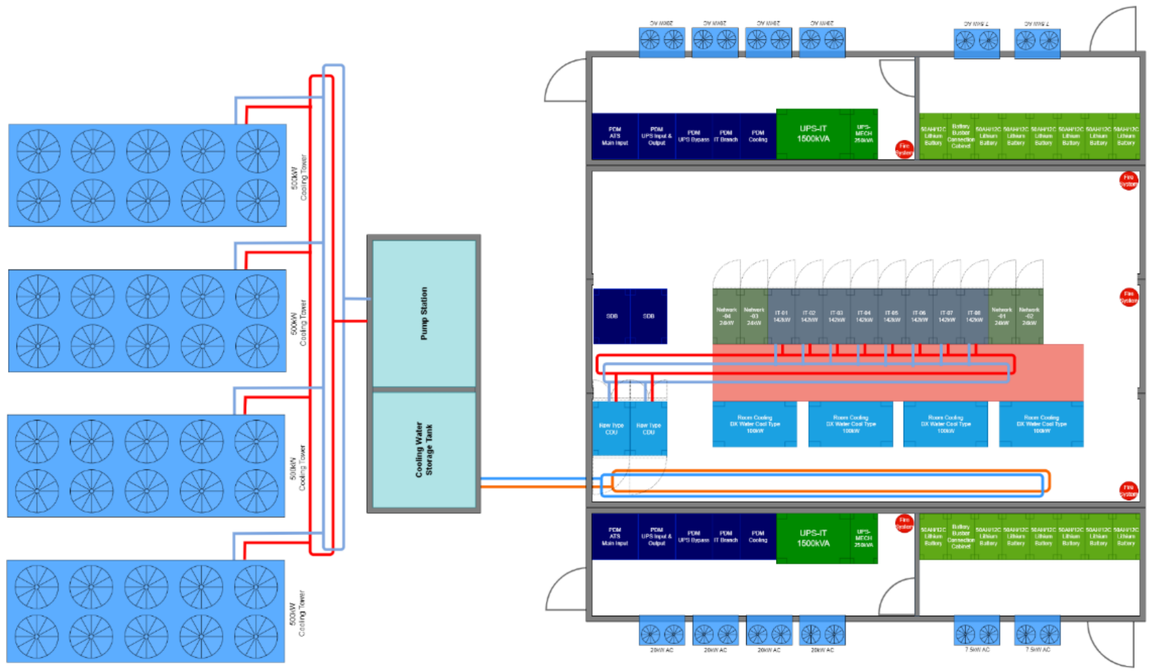
Reference Design – Containerized Architecture

Design Principle

- **Standard size container constructure**, easy for the transportation and fast deployment.
- **With both power and cooling** together to optimize AI infrastructure.
- **Separate designed Power, cooling and IT function module** for easy duplicated management and flexible expansion.
- **Handle AI workloads surges** through system level controls and power and cooling redundancy operations.
- **Mixed Liquid and Air cooling solution design**, ideal for hybrid workloads heat rejection.
- **Multiple type air cool options** for matching flexible layout design and suitable for different application worldwide.

