



WHITEPAPER

## RACKMOUNT.IT OT SOLUTIONS

THE SMART MIDDLE-GROUND FOR SECURE OT DEPLOYMENT

RACKMOUNT.IT



## EXECUTIVE SUMMARY

Operational Technology (OT) environments demand secure and reliable network connectivity, but not every setup calls for expensive, ruggedized solutions. In many industrial scenarios, overengineering can lead to unnecessary complexity and cost. For these situations, Rackmount.IT's DIN solutions offer a purpose-built, cost-effective middle-ground.

Designed to adapt off-the-shelf IT appliances from multiple vendors, Rackmount.IT's kits allow for seamless OT integration without sacrificing durability, serviceability, or power compatibility. This whitepaper outlines how Rackmount.IT is uniquely positioned to bridge the IT/OT divide with adaptable mounting systems, industrial-grade designs, and tailored power solutions, all while maximizing existing infrastructure.

# BRIDGING IT AND OT WITH RACKMOUNT.IT DIN SOLUTIONS



The push for industrial digitalization is reshaping how organizations manage connectivity and security at the edge. OT is no longer isolated, it's becoming an integral part of enterprise networks, making it increasingly relevant for IT professionals. Traditionally, OT systems operated in air-gapped environments, physically separated from IT networks. This separation limited exposure to cyber threats and meant OT rarely fell under the scope of IT teams.

However, with the rise of remote access, real-time data monitoring, and cloud connectivity, that air gap is rapidly disappearing. OT devices are now connected to the same networks as corporate IT assets, exposing them to similar vulnerabilities, including malware, ransomware, and unauthorized access. While traditional IT gear often lacks the resilience for industrial environments, fully ruggedized OT hardware is frequently overbuilt and cost-prohibitive for use cases that don't demand extreme durability.

This shift highlights the growing need for practical, secure, and cost-effective solutions that can bridge IT and OT, especially in mixed-use environments.

Rackmount.IT's DIN product line sits at this intersection, transforming commercial-grade appliances into DIN-rail-compatible, OT-ready solutions. With built-in power converters, space-conscious layouts, and robust cable shielding, these kits are engineered for the "in-between" environments where standard IT isn't enough, but full ruggedization isn't required.

## KEY BENEFITS

- Custom-fit DC power solutions for non-standard IT voltages.
- Shielded industrial-grade components to resist EMI and vibrations.
- Easy DIN-rail installation for tight or remote cabinet deployments.

# THE VALUE OF DIN-RAIL MOUNTING IN OT ENVIRONMENTS

## DIN RAILS THE STANDARD BACKBONE OF INDUSTRIAL CABINETS

DIN rails are standard in OT, like in electrical and automation cabinets. Their modularity allows for compact, serviceable layouts, ideal for mounting network and security devices where space and accessibility are critical.

Making modern IT hardware DIN-compatible brings several operational advantages:

- Seamless integration into existing OT environments.
- Efficient use of space in crowded control panels.
- Faster maintenance and modular upgrades.

## RACKMOUNT.IT TURNING IT APPLIANCES INTO OT-READY TOOLS

With a vendor-neutral portfolio, Rackmount. IT enables reliable DIN integration for a wide range of networking and security devices:

- Built-in DC-DC converters support OT voltage standards like 24V, 48V, and high-voltage DC (up to 165V).
- Industrial-grade shielded cables and connectors ensure signal integrity in electrically noisy environments.
- Hardware is engineered for cooling efficiency and optimal mounting, even in enclosed, high-density cabinets.





## UNDERSTANDING THE “MIDDLE GROUND” WHERE RUGGEDIZATION IS, AND ISN’T, REQUIRED

Industries like oil & gas, heavy industry, and outdoor utilities often operate in harsh or hazardous conditions. These environments demand fully ruggedized gear, which can withstand:

- Wide temperature ranges.
- High vibration and shock levels.
- Moisture, dust, or explosive atmospheres.

In these cases, ruggedized equipment is non-negotiable, and Rackmount.IT can provide custom rack or wall-mount brackets to help install these bulky or DIN-only devices in unconventional spaces.

But not every OT environment is harsh. In contrast, many OT settings, like manufacturing plants, wind turbine control stations, public infrastructure, and warehouses, are controlled and stable.

These environments often benefit more from cost-effective DIN adaptations of proven IT equipment, which offer:

- Faster deployment.
- Lower TCO (total cost of ownership).
- Easier servicing and replacements.

Rackmount.IT specializes in supporting these “middle-ground” OT scenarios, delivering a smart mix of performance, safety, and affordability.

# REAL-WORLD APPLICATIONS

## FLEXIBLE DEPLOYMENTS IN ACTION



### AUTOMOTIVE MANUFACTURING

#### SMART POWER ADAPTATION FOR INDUSTRIAL CONTROL PANELS

##### CHALLENGE

A leading German automotive manufacturer needed to install a compact firewall in their factory's industrial control cabinets, which operated on 24V DC. The appliance required 12V input and DIN-rail mounting, but the space and power setup didn't align with off-the-shelf solutions.

##### SOLUTION

Rackmount.IT delivered a tailored DIN kit with an integrated 24V-to-12V DC-DC converter and compact, industrial-grade mounting system. The solution ensured seamless integration into the cabinet's existing layout.

