

Eaton Micro Data Center

# iCube 2.0



*Powering Business Worldwide*



## Eaton iCube 2.0

Eaton Micro Data Center (MDC), known as Eaton iCube 2.0, provides power supply, power distribution, thermal energy management, environmental monitoring, system connection, remote and distributed management in one system.

Eaton iCube 2.0 provides an “all-in-one” or an integrated solution to users with high reliability, low energy consumption, easy maintenance, and high scalability.

All components of the Eaton iCube 2.0 are integrated and configured at factory before shipping to the customer’s site. The on-site set up can be applied even at remote or distributed locations.

### Applications

- Finance, insurance, securities (branches and business nodes)
- Government digital systems, educational and medical institution computer rooms
- Transport, shipping, commercial retail (computer rooms and branch nodes)
- Computer rooms of large-sized enterprise branches and small and medium-sized enterprises
- Telecommunications, 5G computer rooms
- Edge computing

# Micro Data Center VS Traditional IT Room and Data Center

- Rapid deployment and extension**  
Prefabricated and standard modular design
- High reliability**  
Power management components are tested ensuring smooth operations
- Low TCO (total cost of ownership)**  
Optimize the air flow to cool server with low electricity loss
- Central management**  
Manage all power management devices in one system efficiently
- Ergonomic data center**  
Clean and unified image of computer room

## The key to Edge Computing Micro Data Center provides all-in-one data center infrastructure solution sized to meet your requirements

1. **SECURE RACK**
  - IP50 protection, earthquake rated, separates noise and dust
  - Known to bear 20% higher load than market standard
  - Intelligent door lock and release
2. **PRE-ASSEMBLY, WIRING**
  - Except for load equipment, all structures in the cabinet are factory prefabricated and preinstalled
3. **POWER PROTECTION**
  - High efficiency UPS provides best in class protection for all your critical applications
4. **INTELLIGENT MANAGEMENT**
  - Remotely manage all aspects of the system and components via web or phone application
  - Interactive LCD provides info and control at your fingertips
5. **DYNAMIC MONITORING**
  - Built-in sensors track environmental parameters and provide timely alerts
6. **PRECISION COOLING**
  - CE certified in-rack air-conditioning circulates air quickly due to proximity to heat sources.

## iCube 2.0 advantages



### Time saving

- Standardized design with configurable options tailored to your needs
- Pre-configuration saves more than 65% time on on-site installation compared to conventional solutions
- 1-hour fast installation for single rack
- Centralised monitoring system with a single interface to easily manage your infrastructure

### Cost saving

- Prefabrication and modular construction saves on-site installation cost
- In-rack cooling system eliminates the need for room-level cooling system and cooling loss thus reducing total infrastructure costs
- Saves electricity bills with PUE as low as 1.34
- Unified system saves communication cost

### Improved reliability

- IP50 secured enclosures, reducing dust and noise
- Smart pop-up door system for temperature control and emergency heat dissipation
- Supports low-load dehumidification which greatly reduces the risk of condensation in the cabinet
- Modular in design, allows for rack-mounted installation and easier expansion
- Complies with industry standard/ certification to ensure a safe and reliable system
- Supports multiple configurations of single unit, N+1 redundancy, 2N redundancy



# Basic single rack

Basic single rack	
System Size (W*D*H)-mm	600x1200x2000 (42U) 600x1000x1200 (24U)
Power input	220/230/240Vac, 50/60Hz, 1Ph+N+PE
Enclosure type	Mesh door
Color	RAL9005-Black
System IP rating	IP20
UPS rating	3kVA/6kVA
Recommended IT load	2.4-4.8kW
Available U space	18U-24U enclosure 36U-42U enclosure
Cooling	N/A
PDU outlets	1x basic (12*C13+4*C19)-24U 1x basic (20*C13+4*C19)-42U
User interface	10.1 inch touch screen
Connectivity	SNMP/HTTP
Remote monitoring	PC end, mobile APP
Sensor included	1x smoke/1x water leakage/1x T/H
Options	ATS/EMB/BMS/intelligent PDU...etc *