Containerized AI Prefab DC | D2C

ATM-1200-AU | D2C



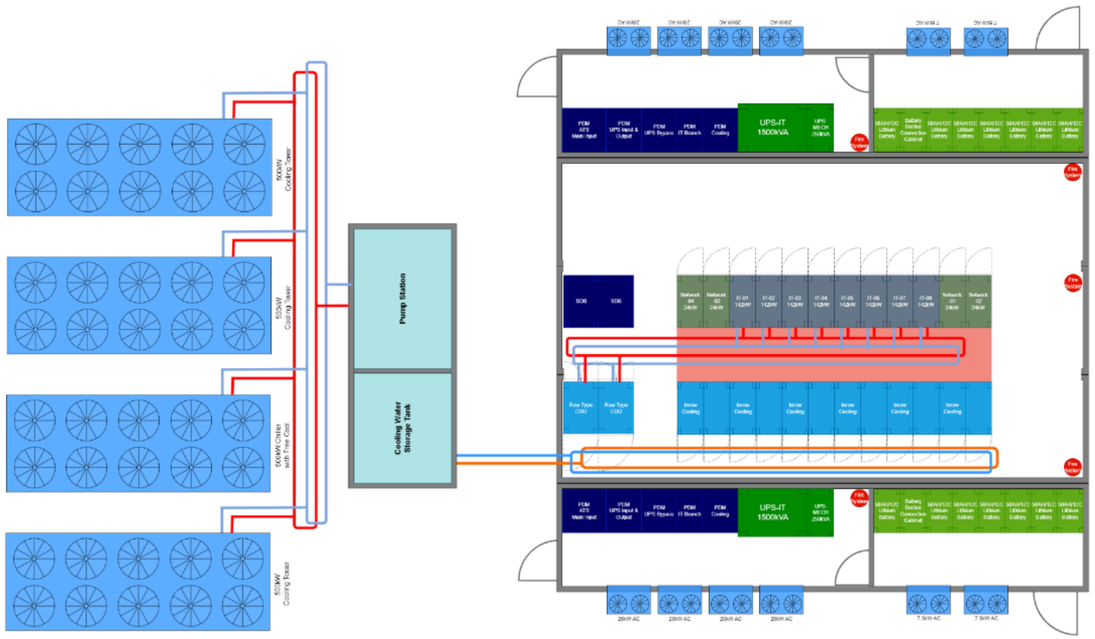
Design Summary

Solution Capacity	1.2MW			
Target Availability	Tier II, add one more power container module for Tier III			
Redundancy	N+1 for Power, N+1 for Cooling			
Total IT Load	1232kW			
Rack Density	8 racks at 142kW, 4 racks at 24kW			
Racks	12			
Cooling Topology	78% Liquid(direct-to-chip), 22% Air			
Cooling for IT		**Option 1**	**Option 2**	**Option 3**
	Liquid	BT-1500-CL	BT-1500-CL	BT-1500-CL
	Air	W-100WAY Water Cool	S-030DCN CW RDHx	S-065RAY Water Cool
	Heat Rejection	Cooling Tower KSF500TN	Free Cool Chiller C-500GV	Cooling Tower KSF500TN
Cooling for Power	UPS: S-020WAY, Battery: S-007WAY			
Power Distribution	4000A MCB for IT and Facility			
UPS for IT	1500kVA UPS, power module N+1			
UPS for Cooling	250kVA UPS, Power Module N+1			