##### RESULT

A fast, cost-efficient deployment with no need for cabinet modifications, enabling the plant to enhance network security without disrupting production or overhauling infrastructure.



## RENEWABLE ENERGY

### STABLE POWER FOR REMOTE WIND TURBINE INFRASTRUCTURE

#### CHALLENGE

Wind turbine installations in remote areas required edge network devices powered by 12V, while local infrastructure only offered 48V DC. Fluctuating power levels and harsh conditions introduced reliability concerns.

#### SOLUTION

Rackmount.IT developed a DIN-mounted power kit with robust 48V-to-12V DC-DC conversion, designed for use in vibration-prone and weather-exposed turbine enclosures.

#### RESULT

The solution delivered stable, consistent power to edge appliances, improving uptime, reducing maintenance visits, and ensuring network continuity in critical energy infrastructure.



## POWER SUBSTATIONS

### COMPACT HIGH-VOLTAGE COMPATIBILITY IN CONFINED SPACES

#### CHALLENGE

A power utility operator needed to deploy IT-grade networking equipment in substations using high-voltage 54–165V DC power. Limited cabinet space and strict safety standards complicated integration.

#### SOLUTION

Rackmount.IT engineered a space-efficient DIN kit with built-in high-voltage DC-DC conversion, shielding, and thermal optimization, all packaged to fit tight electrical compartments.

#### RESULT

The deployment was fully compliant with substation safety protocols, allowing for secure, reliable IT integration without any changes to cabinet design or layout.



## MUNICIPAL INFRASTRUCTURE

### CUSTOM MOUNTING FOR RUGGED EQUIPMENT

#### CHALLENGE

A municipality in the Netherlands needed to install a full-sized, rugged switch inside a narrow outdoor electrical enclosure. The enclosure's tight dimensions and atypical layout made it impossible to use traditional rackmount solutions.

#### SOLUTION

Rackmount.IT developed a custom mounting bracket that positioned the switch at a specific angle, allowing it to fit securely within the limited space while maintaining proper airflow and serviceability.

#### RESULT

The municipality achieved a stable and accessible installation without redesigning the enclosure, enabling deployment of rugged hardware in a challenging real-world scenario that the original vendor couldn't accommodate.

# PRODUCT LINE-UP

## SCALABLE SOLUTIONS FOR ANY VENDOR

We use a largely mechanized production process to fabricate our racks, which allows us to keep them affordable without compromising quality. The products are assembled with the help of robots. Inspection, quality control and packaging are still 100% human-led and are made on Dutch soil.

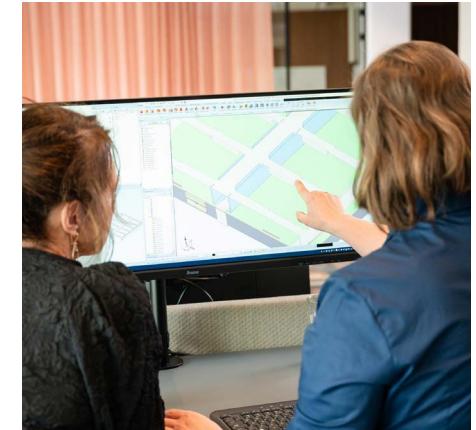


### DIN-KITS

Converting IT-appliances for OT-environments, like the RM-FR-D21.

### DC-DC POWER CONVERTERS

Including models like PW-DC-48-25 and PW-DC-54-165 for low and high-voltage integration.



### CUSTOM KITS FOR RUGGED AND DIN-ONLY DEVICES

Providing mounting options in 19" racks, outdoor boxes, and edge cabinets.



## WHY RACKMOUNT.IT IS THE GO-TO PARTNER FOR INDUSTRIAL DEPLOYMENTS

Whether you're extending IT infrastructure into the field or overcoming deployment roadblocks for rugged gear, Rackmount.IT delivers the expertise and hardware you need:

### VENDOR-AGNOSTIC FLEXIBILITY

Supports leading networking and security brands.

### ENGINEERED FOR OT CONDITIONS

Durable, EMI-resistant, thermally efficient hardware.

### COST-EFFECTIVE

Avoids ruggedization unless necessary, reducing deployment costs.

### CUSTOM SOLUTIONS

Designed for the real-world constraints of industrial cabinets and enclosures.

click here  
to visit our  
website!



## CONCLUSION

Bridging the gap between IT and OT is no longer optional, but it doesn't always require a rugged overhaul. With Rackmount.IT's DIN and hybrid solutions, organizations can extend the value of existing IT hardware into industrial environments safely, affordably, and smartly. Whether you're deploying in a factory, wind farm, substation, or a smart city cabinet, or facing install challenges with rugged gear, Rackmount.IT is your go-to partner for bridging the digital divide between IT and OT.

RACKMOUNT.IT, WHERE SMART  
OT DEPLOYMENT BEGINS.



**ROBERT JACOBS**  
Product Manager

Robert Jacobs brings a passionate and detail-oriented approach to product management at Rackmount.IT. With a keen eye for innovation and a commitment to delivering top-quality rack mount kits, Robert excels in aligning product development with customer needs.

His vision emphasizes seamless integration, user-friendly designs, and robust performance. Robert's leadership ensures that our products not only meet but exceed industry standards, driving success for our resellers and distributors in the IT security sector.



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