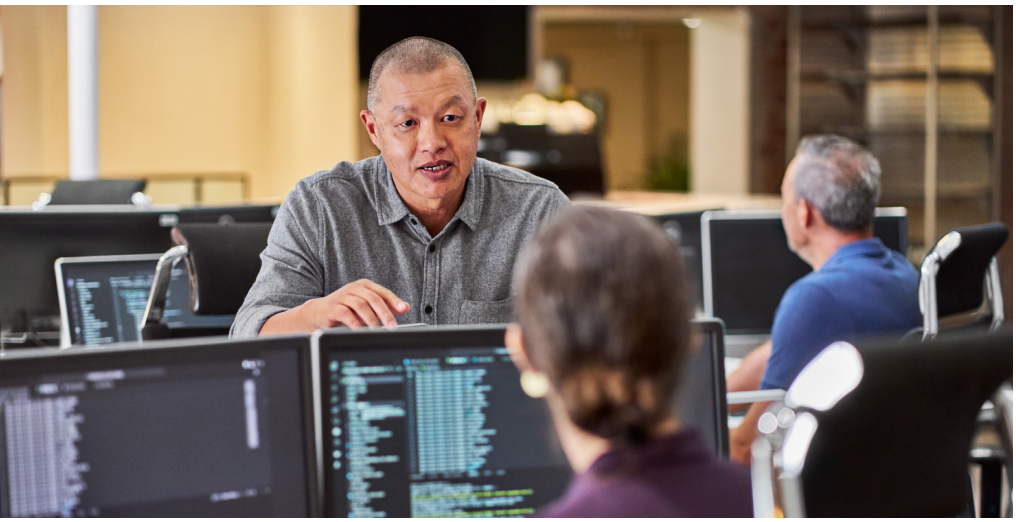
Solution overview

ENERGIZE YOUR ENTERPRISE WITH EDGE COMPUTE

HPE ProLiant DL145 Gen11—compact, resilient, AI-ready edge server



Edge computing—more important than ever before

For a growing number of industries—including retail and manufacturing—data generated at distributed edge locations holds critical insights about customers, environments, and processes. Acting on edge data enables these organizations to not only grow strategically, but also to transform the way they deliver new and better services by:

— Effectively running latency-sensitive applications where data is generated

— Saving time by processing data locally, rather than sending it back and forth to the data center or the cloud for analysis

— Capitalizing on new artificial intelligence (AI) opportunities as they emerge

While turning edge data into insights with velocity is the desired goal, some significant challenges can stand in the way of success:

— Meeting the diverse needs of edge workloads and environmental challenges

— Sustaining enterprise-grade reliability for business continuity

— Protecting data and workloads and the infrastructure

— Managing distributed and remote sites

— Ability to flex for demanding edge AI workloads

These edge computing challenges exist for large and small organizations alike, but growing small and midsize businesses (SMBs) face an additional obstacle: accessing enterprise-grade compute power. Whether their day-to-day operations include running critical business apps such as point-of-sale systems, inventory, or pricing, SMBs need reliable compute that can process and store their data, regardless of their physical environment, with the flexibility to deploy AI seamlessly.

Finding an affordable and feature-rich system that meets both enterprise and SMBs' requirements for edge AI, cost-efficiency, performance, and flexibility has been difficult—until now.

Harnessing edge AI to transform business operations

Operational resilience for retail

Retailers can increase their efficiency, reduce costs, and create better shopping experiences when they use the HPE ProLiant DL145 Gen11 server to:

— **Reduce retail shrinkage.**

- Detect fraudulent activities.
- Use AI applications such as vision AI to protect assets.
- Use video analytics to prevent ticket switching, misscanning, return fraud, and employee theft.

— **Manage inventory in real time** with instant updates that help reduce errors and improve inventory accuracy without costly data transfer fees.

— **Analyze flow** by using video feeds to identify the best locations to stock high-value goods, impulse purchase items, and/or in-store advertising.

Boost manufacturing productivity

Manufacturers can use the HPE ProLiant DL145 Gen11 to gain seamless access to data across their operations to speed decision-making, boost factory output, and deploy autonomous systems at the edge. HPE ProLiant DL145 Gen11 can help manufacturers improve:

— **Quality assurance** by leveraging AI-based video analytics

— **Production-line diagnostics** that enable timely maintenance with the power of data analytics, using data made available at the edge

— **Warehouse automation** to boost worker productivity and safety

Flexible, reliable edge compute engineered for business and AI

Uncompromising performance and efficiency for any edge workload

The NVIDIA RTX PRO 4500 Blackwell Server Edition brings the revolutionary capabilities of the Blackwell architecture to mainstream enterprise data center and edge platforms. With fifth-generation Tensor Cores, fourth-generation RT cores, and 32GB of high-speed GDDR7 memory, it delivers breakthrough performance and efficiency for demanding data processing, AI, video, and visual computing workloads in a single-slot, power-efficient design.