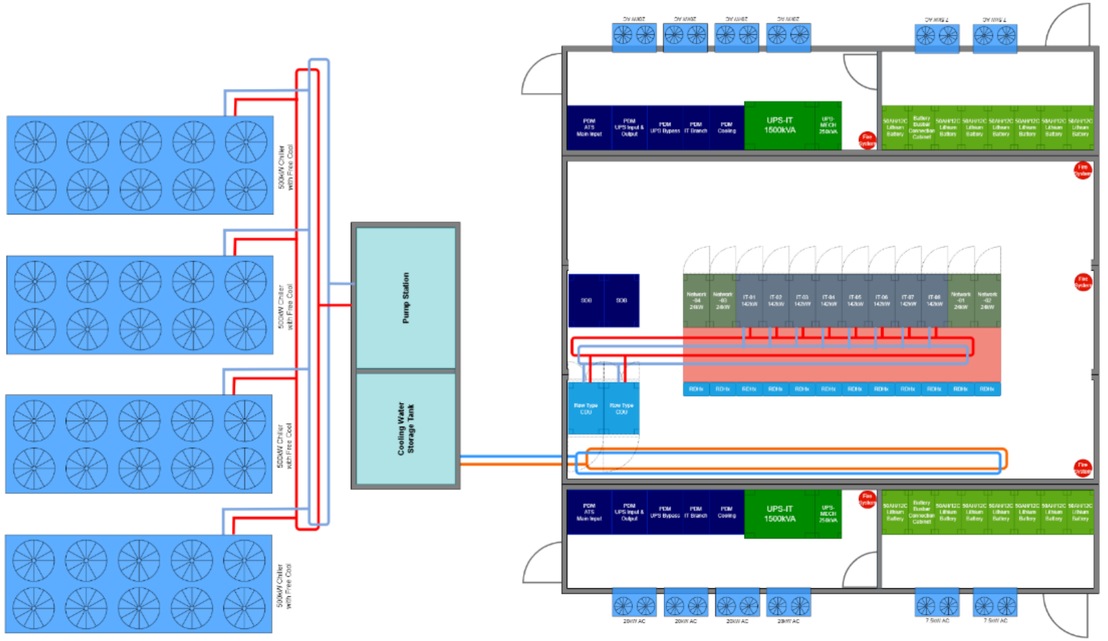
Containerized AI Prefab DC | D2C

Different Thermal Management Solution Options under the Same Architecture

*Design with CDU & Inrow Cooling solution



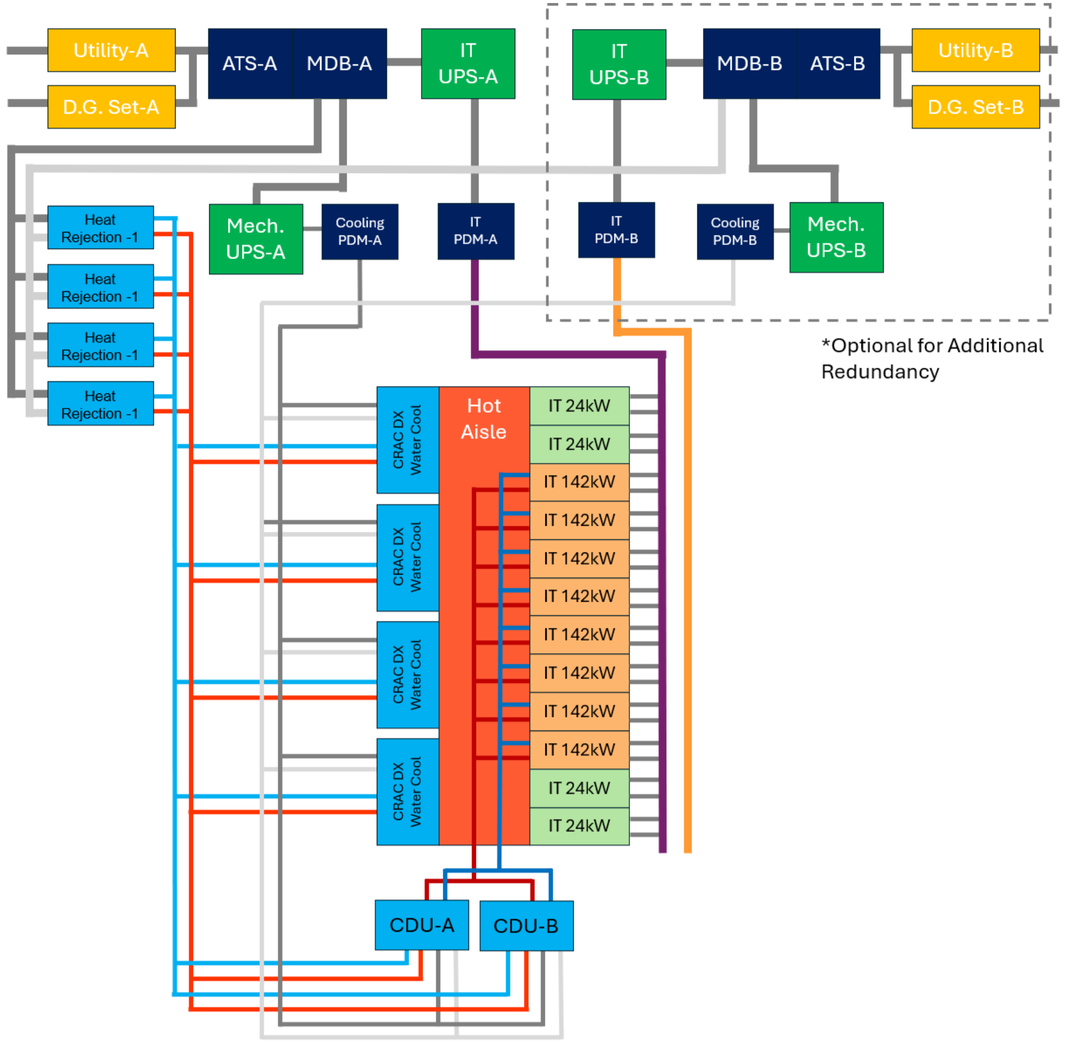
*Design with CDU & RDHx solution



Containerized AI Prefab DC | D2C

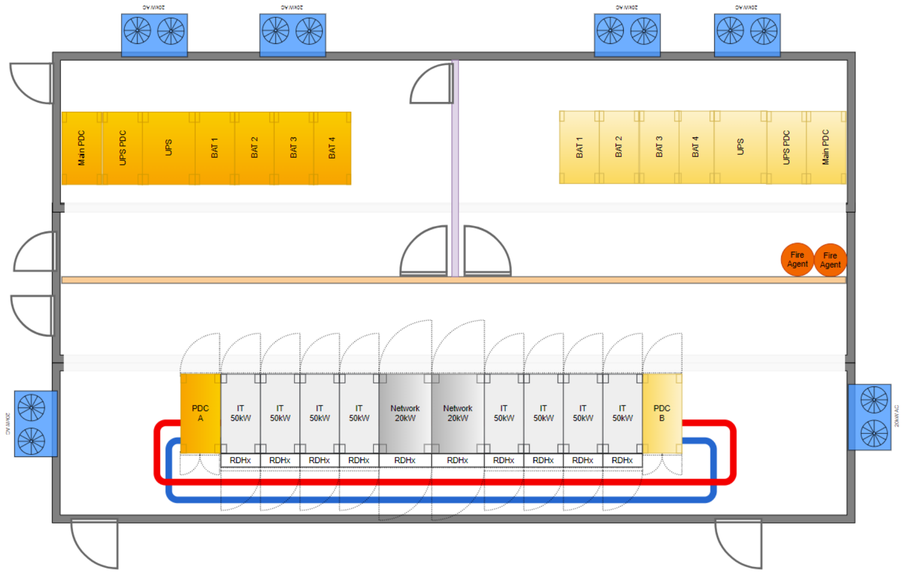
Components of the Design

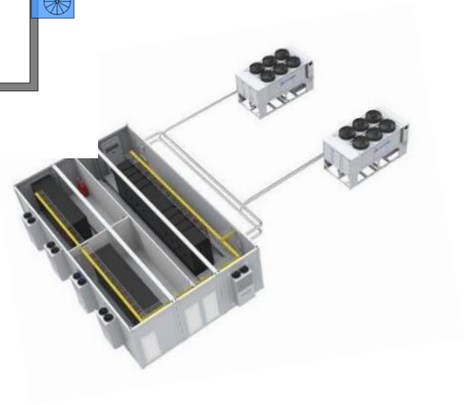
Component	Descriptions			
Container Size	40F (W2438mm*D12192mm*H3600mm)			
Function Modular	2x 40F for IT, 1x 40F for Cooling, 1x 40F for Power , additional 1x 40F for power redundancy			
Power distribution Module	1x 4000A ATS & PDM for Main Input, 1x2500A PDM for UPS Input & Output, 1x 630A PDM for Cooling and Facility			
UPS for IT	1x 1500kVA UPS (with 12x 125kVA power module), 6x 50AH/12C Lithium Battery group(5min backup)			
UPS for Cooling	1x 250kVA UPS(with 10* 25kVA power module), 1x 50AH/12C Lithium Battery group(5min backup)			
Rack PDUs for Network	2x 63A rack PDUs per rack			
Cooling for IT		**Option 1**	**Option 2**	**Option 3**
	Liquid	2x 1500kW CDU @4C ATD, N+1		
	Air	4x W-100WAY Water Cool, N+1	12x S-030DCN CW RDHx, N+1	6x S-065RAY Water Cool N+1
	Heat Rejection	4x KSF500TN Cooling Tower, N+1	4x C-500GV Free Cool Chiller, N+1	4x KSF500TN Cooling Tower, N+1
	Cold Water Storage	1x 20F container with built-in pump station & cold water storage tank		
Cooling for Power	UPS: 4x S-020WAY,N+1. Battery: 2x S-007WAY, N+1			



