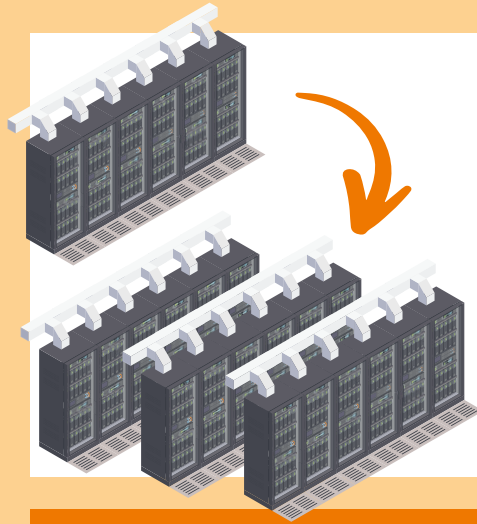


# Power-Intensive Digital Applications and AI Continue to Drive Data Center Demand

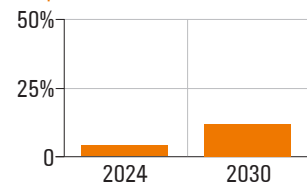


## RACK DENSITIES INCREASING

Hyperscale data centers are projected to increase their rack density at a compound annual growth rate (CAGR) of 7.8%

Electric power needs of data centers are expected to grow to about three times higher than current capacity by the end of the decade, going from between 3% and 4% of total US power demand today to between 11% and 12% in 2030. (McKinsey) – and one of the key drivers are the adding of more and more server racks.

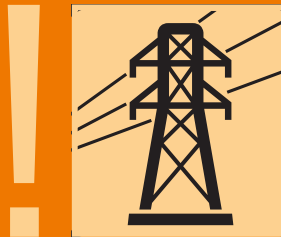
Data centers projected % of total US power demand



Source: McKinsey

## GRID CHALLENGES

US electricity demand is projected to grow 15% by 2029, five times faster than previously estimated, driven by industries like semiconductor manufacturing, AI and battery production, according to a report by *Grid Strategies*.



## FACTORS FUELING GROWTH FOR DATA CENTERS

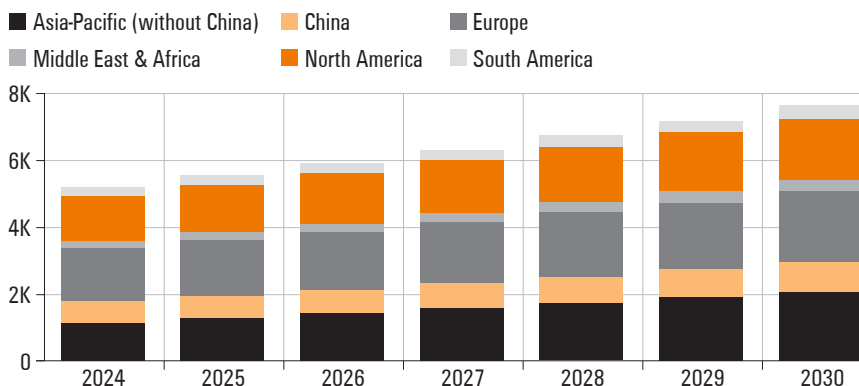
- Artificial intelligence (AI) and machine learning.
- Adoption and utilization of power-intensive digital applications.
- Increase in hyperscale data centers.



## PUBLIC DATA CENTERS WORLDWIDE TO INCREASE 47% BY 2030

By the end of 2024, there will be 5,709 public data centers worldwide – 5,186 colocation sites and 523 hyperscale sites. Asia-Pacific has the highest concentration of data center locations, with Europe and North America following. ABI Research anticipates 8,378 data centers will be in operation by 2030.

