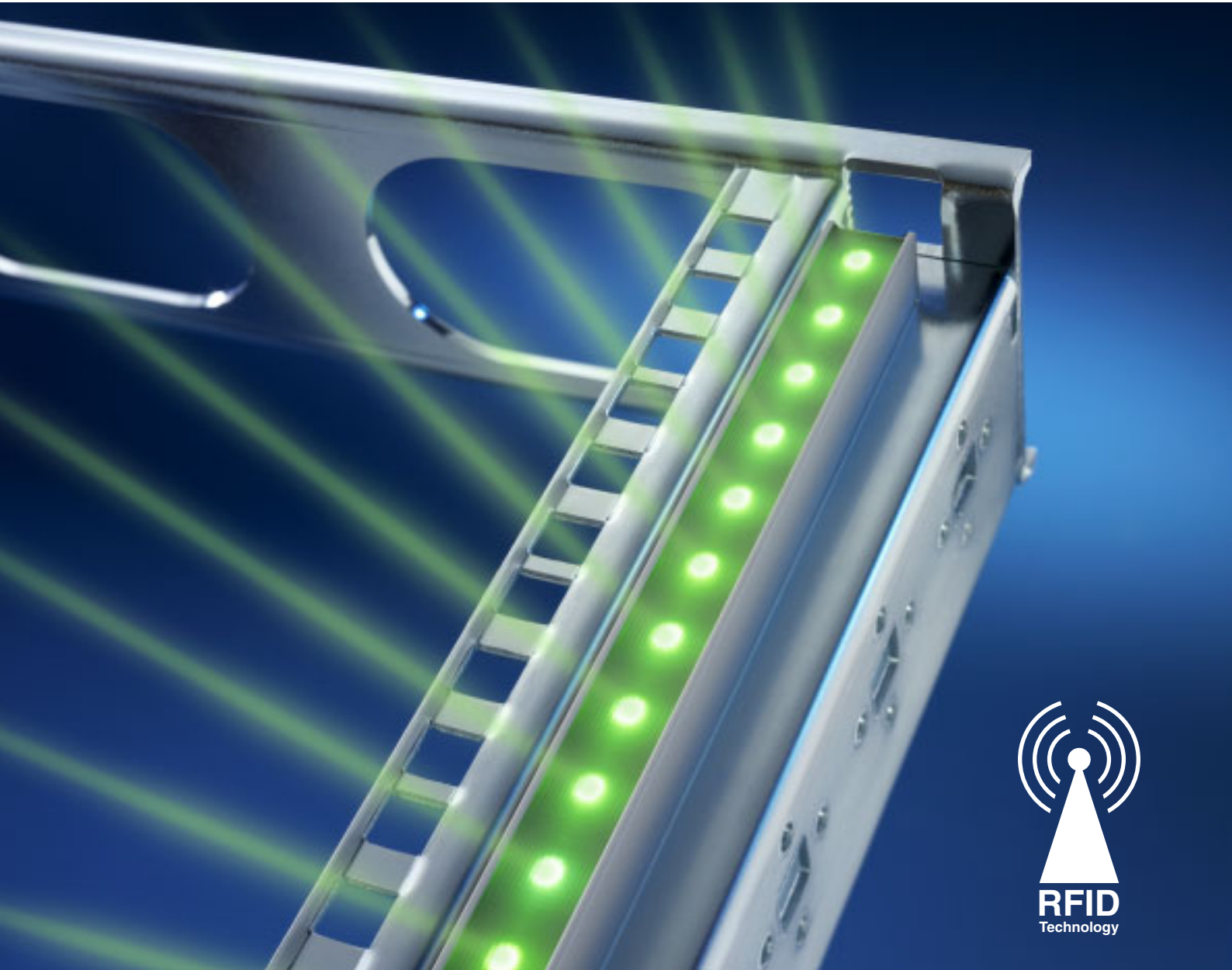




# Rittal – Dynamic Rack Control