Containerized AI Prefab DC

ATM-500-AD | RDHx



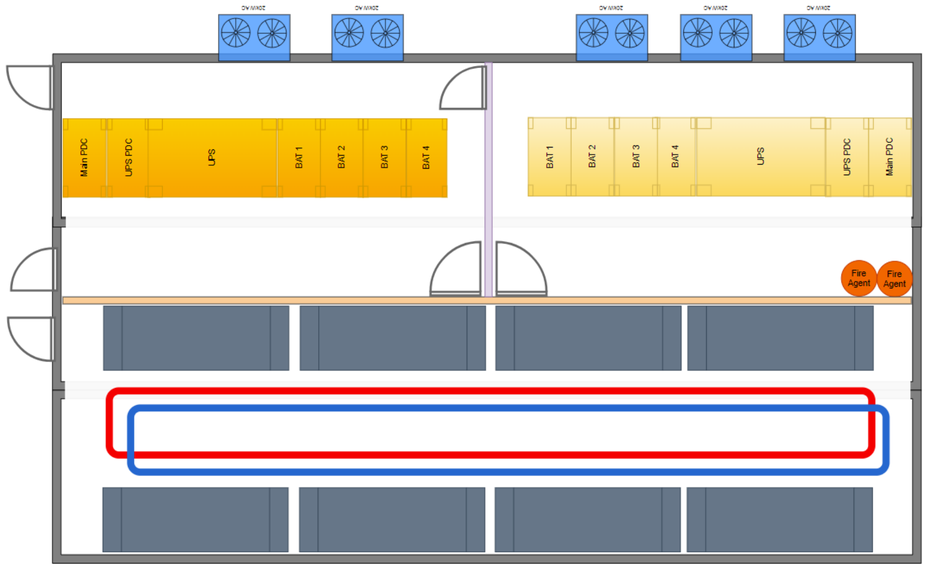


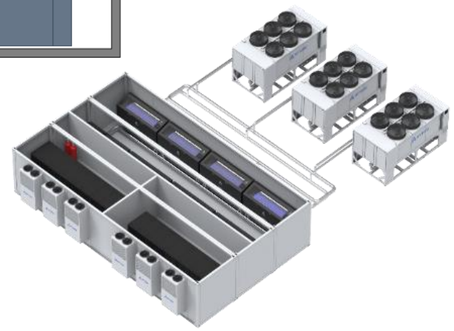
Design Summary

- **Total IT Load:** 500kW, 10x IT racks
- **Cooling System:**
  - RDHx cooling: **10x 65kW RDHx**
  - IT Air cooling: **2x 20kW wall cool**
  - **Free Cooling chiller** for IT room heat rejection
  - **4x 20kW wall cool** for power room cooling.
- **Power: 2N power system with UPS, battery and power distribution.**.
- **AgileView local DCIM** with insights of power, cooling and full sensors.
- **AgileCub 2.0 containerized DC platform.** IP55 protection. 3 in 1 access control. Fire protection.
- **Modules:** 3x prefabricated container modules

Containerized AI Prefab DC | Immersion

ATM-800-AS | Immersion



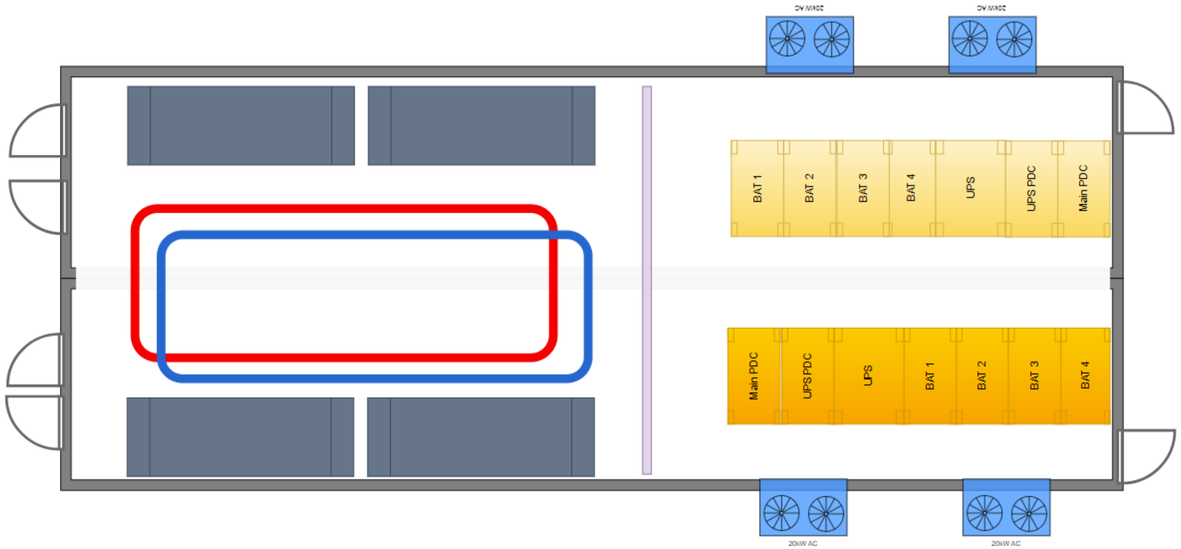


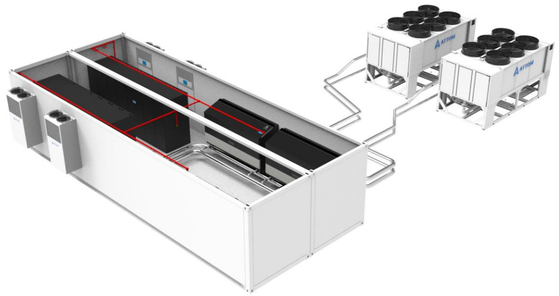
Design Summary

- **Total IT Load**: 800kW, 8x IT Tanks
- **Cooling System:**
  - Immersion cooling: 8**x 100kW Immersion Cool**
  - **Free Cooling chiller** for IT room heat rejection
  - **6x 20kW wall cool** for power room cooling.
- **Power: 2N power system with UPS, battery and power distribution.**.
- **AgileView local DCIM** with insights of power, cooling and full sensors.
- **AgileCub 2.0 containerized DC platform.** IP55 protection. 3 in 1 access control. Fire protection.
- **Modules:** 3x prefabricated container modules

