Hewlett Packard Enterprise

Solution brief

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RUGGED EDGE COMPUTING SOLUTIONS THAT MEET FEDERAL REQUIREMENTS

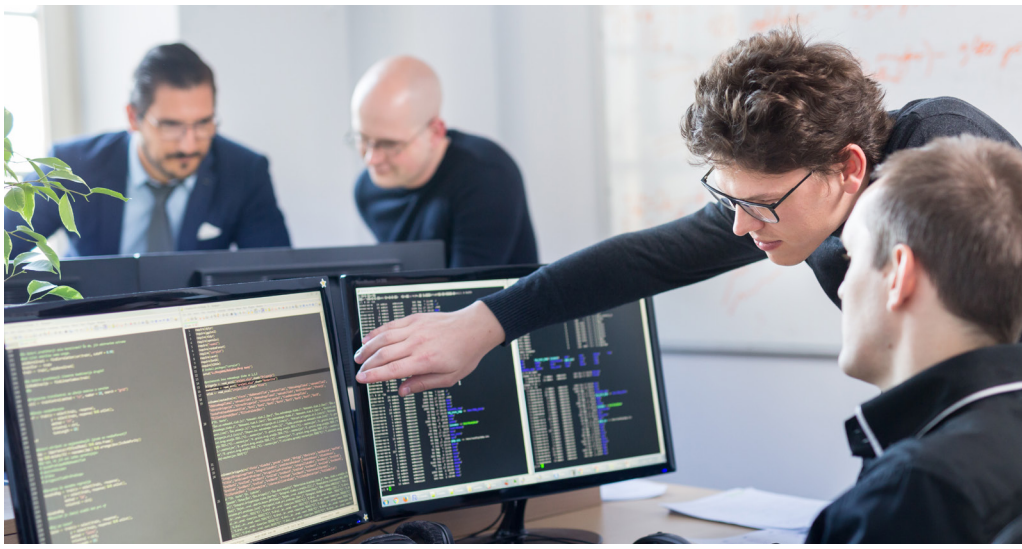
HPE Edgeline EL8000—the most capable, rugged server system on the market[1]

Uncompromised data center compute and application stacks support diverse workloads at the edge

The U.S. armed forces can leverage the high-performance, highly efficient HPE Edgeline EL8000 system to handle a wide variety of workloads and use cases at the edge:

- Video surveillance and safety/security
  - Near real-time object detection using artificial intelligence (AI) from high-resolution images
  - Common operational environments (for example, full motion video, logging, chat, collaboration)
  - Local analysis to enhance performance/speed and optimize networks
  - Correlation of images and data streams
  - Maximized data storage agility, whether at the edge, in the data center or in the cloud
  - Industrial vision and quality inspection
  - Flyaway kits that enable ubiquitous connectivity to support communications among disparate remote teams
  - Deployable cybersecurity node
  - Spectrum analysis; security controls and radio frequency (RF) deconfliction
- Platform and mission management
- On-site command control and intelligence
- VDI and tactical LAN in tactical operations and intelligence centers
- On-vehicle compute systems (for example, enabling atmospheric planes to gather and process data in real time and enabling ships to gather oceanic data and process it locally in real time)
- Testbed for future capabilities
- Facial recognition via web cameras
- Commercial solution for classified information sharing

[1] Contains four servers, each with up to 28-core platinum Intel Xeon Scalable processors, able to operate continuously in 55°C temperatures, in a small 8.6" x 8.7" x 16.9" form factor.



GREATER PERFORMANCE AND EFFICIENCY ON TODAY'S DIGITAL BATTLEFIELD

Edge computing is a hot technology topic defined in many ways, depending on the industry and how the technology is used in the field. In the case of U.S. Army, Navy, Marine Corps and Air Force, edge computing is a proven approach for driving greater success on today's digital battlefield.

Currently the primary mechanism for real-time situation awareness, the digital battlefield has transformed operations of the U.S. armed forces, enabling its troops to overcome the challenges of the 21st century. Today, U.S. tanks, fighting vehicles, helicopters, artillery, and convoy/support vehicles are all interconnected within the digital battlefield—helping to improve combat power, responsiveness and resilience.

To support the digital battlefield and enable ubiquitous connectivity and information sharing at the edge, HPE developed the HPE Edgeline EL8000. As the flagship offering in the HPE Converged Edge System portfolio, the EL8000 is purpose-built for the extreme conditions found at the edge—providing greater performance and efficiency during military operations in austere environments or at remote diplomatic sites around the world.

HPE EDGELINE EL8000—THE NEW STANDARD FOR THE INTELLIGENT EDGE

Compact and rugged, the HPE Edgeline EL8000 is a GPU-enabled, four-node, 28-core server system with the power to deliver unprecedented levels of compute, storage, and networking performance at the edge. The EL8000 is powered by the same Intel® Xeon® Scalable processors as mainstream data centers—enabling the EL8000 to support the most demanding applications, including artificial intelligence (AI)

and machine learning (ML). Leveraging built-in AI and ML capabilities enables EL8000 to deliver immediate insights from data generated at the extreme edge of the network—including signals intelligence (SIGINT), video analytics (facial recognition), data analytics (data reduction and visualization) and more.

When floor space is limited, a wide range of wall-, rack-, or shelf-mounting options opens up a variety of placement possibilities. In addition, the EL8000 has no special power requirements; simply plug the system into an ordinary wall socket.

The EL8000 is certified for a variety of industry standards, including NEBS Level 3, MIL-STD-810G, or IP50, depending on the options you select.

Carry-on toolbox size for easy transportation

Taking the HPE Edgeline EL8000 to the edge of extreme environmental and operational conditions is seamless and secure, thanks to the system's UltraLife toolbox-size enclosure. With the UltraLife commercial airline carry-on case, you can place the EL8000 system under your seat in first class or in the overhead storage compartment. To protect the EL8000 and its mission-critical components while traveling from the desert to the Arctic, the ruggedized case protects against high- or low-temperature exposure. And for protection of the EL8000 while at sea, the UltraLife enclosure provides a watertight fit.

HPE EDGELINE EL8000 CONVERGED EDGE SYSTEM AT A GLANCE

Compact chassis with unmatched SWaP-C3 metrics	Configurations per 5U half-width block	Ruggedized	Superior management and security	Flexible design for a wide range of deployments
• **Size:** 8.6" x 8.7" x 16.9"; 5U half-rack width • **Weight:** 50 pounds • **Power:** Uninterruptible power supply; 110V/15A AC; 24V to 48V DC • **Compute:** 4 servers, up to 28 cores, 20 TB storage, 1.5 TB RAM, 10 Gb switches • **Cooling:** 0°C to 55°C (131°F) • **Cost:** Significantly less expensive than existing, less-capable rugged edge servers	• Up to 4 high-performance compute blades • Storage chassis with >120 TB raw capacity; 8 SFF SSDs with hardware RAID	• 0°C to 55°C operational temperature specification for continuous operation • Tested to higher levels of shock and vibration vs. typical servers	• HPE Integrated Lights Out (iLO 5) • HPE Silicon Root of Trust • Backed by the HPE Trusted Supply Chain	• NEBS compliant • Edge-optimized management • Modular form factor • Rapid serviceability • Multinode local cluster capability • High performance for the most demanding applications • Energy efficient; smart fan/ cooling design, with 1,500W redundant power load

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