Number of colocation data centers by region, 2024-2030



Source: ABI Research (MD-NGDC-24)

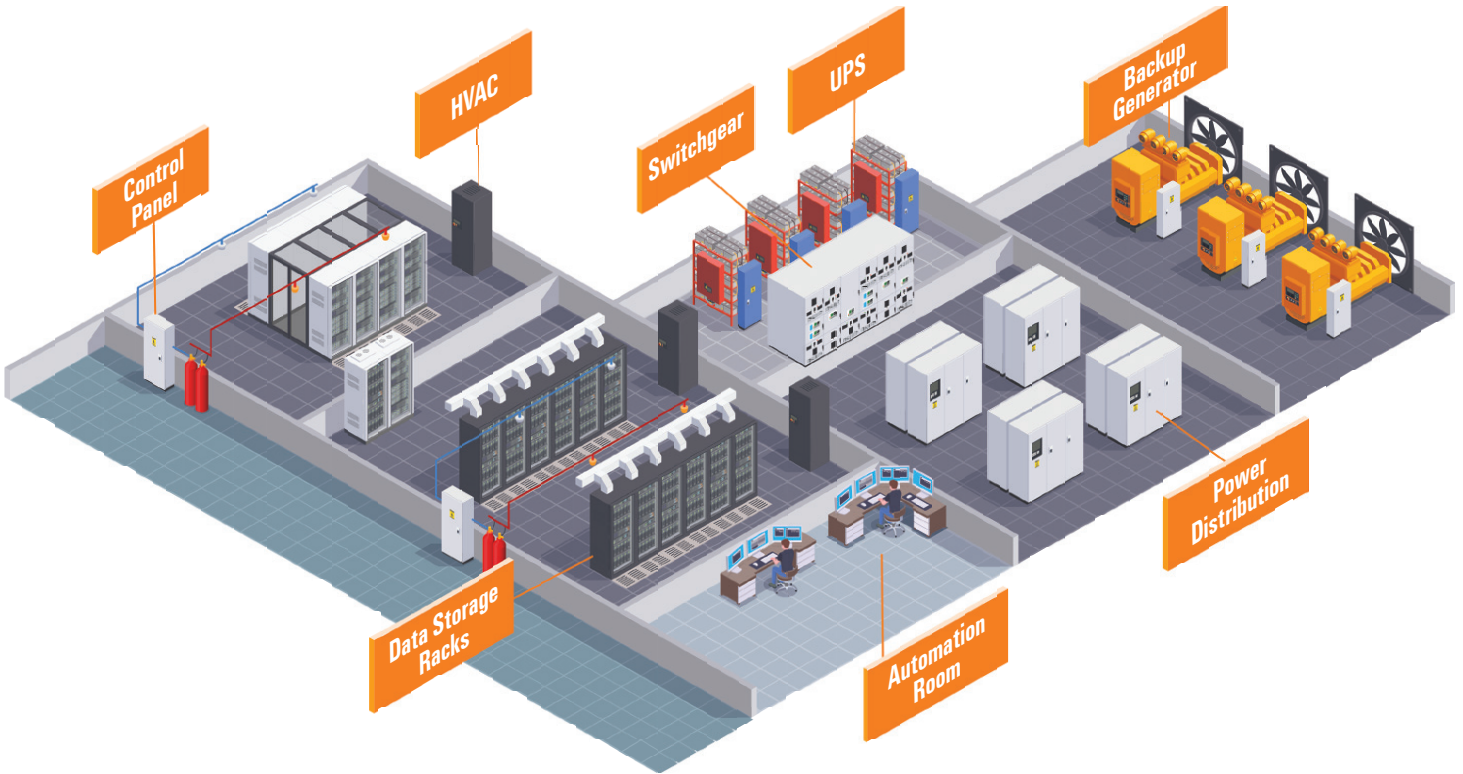





Weidmüller delivers products and solutions for reliable power sources, sustainability of power, upstream infrastructure for power access and power equipment within data centers.




We have the products and solutions to tackle these challenges - today. Take a look at our offering for every part of your data center.