Built to power your business and create new AI advantages at the edge, the HPE ProLiant DL145 Gen11 server powered by AMD EPYC™ 8004 Series processors is compact and quiet, while offering very efficient and impressive processing power—making it an excellent choice to deliver great performance and support your AI initiatives.

Providing a full range of energy efficient CPUs from 8 cores up to 64 cores, this reliable, single-processor, intentionally designed edge server balances affordability with support for latest NVIDIA RTX PRO™ 4500 Blackwell Server Edition for AI workloads. Its sleek, wall-mountable design, edge economics, and near-silent operation cater to the needs of retail, healthcare, finance, and various other industries, making it an attractive alternative to traditional servers.

For edge sites with the challenging conditions or environmental constraints often found at manufacturing and energy production facilities, HPE ProLiant DL145 Gen11 has a resilient and secure enclosure to ensure seamless operation in:

— Cabinets with little air flow

— Dusty locations

— Very cold to very hot environments; the HPE ProLiant DL145 Gen11 can operate continuously in temperatures ranging from -5°C to 55°C

Offering front accessibility, a user-friendly interface, and seamless integration, HPE ProLiant DL145 Gen11 is fast and easy to set up and manage. Fully integrated with both HPE Compute Ops Management (COM) and HPE iLO, the HPE ProLiant DL145 Gen11 is a plug-and-play server. You can ship the server to hundreds of locations, and, through auto-configuration capabilities, low-touch provisioning is now a reality—requiring only power and Ethernet to securely onboard your distributed edge servers to the network. And because the HPE ProLiant DL145 Gen11 operates at the edge, you can reduce reliance on the cloud, resulting in lower latency and reduced bandwidth utilization and connectivity.

Table 1. Delivering big value to resolve tough business challenges

Business challenges	HPE ProLiant DL145 Gen11 value
Boost performance and quicken frontline insights for any edge workload while reducing reliance on the cloud infrastructure and managing costs	— Compact, right-sized server designed for edge locations — Support for up to 128 virtual machines (VMs) and 480 containers, which brings enterprise-class performance to the edge to deliver faster insights
Meet unique environmental requirements and space restraints at the edge	— Compact, quiet, and powerful, the server can be located anywhere for any workload — Measuring ~15 inches wide and 16 inches deep, the DL145 can be placed in a cabinet or a rack, or you can mount it on a wall or on a desk — Greater environmental tolerances, including shock absorbance, temperature range, and optional dust filter
Reduce management complexity of a distributed compute environment	— Enabling you to deploy, secure, and manage everywhere with ease — Standardize management across your organization through global visibility from a unified console — Achieve faster server firmware updates by replacing manual, piecemeal updates with automated, policy-based updates—sealing a key vulnerability
Secure your data and property	— Enterprise-grade security and support — Data is secured against outside breaches from the moment the server is plugged in and authenticated to the network — Multilevel security protects your data and your devices: • Built-in security with AMD Infinity Guard, AMD Secure Processor and AMD "Zen" architecture[1] • Silicon root of trust from HPE, HPE iLO 6, IDevID, and platform certificates • Security for physical property, including a chassis intrusion kit, a bezel lock, and a Kensington lock

Modernize lifecycle management with cloud simplicity

Delivered through GreenLake cloud, HPE Compute Ops Management transforms your IT environment to drive better efficiency of server deployments, provides secure connections from edge and data center to cloud, and automates tasks for a low touch experience. This software-as-a-service solution simplifies server lifecycle operations. With HPE Compute Ops Management, you can transform business operations and pivot your team from reactive to proactive with a cloud experience that delivers global visibility, insight, and speed across your compute environment, wherever it lives.

[1] GD-183: AMD Infinity Guard features vary by EPYC processor generations and/or series. Infinity Guard security features must be enabled by server OEMs and/or Cloud Server Providers to operate. Check with your OEM or provider to confirm support of these features. Learn more about Infinity Guard at amd.com/en/products/processors/server/epyc/infinity-guard.html

The HPE ProLiant DL145 Gen11 server is powered by AMD EPYC 8004 Series processors

Together the HPE ProLiant DL145 Gen11 Server and AMD EPYC 8004 Series processors enable key capabilities:

— Keeping data secure with built-in security features

— High performance and energy efficient computing in an optimized, single-processor server

— Broad operating temperature ranges, requiring lower direct current (DC) power feeds

— Quieter operation and tolerant to vibration

— Lower operating costs than traditional power-hungry and nonstandard alternative platforms

— AI ready with support for latest NVIDIA RTX PRO 4500 Blackwell Server Edition

— Lower operating costs and easier to deploy versus traditional data centers and specialized servers

Learn more at

HPE.com/ProLiant/DL145-gen11

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