

Rittal – The System.

Faster – better – everywhere.



RiMatrix **Micro Data center**

Modular is the way forward

ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

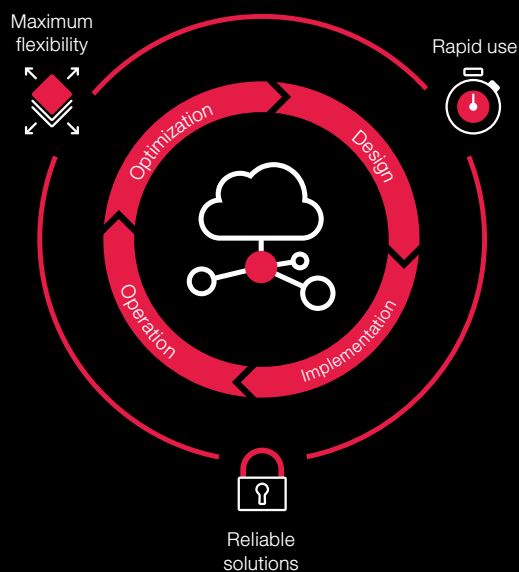
IT INFRASTRUCTURE

SOFTWARE & SERVICES

FRIEDHELM LOH GROUP



Lifelong IT partners: Lifecycle IT



RiMatrix Micro Data Center

Data centres are constantly evolving, driven by Industry 4.0, the IoT (Internet of Things), big data and edge computing. To ensure that today's IT solutions do not become obsolete, RiMatrix MDC offers scalable solutions, with Rittal on hand as your reliable partner at every phase: from the initial analysis of your requirements, to defining a suitable strategy, through to the ongoing operation of your data centre.

RiMatrix MDC supports the entire IT lifecycle, which is divided into the following phases:



Design: Once the concept has been developed and the solution modules selected, the investment (CAPEX) and operating costs (OPEX) are calculated.



Implementation: The physical infrastructure (power, cooling, monitoring, security) is assembled, followed by commissioning and sign-off.



Operation: The data centre can be operated locally, or by Rittal partners as a managed service.



Optimization: The installed solution is analysed in respect of efficiency, costs and sustainability, to identify further optimisation potential.

Save energy and reduce carbon emissions at every stage of the cooling chain

Average
75%
energy savings with
Rittal Blue e+ IT cooling units



Efficiency begins with planning

For Rittal, efficiency begins with conceptual planning, and entails far more than simply minimising the energy consumption of a single component. Seamless interconnection of all involved components is the key here: efficiency is a matter of integration.

Save energy and reduce carbon emissions – The Blue e+ series of IT cooling units

The Blue e+ IT cooling unit series can achieve huge energy savings and CO₂ reductions with rack climate control.

Further benefits of IT cooling solutions from Rittal:

- Aisle containment and cross-system control concepts in conjunction with energy-efficient cooling by external IT chillers allow a higher density of servers
- Operating costs and complexity are minimised, thanks to superior reliability, energy and cost efficiency
- Resource and energy savings plus reduced carbon emissions make this an eco-friendly choice



Rittal Blue e+ IT cooling unit

Scalable solutions from edge to hyperscale



Time needed for installation
and **commissioning**:
Possible within **1** Day

Using data at the point of origin: Edge computing

As the complement to cloud computing, edge data centres support the processing of large volumes of data directly at the point of origin to support real-time applications and analytics. This spatial proximity helps to minimise latencies and enables the more effective use of storage capacity and bandwidths.

Edge computing therefore represents the link between centralised cloud applications and the physical world of sensors, production machines and mobile terminal equipment. Industrial segments such as power distribution, transport management, retail and medicine use edge data centres to optimise their operations, cut costs and improve the customer experience, to name just a few of the benefits.

Rittal supplies adaptable solutions based on RiMatrix MDC.