## Weidmüller Data Center Connectivity & Automation Solutions

Delivering reliability, redundancy and sustainability



	Automation Solutions 	Cabinet Products 	Device & Field Connectivity 
Control Panel	<ul style="list-style-type: none"> <li>Analog signal conditioning</li> <li>Energy monitoring</li> <li>HMI</li> <li>Industrial ethernet</li> <li>PAC controllers w/ redundancy</li> <li>Power supplies</li> <li>Remote I/O</li> <li>Security routers</li> <li>UPS</li> </ul>	<ul style="list-style-type: none"> <li>Circuit breakers</li> <li>OVP</li> <li>Relays</li> <li>Terminal blocks</li> </ul>	<ul style="list-style-type: none"> <li>Data connectors</li> <li>FrontCom service interfaces</li> <li>HDC: ModuPlug</li> <li>RJ45 patch cords</li> </ul>
HVAC	<ul style="list-style-type: none"> <li>Industrial ethernet</li> <li>PLCs</li> <li>Power supplies</li> <li>Remote access gateways</li> <li>Remote I/O</li> </ul>	<ul style="list-style-type: none"> <li>Circuit breakers</li> <li>OVP</li> <li>Relays</li> <li>Surge protection relays</li> <li>Terminals</li> </ul>	<ul style="list-style-type: none"> <li>HDC: Outdoor compatible housing</li> <li>PCB signal terminal blocks &amp; connectors</li> </ul>
Switchgear	<ul style="list-style-type: none"> <li>PAC controllers w/ redundancy</li> <li>Power supplies</li> <li>Remote I/O</li> </ul>	<ul style="list-style-type: none"> <li>OVP</li> <li>Relays</li> <li>Terminals</li> </ul>	<ul style="list-style-type: none"> <li>HDC: Cabinet wall solution</li> </ul>
UPS	<ul style="list-style-type: none"> <li>Industrial ethernet</li> <li>Power supplies</li> <li>UPS</li> </ul>	<ul style="list-style-type: none"> <li>Enclosures &amp; cable glands</li> <li>Surge protection</li> <li>Terminal blocks</li> </ul>	<ul style="list-style-type: none"> <li>Data connectors</li> <li>FrontCom service interfaces</li> <li>PCB signal terminal blocks &amp; connectors</li> <li>RJ45 patch cords</li> </ul>

	Automation Solutions 	Cabinet Products 	Device & Field Connectivity 
Backup Generator	<ul style="list-style-type: none"> <li>HMI</li> <li>PLCs</li> <li>Power analyzer</li> <li>Power supplies</li> <li>Remote I/O</li> <li>UPS</li> </ul>	<ul style="list-style-type: none"> <li>Terminals</li> </ul>	<ul style="list-style-type: none"> <li>HDC: Motor connection</li> <li>PCB Signal terminal blocks &amp; connectors</li> <li>SAI M23 connection</li> </ul>
Power Distribution	<ul style="list-style-type: none"> <li>HMIs/Energy monitors</li> <li>PAC controllers w/ redundancy</li> <li>PLCs</li> <li>Power supplies</li> <li>Remote I/O</li> <li>UPS</li> </ul>	<ul style="list-style-type: none"> <li>Cabtite</li> <li>Circuit breakers</li> <li>Enclosures &amp; cable glands</li> <li>OVP</li> <li>Terminal blocks</li> </ul>	<ul style="list-style-type: none"> <li>Field power</li> <li>HDC: High power, ModuPlug, HQ 4/2</li> <li>PCB power terminal blocks &amp; connectors</li> </ul>
Automation Room	<ul style="list-style-type: none"> <li>HMIs/PCs/IPPCs</li> <li>Resma</li> </ul>	<ul style="list-style-type: none"> <li>Circuit breakers</li> <li>DIN rail</li> <li>OVP</li> <li>Surge protection</li> </ul>	<ul style="list-style-type: none"> <li>Data connectors</li> <li>RJ45 patch cords</li> <li>Single pair ethernet</li> </ul>
Data Storage Racks	<ul style="list-style-type: none"> <li>PAC controllers w/ redundancy</li> <li>Storage data controller</li> <li>UPS</li> </ul>	<ul style="list-style-type: none"> <li>Cabinet lighting</li> <li>Circuit breakers</li> </ul>	<ul style="list-style-type: none"> <li>Data connectors</li> <li>FrontCom service interfaces</li> <li>PCB signal terminal blocks &amp; connectors</li> <li>RJ45 patch cords</li> <li>SAI cordsets</li> </ul>