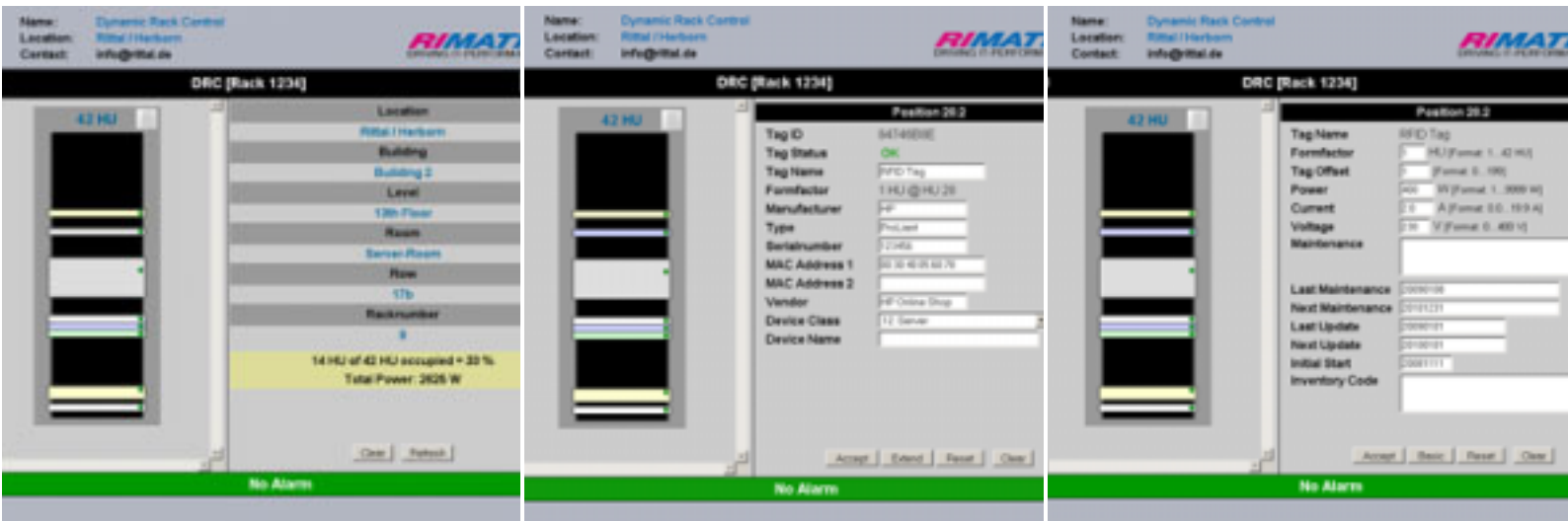
Efficient infrastructure management  
for ITC components