Product Specification

Specification	MDC-S e+	MDC-M e+	MDC-LCU DX	MDC-LCP DX	MDC-LCP DX2
Rack					
Rack dimension W x H x D (mm.)	800x1200x1000	800x2000x1200	800x2000x1200	800x2000x1200	800x2000x1200
Total rack U space	24U	42U	42U	(2) 42U	(2) 42U
Available rack U space	24U	39U	39U	42U to 2x 42U	(2) 42U
Load capacity per rack	1500 kg.				
Racks baying system	Yes				
Colour	RAL 7035				
Material	Sheet steel, Aluminium, Glazed door: Single-pane safety glass, 3 mm				
Surface finish	Enclosure frame: Dipcoat-primed, Interior installation: Spray-finished Rear door and roof : Dipcoat-primed, powder-coated Front door: Aluminium, anodised/spray-finished				
Rack standards	UL 2416, UL/IEC 60950-1, EN 62368-1 (VX-IT) UL 60950-1 (TS-IT)				
Cooling					
Cooling capacity	1.6 kW	3.0 kW	6.5 kW	12 kW	20 kW
Cooling type	Roof mounted Hybridge inverter w/o external unit	Wall mounted Hybridge inverter w/o external unit	In-Rack inverter controlled with external unit	Side mounted In-Rack inverter controlled with external unit	
Air route	front to rear (Cold air from top)	front to rear (Cold air from Bottom)	front to rear (Cold air from side)		
Refrigerant	R134a		R410a		
Operating voltage	Multivoltage capability 110-240 V, 1~, 50/60 Hz. 380-480 V, 3~, 50/60 Hz.		230 V, 1~, 50/60 Hz.	380-480 V, 3~, 50/60 Hz 230 V, 1~, 50/60 Hz (for external unit)	
Cooling Emergency system	Automatic door opener Glazed doors VX IT, with vent flaps for automatic opening Glazed doors TS IT, with door automatic openingipsum				
Cooling standards	EN ISO 12100 EN 378-2 EN 60529 EN 60335-1 und -2-40 EN 61000-6-2:2005 EN 61000-6-3: 2006/A1:2010		EN 60335-1 und -2-40 EN 61000-6-2:2005 EN 61000-6-3:2007 /A1:2011 EN 61000-3-2:2014 EN 61000-3-3:2013	EN ISO 13857 EN ISO 12100 EN 55022-Class A EN 60204-1 EN 61000-3-2 EN 61000-3-3 EN 61000-6-2:2005	
Power					
Maximum IT load	1.5 kW	2.5 kW	6.0 kW	10.0 kW	15.0 kW
UPS Capacity (option)	2000 VA	3000 VA	6000 VA	10000 VA	20000 VA
UPS Runtime (option)	Depend configuration				
Power input	230 V, 1~, 50/60 Hz.		230 V, 1~, 50/60 Hz / 380-480 V, 3~, 50/60 Hz		
PDU options	PDU Basic / PDU Metered / PDU Switched 16A/1P CEE 12xC13+4xC19	PDU Basic / PDU Metered / PDU Metered+ / PDU Switched / PDU Managed 32A/1P CEE 24xC13 + 4xC19			
PDU standards	EN 62 368-1 EN 55 022/B, EN 61 000-4-2, EN 61 000-4-3, EN 61 000-6-2, EN 61 000-6-3 CE, EAC, RoHS, WEEE				
Monitoring					
Emveronmental monitoring	Temperature, Humidity, Smoke detection and automatic door opening				
Monitoring / Security options	Rack access sensors, Access control : Key card / Biometric, Spot/Rope waterleak, Vandalism				
Alarm	Email (option : SMS, Tower light and sound beeper)				
Remote monitoring	Web monitoring (Option: DCIM)				
Product standards	UL 60950-1, EN 61000-6-2:2005, EN 61000-6-3:2007/A1:2011				
Monitoring protocols	OPC-UA, SNMPv1/SNMPv2c/SNMPv3 Modbus/TCP,TCP/IPv4,TCP/IPv6 Radius,Telnet,SSH,FTP,SFTP,HTTP,HTTPS,NTP,DHCP,DNS,SMTP,Syslog,LDAP				
Fire Extinguish System					
Fire suppression system	Early fire detection, Automatic extinguishing Innovative extinguisher Novec™ 1230: eco-friendly, non-critical for IT components, non-conductive 482.6 mm (19") rack mount wit just 1 U 2x RJ-45 port (CAN bus) for Connecting with Monitoring system				
Master / Slave option	Yes (1 Master unit maximum 4 Slave unit)				
Product standards	VdS 2344:2014-07, DIN 14497:2011-12 EN5081:2012, EN 55022:2010, EN61000-3-2:2014, EN61000-3-3:2013, EN50130-4:2011, EN62368-1:2014				