\* Please contact local sales representative

## SECURE RACK

- IP20 protection
- Perforated door
- 24U/42U options

## RACK PDU

- IEC outlet
- Basic type as standard config
- Monitor/Manage type for option
- 1 per rack for standard config

## PDM



## CENTRAL MONITOR

- Lighting/ Smoke/ Leakage  
Temp/ Humidity

## UPS

- High efficiency UPS (3-6kVA)  
provides best in class protection  
for all your critical applications

# Standard single rack

	Standard single rack
System Size (W*D*H)-mm	600*1200*2000
Power input	220/230/240Vac, 50/60Hz, 1Ph+N+PE
Enclosure type	Enclosed cold and hot aisle Glass front door + solid metal rear door
Color	RAL9005-Black
System IP rating	IP50
UPS rating	3kVA/6kVA/10kVA
Recommended IT load	2-3.5kw
Available U space	28U-32U
Cooling	Self-contained DX 2kW Split DX -4.2kW
PDU outlets	1x basic 20*C13+4 *C19
User interface	10.1 inch touch screen
Connectivity	SNMP/HTTP
Remote monitoring	PC end, mobile APP
Sensor included	1x smoke/1x water leakage/1x T/H
Options	ATS/EMB/BMS/intelligent PDU...etc *

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## SECURE RACK

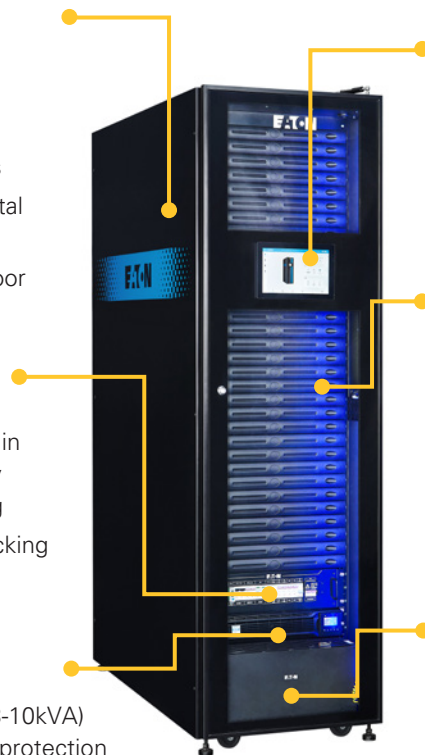
- IP50 protection, earthquake rated
- Can bear 20% higher load than other brands
- Glass front door + metal rear door
- Intelligent Electrical door lock and release

## PREFAB POWER DISTRIBUTION

- Infrastructure devices in the cabinet are factory preinstalled and wiring
- Intelligent PDM to tracking the load and PUE
- Lighting

## POWER PROTECTION

- High efficiency UPS (3-10kVA) provides best in class protection for all your critical applications



## INTELLIGENT MANAGEMENT

- SNMP connectivity
- Remotely manage via internet Web or phone APP
- 10.1" Touch LCD provides information and control at your fingertips
- Cybersecurity passed

## DYNAMIC MONITORING

- Built in sensors track environmental parameters and provides timely alerts
- Temp and humidity sensors to track environment status
- Smoke and water leak sensors to prevent any environment risk
- Status lighting system – 3 colors

## PRECISION COOLING

- CE certified in-rack air-conditioning circulates air quickly due to proximity to heat sources.
- R410A environment friendly refrigerant
- Have Split and Self-contained option.
- Compatible for both Gravity drain and condensate pump