**Benefit:**  
Determination of the exact rack position of individual servers and other hardware – to the exact shelf.

# Hardware overview

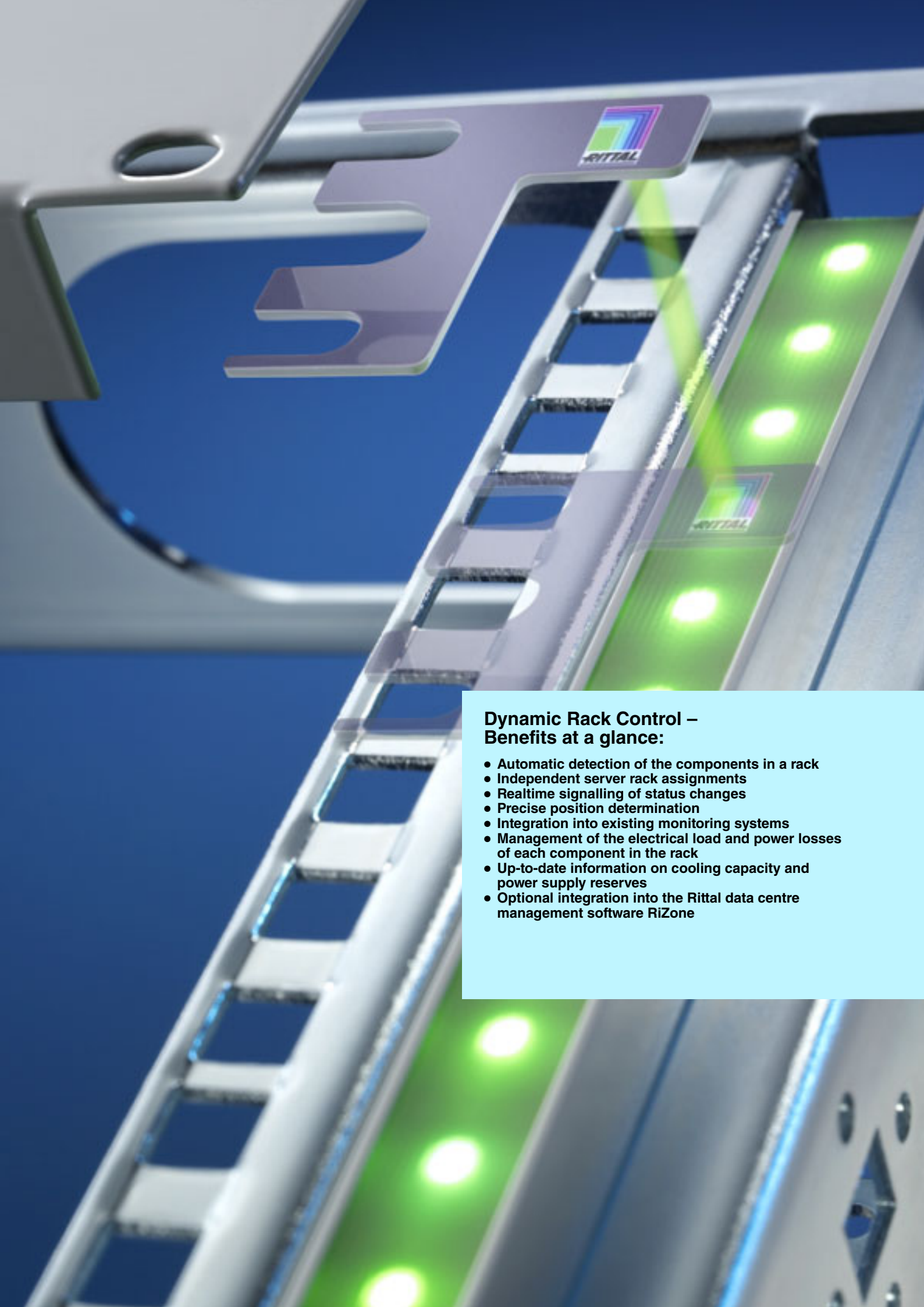
Dynamic Rack Control brings genuine intelligence to the IT rack; after all, the control system “thinks” and reacts independently. With its automatic inventory monitoring functionality, it is able to document the individual location assignments in the rack and thus the exact position of any given component in realtime. The coordinates of each hardware component are communicated continuously to the control PC. If a hardware position changes, this move is automatically detected and reported. The objective of Dynamic Rack Control is to protect the IT infrastructure against losses of hardware and data by issuing immediate and thus timely messages. Integrated readers in the rack handle the continuous transmission of all relevant information to the PC system. Basic component information (hardware manufacturer, type of component, date of installation, software, energy consumption, power loss), which is stored on the RFID tags, is also permanently available.



Basic data and power budget of an individual rack configuration.

Master data record of a 482.6 mm (19") component.

Extended management information.



### **Dynamic Rack Control – Benefits at a glance:**

- Automatic detection of the components in a rack
- Independent server rack assignments
- Realtime signalling of status changes
- Precise position determination
- Integration into existing monitoring systems
- Management of the electrical load and power losses of each component in the rack
- Up-to-date information on cooling capacity and power supply reserves
- Optional integration into the Rittal data centre management software RiZone

# Locate and identify your hardware

The ingeniously simple installation and straightforward handling of Dynamic Rack Control are the keys to efficient cost reductions. The system occupies no additional 'U' space in the rack and it is unbelievably simple to retrofit the system for existing applications. While we are talking about handling: The mounting frames are fitted in next to no time; each hardware component is provided with its own RFID tag. The intelligent system then functions on a wireless basis. An aerial strip in the rack receives the signals from the installed sensors and RFID tags. Correct hardware positions are confirmed by flashing LEDs. A diversity of component data can be stored on the RFID tags and can be used, for example, to assess the electrical power in the rack. With this information, you can plan your power and cooling capacities safely and reliably.