Containerized AI Prefab DC | Immersion

ATM-400-AS | Immersion



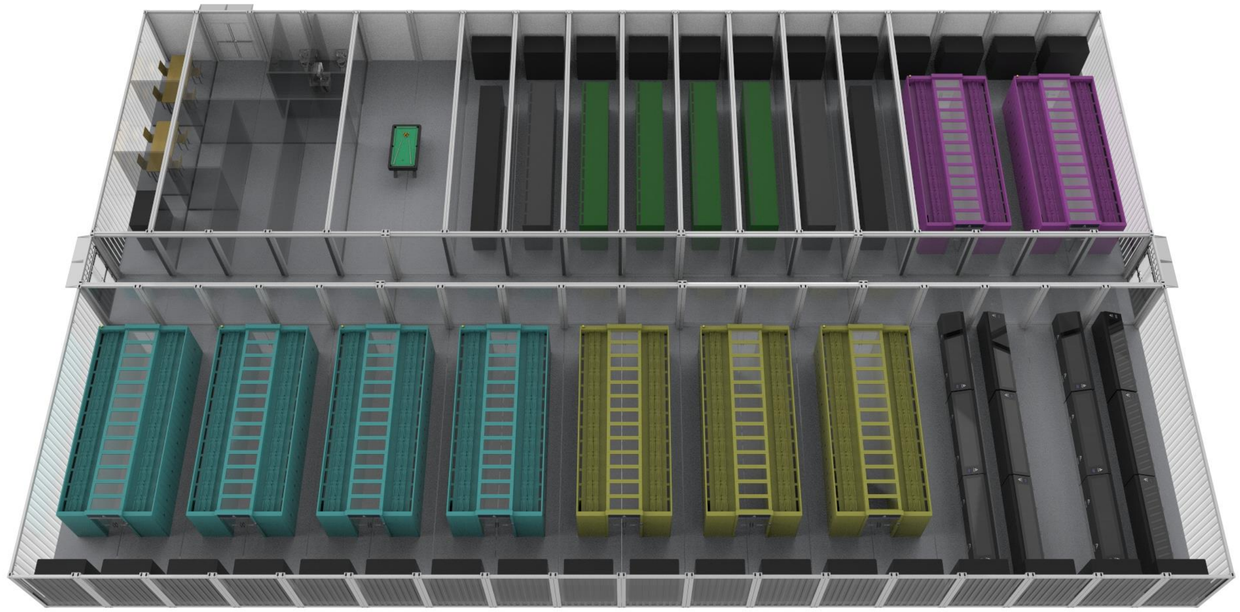


Design Summary

- **Total IT Load**: 400kW, 4x IT Tanks
- **Cooling System:**
  - Immersion cooling: **4x 100kW Immersion Cool**
  - **Free Cooling chiller** for IT room heat rejection
  - **4x 20kW wall cool** for power room cooling.
- **Power: 2N power system with UPS, battery and power distribution.**.
- **AgileView local DCIM** with insights of power, cooling and full sensors.
- **AgileCub 2.0 containerized DC platform.** IP55 protection. 3 in 1 access control. Fire protection.
- **Modules:** 2x prefabricated container modules

Containerized AI Prefab DC | Building

ATM-5000-AB | Hybrid Type



Design Summary

- **Total IT Load**: 5MW air & liquid hybrid cooling
  - High Density(Immersion): **16x 50kW Tanks**
  - High Density (D2C): **3x 1.0MW D2C Pods**
  - Low Density: **4x 200kW IT Pods, 2x 100kW Network Pods**
- **Cooling System:**
  - 6x 1520kW CDU for D2C liquid cooling
  - 16x 50kW Immersion cooling tanks
  - 30x 50kW room cool water cool type for air cooling IT equipment
  - Closed loop cooling tower for heat rejection
- **Power:** 2N power system with UPS, battery and power distribution
- **Modules:** Prefabricated container modules