# Multiple rack

Multiple rack row	
System Size (W*D*H)-mm	(1800-4200)x1400x2000
Rack quantity	3-7
Power input	380/400/415Vac, 50/60Hz, 3Ph+N+PE
Enclosure type	Enclosed cold and hot aisle Glass front door + solid metal rear door
Color	RAL9005-Black
System IP rating	IP50
UPS rating	10kVA-40kVA
Recommended IT load	7-21kW
Cooling	Split DX -8kW
PDU outlets	1x basic 20*C13+4 *C19-main cabinet 2x basic 20*C13+4 *C19 per IT cabinet
User interface	10.1 inch touch screen
Connectivity	SNMP/HTTP
Remote monitoring	PC end, mobile APP
Sensor included	1-2x smoke, 1x water leakage, 1*T/H per rack
Options	ATS/EMB/BMS/intelligent PDU...etc *

\* Please contact local sales representative

## SECURE RACK

- Cold + Hot Aisle contained
- IP50 protection, earthquake rated
- Glass front door + metal rear door
- Intelligent Electrical door lock and release
- UP to 7 Racks

## PREFAB POWER DISTRIBUTION

- Infrastructure devices in the cabinet are factory pre-installed and wiring
- Intelligent PDM to tracking the load and PUE

## POWER PROTECTION

- High efficiency UPS (3-10kVA) provides best in class protection for all your critical applications



## INTELLIGENT MANAGEMENT

- 10.1" ON-SITE Touch LCD provides information and control at your fingertips
- Remotely manage via internet Web or phone APP
- SNMP connectivity
- Cybersecurity passed
- Built in sensors (Temp/ Humidity/ Smoke/ Leak etc)
- Status Lighting system – 3 colors

## PRECISION COOLING

- CE certified in-rack air-conditioning
- 8kw split system
- VSD compressor + EC fan
- R410A environment friendly refrigerant
- Compatible for both Gravity drain and condensate pump

# Single rack typical configuration

	Typical configuration 1	Typical configuration 2
Configuration overview	Standard single cabinet	Standard single cabinet
Unit model	EMSR3K42UA-EA	EMSR6K42U-EA
Power input	220/230/240Vac, 50/60Hz, 1Ph+N+PE	
Recommended IT load	1.7kW	3.5kW
Available U space	29U	31U
PUE (optimized value*)	1.6	1.34
System size (W*D*H)	600*1200*2000	600*1200*2000
System protection class	IP50	IP50
<b>Rack and Enclosure system</b>		
Enclosure type	Fully enclosed Hot and Cold Aisles (glass front door plus solid sheetmetal rear door)	
Rack size (W*D*H)	600*1200*2000	600*1200*2000
Rack quantity	1	1
Door lock	Electronic lock	Electronic lock
Seismic level (earthquake rated)	Level 8	Level 8
LED lighting included	Yes	Yes
Atmosphere lights (3 colors)	Yes	Yes
<b>UPS and power distribution system</b>		
UPS configuration	1x 3kva	1x 6kva
UPS model	9PX3000IRT2U	9PX6Ki
UPS efficiency	94%	95%
EBM included	No-optional	No-optional
Power meter included	Yes	Yes
Lightning protection	C class, in20kva, I <sub>max</sub> 40KA, 8/20us	
PDU type	Basic as standard, Switch and Managed as option	
PDU QTY	Standard: 1pc/rack	Standard: 1pc/rack
PDU outlets	20*C13+4 *C19	20*C13+4 *C19
PDU certificates	CE	CE
ATS/STS included	No-optional	No-optional
<b>Cooling system</b>		
Cooling model	1x E02A	1x E04SE/EW06E
Cooling type	Self-contained DX	Split DX
Input voltage/frequency	200-240V/50-60Hz	
Cooling capacity	2kW	4.2kW
Air volume	600m <sup>3</sup> /h	800m <sup>3</sup> /h
Form factor in total	8U	5U
Refrigerant type	R410a	
Condensate pump included	No	Yes
Pump lift-m (if yes)	NA	5
Certificates	CE	CE
<b>Monitoring system</b>		
User interface	10.1 inch touch screen	
Connectivity	SNMP/HTTP	SNMP/HTTP
Remote monitoring	PC end, Mobile APP	
Smoke sensor included	1	1
Water leakage sensor included	1x rope type(5m)	1x rope type (5m)
Temp/Humidity sensor	1	1
Emergency plan (fire/high temp)	Pop-up front and rear doors	