Micro data center

MDC-S e+



Standard Features

Rack	VX-IT/TS-IT to IP55 Rack All model / TS-IT 24U 800Wx1200Hx1000D mm 3mm. Safety glazed front door ipsum
Cooling	Roof-mounted Blue e+ cooling unit 1.6 kW Hybride inverter cooling technology
Monitoring	IoT-Interface alarm via Email, Web monitoring Temperature, Humidity, Smoke sensor, Automatic door opener
Services	Full assembly and basic configuration Product warranty 1 Year (+ 1 Year)

Option

Power	UPS, 2000 VA, 1~ PDU Basic, Metered, Switched
Monitoring	DCIM software
Security	Access control, Key card and Biometric In-rack Novec 1230 fire suppression system
Services	Onsite installation Onsite service including PM/MA 2 Times / year SLA : 24x7 4Hrs. 24x7 NBD 8x5 NBD 2nd -5th year Extended warranty

Micro data center

MDC-M e+



Standard Features

Rack	VX-IT / TS-IT 42U 800Wx2000Hx1200D mm 3mm. Safety glazed front door
Cooling	Wall-mounted Blue e+ cooling unit 3.0 kW Hybride inverter cooling technology
Monitoring	IoT-Interface alarm via Email, Web monitoring Temperature, Humidity, Smoke sensor, Automatic door opener
Services	Full assembly and basic configuration Product warranty 1 Year (+ 1 Year)

Option

Power	UPS, 3000 VA, 1~ PDU Basic, Metered, Switched
Monitoring	DCIM software
Security	Access control, Key card and Biometric In-rack Novec 1230 fire suppression system
Services	Onsite installation Onsite service including PM/MA 2 Times / year SLA : 24x7 4Hrs. 24x7 NBD 8x5 NBD 2nd -5th year Extended warranty

Micro data center

MDC-LCU DX



Standard Features

Rack	VX-IT / TS-IT 42U 800Wx2000Hx1200D mm 3mm. Safety glazed front door
Cooling	LCU DX cooling unit 6.5 kW Inverter cooling technology with condensing unit
Monitoring	CMC III Monitoring alarm via Email, Web monitoring Temperature, Humidity, Smoke sensor, Automatic door opener
Services	Full assembly and basic configuration Product warranty 1 Year (+ 1 Year)

Option

Power	UPS, 6000 VA, 1~ PDU Basic, Metered, Switched
Monitoring	DCIM software
Security	Access control, Key card and Biometric In-rack Novec 1230 fire suppression system
Services	Onsite installation Onsite service including PM/MA 2 Times / year SLA : 24x7 4Hrs. 24x7 NBD 8x5 NBD 2nd -5th year Extended warranty

Micro data center

MDC-LCP DX



Standard Features

Rack	VX-IT / TS-IT 42U 800Wx2000Hx1200D mm 3mm. Safety glazed front door
Cooling	LCP DX cooling unit 12 kW Inverter cooling technology with condensing unit
Monitoring	CMC III Monitoring alarm via Email, Web monitoring Temperature, Humidity, Smoke sensor, Automatic door opener
Services	Full assembly and basic configuration Product warranty 1 Year (+ 1 Year)

Option

Power	UPS, 10 KVA, 3~ (1-2x) PDU Basic, Metered, Switched
Monitoring	DCIM software
Security	Access control, Key card and Biometric In-rack Novec 1230 fire suppression system
Services	Onsite installation Onsite service including PM/MA 2 Times / year SLA : 24x7 4Hrs. 24x7 NBD 8x5 NBD 2nd -5th year Extended warranty

Rittal – The System.

Faster – better – everywhere.

- Enclosures
- Power Distribution
- Climate Control
- IT Infrastructure
- Software & Services

Authorized Channel Partner.

THA-SEPTEMBER, 2022

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