## Tag/mounting/contact

All relevant information on the installed hardware is stored directly on the corresponding RFID tag.



## Monitoring/CMC

The controller links the RFID reader of the 482.6 mm (19") mounting frame to the CMC-TC system. It is possible to monitor and manage each rack location and all information on the installed hardware. Integration into the RiZone system is also possible.

# Dynamic Rack Control

## System solution with Rittal



### RFID mounting frame

#### for TS 8

With integral RFID reader (aerial) to accommodate the 482.6 mm (19") built-in components. The mounting frame may be depth-variably secured in the TS 8 and is used to structure the front 482.6 mm (19") mounting level.

Position detection of the components is accurate to within 1/3 U, therefore there are 3 aerial elements and signalling LEDs integrated into each U. The installation position of the components is correctly recognised even if they are not located precisely in the height pitch pattern. Reading and writing of the RFID tags is likewise signalled by one LED in each case.

Additionally, a matching mounting frame without RFID reader (see ordering table) is required to emulate the rear mounting level.



For TS 8		U	RFID mounting frame, front	Mounting frame, rear
Width mm	Height mm		Model No. DK	Model No. DK
600	2000	42	<b>7890.206</b>	<b>7856.719</b>
800	2000	42	<b>7890.208</b>	<b>7856.731</b>
600	2200	47	<b>7890.226</b>	<b>7856.722</b>
800	2200	47	<b>7890.228</b>	<b>7856.734</b>

Other sizes available on request.

#### Load capacity:

max. 1000 kg static load with even distribution across two 482.6 mm (19") mounting levels.

#### Material:

Sheet steel, zinc-plated, passivated

#### Supply includes:

Assembly parts



### RFID tags

1 RFID tag is required for each component. Each tag has a "Unique ID" (UID, not sequential), which cannot be altered, data is stored on the tag in conformity with ISO 15693. The tags are unwritten in their delivered state. The tag is stuck to the inside right of the 482.6 mm (19") mounting bracket with an adhesive surface. The component is later screw-fastened to the 482.6 mm (19") level, including the tag.

Passive, writable RFID tag (13.56 MHz)	
Packs of	Model No. DK
20	<b>7890.020</b>



#### Also required:

RFID controller, see below and CMC-TC Processing Unit II<sup>1)</sup> (firmware from Version 2.70), DK 7320.100, wide-range power pack (sec. 24 V DC), DK 7320.425, 1 U mounting unit, DK 7320.440,

Connection cable (Cat5), DK 7320.472, CMC-TC programming cable, DK 7200.221, connection cable (DE) 230 V AC, DK 7200.210, see IT Catalogue from page 158.

<sup>1)</sup> Sufficient for 1 – 4 racks with RFID mounting frame.



### RFID controller

This controller connects the RFID reader (aerial) of the 482.6 mm (19") mounting frame to the CMC-TC system. Additionally, at a later date, an optional RFID floor reader may be connected to this controller for precise position-finding of the rack in the data centre.

One RFID controller is required per rack.

#### Enclosure dimensions W x H x D:

136 x 44 (1 U) x 129 mm

#### Material:

Plastic

#### Rated voltage:

24 V DC

#### Connections:

RJ45 socket (connection to CMC-TC)  
2 x Mini-DIN (connection of RFID frame & floor reader)

Packs of	Model No. DK
1	<b>7890.500</b>



#### Also required:

Mounting module CMC, DK 7320.450, see IT Catalogue, page 170, Cat 5 patch cable see IT Catalogue, page 169.