Basic rack



Standard rack with self-contained/split cooling unit

# Multiple rack typical configuration

	Typical configuration 3	Typical configuration 4	Typical configuration 5	Typical configuration 6
Configuration overview	1+2 Row cabinet	1+2 Row cabinet	1+4 Row cabinet	1+6 Row cabinet
Unit model	EMMRS10K1/2-EAEBM	EMMRS(2)10K1/2-EAEBM	EMMRS20K1/4-EA	EMMRS(2)20K1/6-EA
Power input	380/400/415Vac, 50/60Hz, 3Ph+N+PE			
Recommended IT load	7kW	7kw	14kw	21kw
Available U space	105U	99U	179U	252U
PUE (optimized value*)	1.34	1.34	1.34	1.34
System size (W*D*H)	(600*3)*1400*2000	(600*3)*1400*2000	(600*5)*1400*2000	(600*7)*1400*2000
System protection class	IP50	IP50	IP50	IP50
<b>Rack and Enclosure system</b>				
Enclosure type	Fully enclosed Hot and Cold Aisles (glass front door plus solid sheetmetal rear door)			
Rack size (W*D*H)	600*1400*2000	600*1400*2000	600*1400*2000	600*1400*2000
Rack quantity	1+2	1+2	1+4	1+6
Door lock	Electronic lock	Electronic lock	Electronic lock	Electronic lock
Seismic level (earthquake rated)	Level 8	Level 8	Level 8	Level 8
LED lighting included	Yes	Yes	Yes	Yes
Atmosphere lights (3 colors)	Yes	Yes	Yes	Yes
<b>UPS and power distribution system</b>				
UPS configuration	1x 11kva	2x 11Kva	1x 20kva	2x 20kva
UPS model	9PX11KiPM31	9PX11KiPM31	9SX20KPM	9SX20KPM
UPS efficiency	95%	95%	96%	96%
EBM included	Yes	Yes	No-optional	No-optional
Power meter included	Yes	Yes	Yes	Yes
Lightning protection	C class, in20kva, lmax 40KA, 8/20us			
PDU type	Basic as standard, Switch and Managed as option			
PDU QTY	Standard: 5pcs (1+2*2)	Standard: 5pcs (1+2*2)	Standard: 9pcs (1+2*4)	Standard: 13pcs (1+2*6)
PDU outlets	20*C13+4 *C19	20*C13+4 *C19	20*C13+4 *C19	20*C13+4 *C19
PDU certificates	CE	CE	CE	CE
ATS/STS included	No-optional	No-optional	No-optional	No-optional
<b>Cooling system</b>				
Cooling model	1x E08SE/EW10E	1x E08SE/EW10E	2x ES08E/EW10E	3x ES08E/EW10E
Cooling type	split DX	split DX	split DX	split DX
Input voltage/frequency	200-240V/50-60Hz	200-240V/50-60Hz	200-240V/50-60Hz	200-240V/50-60Hz
Cooling capacity	8.1kW	8.1kW	2x 8.1kW	3x 8.1kW
Air volume	1500m³/h	1500m³/h	2x 1500m³/h	3x 1500m³/h
Form factor in total	8U	8U	2* 8U	3* 8U
Refrigerant type	R410a	R410a	R410a	R410a
Condensate pump included	Yes	Yes	Yes	Yes
Pump lift-m (if yes)	5	5	5	5
Certificates	CE	CE	CE	CE
<b>Monitoring system</b>				
User interface	10.1 inch touch screen			
Connectivity	SNMP/HTTP	SNMP/HTTP	SNMP/HTTP	SNMP/HTTP
Remote monitoring	PC end, Mobile APP			
Smoke sensor included	1	1	2	2
Water leakage sensor included	1x rope type(5m)	1x rope type(5m)	1x rope type(5m)	1x rope type(5m)
Temp/Humidity sensor	3 x T/H	3	5	7
Emergency plan (fire/high temp)	Pop-up front and rear doors			