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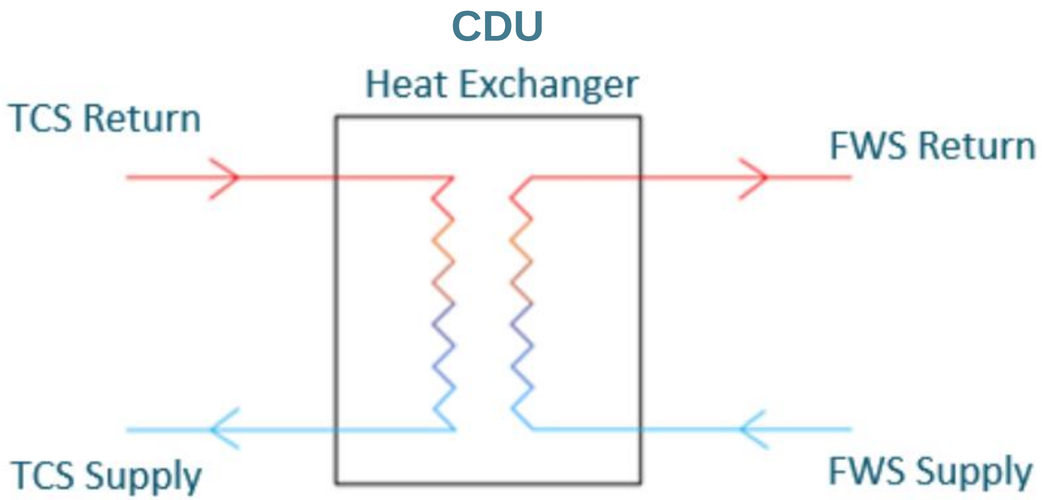
Liquid Cooling Design Considerations

Design considerations in liquid cooling system

Liquid Cooling Design Considerations



ATD = (TCS supply temp – FWS supply temp)

ATD, TCS, and FWS

- **TCS**: Technology Cooing System (Secondary side). The water/fluid pumped through server from CDU.
- **FWS:** Facility Water System (Primary side). FWS is determined by heat rejection type and local ambient temperature.
  - Cooling tower can get W32 at most of world.
  - Chiller can get W17 at any place of world.
  - RDHx usually works with chiller
  - Immersion can work with chiller or cooling tower
  - D2C usually works with cooling tower to save energy
- **ATD:** Approach Temperature Difference. The Delta-T between TCS and FWS. ATD usually designed as 4C to have higher FWS temperature for efficiency.

Liquid Cooling Design Considerations

ASHRAE Liquid Cooling Environmental Class Definitions

Class W17/W27: Typically data centers that are traditionally cooled using chillers and a cooling tower, but with an optional water-side economizer to improve energy efficiency, depending on the location of the data center.

Class W32/W40: Typically operated without chillers in most locations; however, some locations may still require chillers.

Class W45/W+: Typically operated without chillers to take advantage of energy efficiency and reduce capital expense. Some locations may not be suitable for drycoolers.

Equipment Environment Specifications for Liquid Cooling

Liquid Cooling Class	Typical Infrastructure Design		Facility Water Supply Temperature, °C (°F)[a]
	Primary Facilities	Secondary/ Supplemental Facilities	
W17	Chiller/cooling tower	Water-side economizer (cooling tower)	17 (62.6)
W27			27 (80.6)
W32	Cooling tower	Chiller or district heating system	32 (89.6)
W40			40 (104)
W45	Cooling tower	District heating system	45 (113)
W+			>45 (>113)

a. Minimum water temperature for all classes is 2°C (35.6°F).

ASHRAE Thermal Guidelines for Data Processing Environments, Fifth Edition, Revised and Expanded

Liquid Cooling Design Considerations

Liquid Cooling Systems

- CDU for Direct to Chip liquid cooling AI servers.
- RDHx for air cooled AI servers.
- Immersion cooling for immersion type AI servers.