# Rittal – RiZone Rimatrix5 management software

The efficient route to peak performance within data centre infrastructure management



## What can the RiZone Data Centre Management Software do?

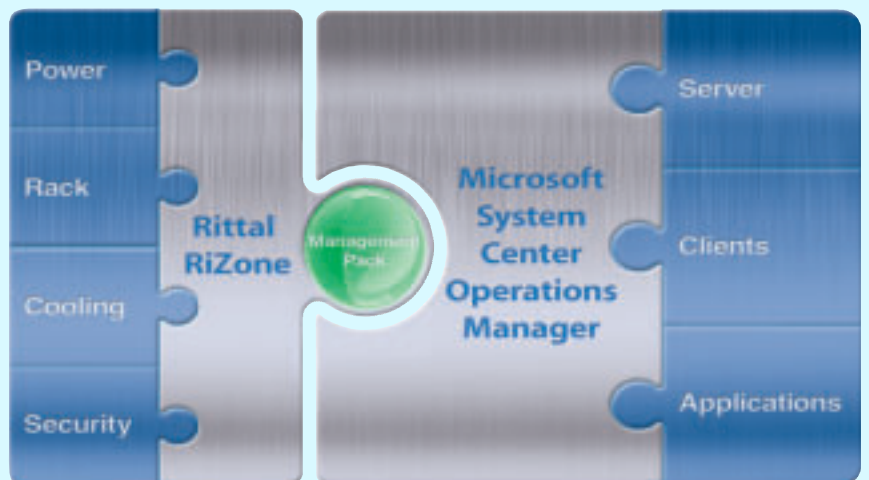
### 1. RiZone is the management platform for all components in the data centre infrastructure.

- Monitoring of redundant data centres (up to Tier IV).
- Fast configuration, automatic detection of all active Rimatrix5 components.
- Precise adaptation to requirements, a modular licence model.
- Efficient administration of the physical infrastructure (from the “single-enclosure data centre” through to the “maxi-data centre”), with a high level of flexibility and availability.

### 2. RiZone can communicate with a server management system (e.g. System Center Operations Manager from Microsoft) and exert direct influence over the availability of individual applications.

### 3. RiZone supports the protocols SNMP and BACnet for connecting and monitoring all equipment in the IT and building infrastructure.

At last, “isolated thinking” in IT and building management is a thing of the past.



## RiZone – Easy to use, comprehensive and profitable

- All active **Rimatrix5 components are automatically detected** and administered in the user interface.
- Any **components that support the protocol SNMP or BACnet** may be incorporated via the configuration manager. This means that all RiZone functions are then available to these components.
- A **workflow editor represents all mathematical operations and configures components across the board**, facilitating optimum interconnection between all parameters. This opens up brand new opportunities to optimise the entire infrastructure.
- The architecture is easily adapted to customer requirements. All potential applications – from the small server room to the large data centre – may be represented.
- Configured as a high-MTBF application, **the individual RiZone servers monitor one another** to ensure availability.
- Individual **messages or results from the sensors and the workflow may be transmitted, e.g. to a server management system**. This opens up the opportunity of responding directly at server level if malfunctions occur in the data centre, which in turn significantly enhances the availability of each application.

## All in all – solutions from Rittal

Rittal has one of the largest ranges of enclosures available for immediate delivery. However, Rittal also supplies integrated solutions – up to Level 4. This comprises mechanical installation, power supply, electronic components, climate control and central monitoring. For all of your requirements. Fully assembled and functional.

Wherever in the world you develop and implement solutions for yourself and your customers, we are close at hand. The global alliance between production, distribution and service guarantees closeness to the customer. Worldwide!



## Enquiries and information

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We will be happy to send you further information or advise you in person.

### Please send me the following brochure(s):

- IT News
- IT Catalogue
- RiZone brochure

From:

\_\_\_\_\_  
Surname / first name

\_\_\_\_\_  
Company / customer no.

\_\_\_\_\_  
Department / function

\_\_\_\_\_  
Address

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Telephone

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