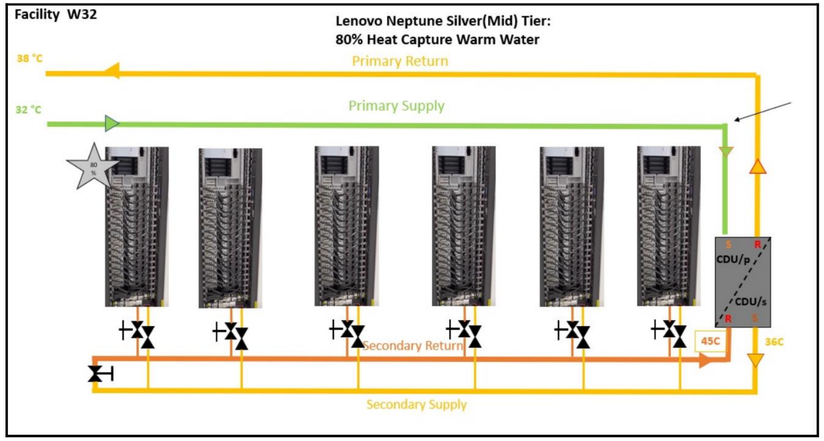
Air Cooling Systems

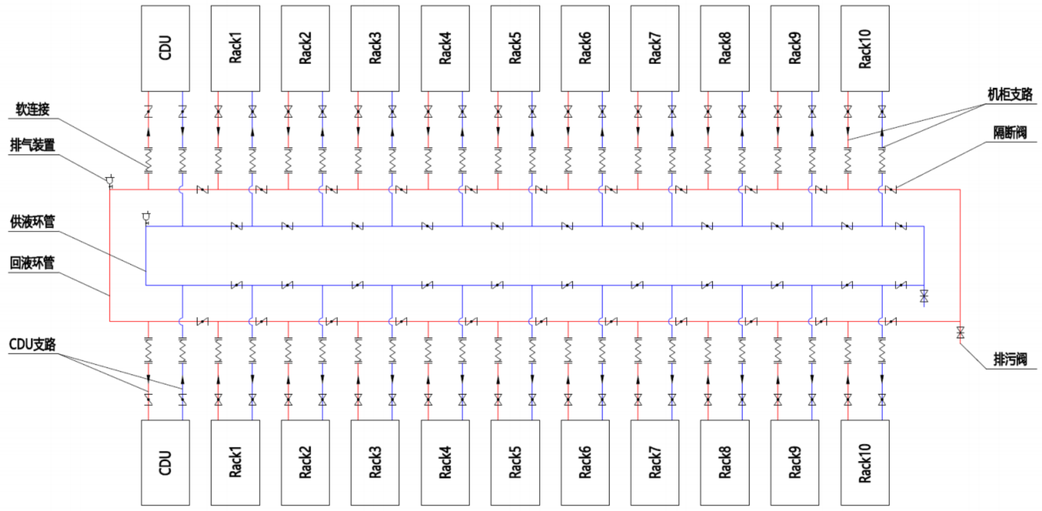
- Air cool is needed for air cool part of liquid cooling servers.
- Air cool is important for humidity control to prevent condensation.
- DX water cooled is good match for cooling tower heat rejection system.

Heat Rejection Systems

- Air cooled free cooling chiller is usually used for RDHx, air cool CW cooling, and CDUs in high ambient area. Higher PUE.
- Cooling tower is usually used for CDU direct to chip system. Lower PUE. Ambient condition dew point determines cooling tower possibilities.

Liquid Cooling Design Considerations





Water Loop Design

- Water piping goes into raised floor for water safety considerations.
- Water flow speed controls below 3.0m/s.
- Consider water pressure balance to reach even water flow distribution.
- Can use PICV valves per situation for better water flow balance.
- Set shutoff valve for each section, for easier service and maintenance.
- Consider air discharge from water system during commission and running.
- Design as O loop for better redundancy and better water distributions.

Liquid Cooling Design Considerations

Parameter	FWS (Table 5.3, ASHRAE 2014)	TCS (Table 6.2, ASHRAE 2014)
pH	7 to 9	8.0 to 9.5
Corrosion inhibitor(s)	Required	Required
Biocide	—	Required
Sulfide	<10 ppm	<1 ppm
Sulfate	<100 ppm	<10 ppm
Chloride	<50 ppm	<5 ppm
Bacteria	<1000 CFUs/mL	<100 CFUs/mL
Total hardness (as $CaCO_3$)	<200 ppm	<20 ppm
Conductivity	—	0.2 to 20 micromho/cm
Total suspended solids	—	<3 ppm
Residue after evaporation	<500 ppm	<50 ppm
Turbidity	<20 NTU (Nephelometric)	<20 NTU (Nephelometric)

Water Quality

- Continuous monitor water quality to prevent rusting, wetting, scaling and corrosions in water loop.
- PG25 recommended for TCS loop.
- EG20 recommended for FWS loop.
- Filtration for water loops 50-micro for TCS loop, 200-micro for FWS loop.
- Water Leak Detection shall be standard.
- Water discharge and refill considerations in the system designs.

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