



TRANSFORMING MANUFACTURING WITH AI AT THE EDGE

Together, HPE, C3 AI, and Intel accelerate time-to-action with the intelligent edge

Deliver value at the edge with an intelligent, turnkey solution

- Accelerate time to value
- Reduce complexity of developing enterprise AI applications
- Enable multi-node and multi-tenant workload processing
- Secure supply chain and cyber-resilient technology
- Become cloud neutral

Built on powerful HPE Edgeline systems, the C3 AI Suite makes it easy for manufacturers to unleash AI at the edge

C3 AI software is layered on top of a container platform to build a comprehensive and adaptable solution. This creates a robust platform for rapidly developing, deploying, and operating high-value enterprise AI applications.



UNLEASHING A NEW AGE OF MANUFACTURING

By distributing data center class artificial intelligence (AI) and computational horsepower to the edge where data is created and decisions need to be made in near real time, companies can eliminate the latency between data collection, analysis, and action. They can develop faster, more effective ways to capture troves of data and derive immediate insights at the edge, without the need to send to the cloud or core data center. Deploying AI at the manufacturing edge allows businesses to anticipate potential disruptive events in their operations.

Hewlett Packard Enterprise, C3 AI, and Intel® have partnered to provide a fully integrated AI platform that is purpose-built for the edge. It is a turnkey solution that can be delivered and installed at the business's location to dramatically accelerate time to value. The solution was developed for rapid deployment of production AI applications at the edge. Whether that's a factory floor, an oil rig, an airport, or other remote locations. This AI solution runs on the HPE Edgeline EL8000 Converged Edge system providing the compute power to analyze data where the data is created. Now, you are ready to take action to optimize operations while maintaining stringent data governance, compliance, low latency and security requirements. This AI solution comes preconfigured, integrated, optimized, and tested, combining the market-leading C3 AI Suite, a containerized development environment:

- **C3 AI Suite:** A comprehensive hybrid AI platform for rapidly developing, deploying, and

operating pre-built, configurable, high-value enterprise AI applications that support any value chain in any industry.

- **Red Hat® OpenShift Container Platform (OCP):** Enterprise container development environment orchestrated and managed by Kubernetes.
- **3rd Gen Intel® Xeon® Scalable processors deliver a balanced architecture.** The only x86 CPU with extensive software optimizations like Intel® Deep Learning Boost, the new processors make it possible to infuse AI into every manufacturing application.
- **HPE Edgeline EL8000:** Purpose-built Edge/SWaP-optimized platform designed to execute high-performance AI and analytics tasks. Equipped with top-line Intel Xeon Scalable processors. Also equipped for optional accelerators when needed for hardcore inference and analytic workloads.

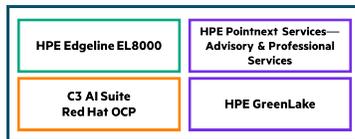
FROM PREDICTIVE TO PRESCRIPTIVE ANALYTICS

Using AI models to present actionable insights, this solution aggregates plant floor data from assembly-line equipment, tools, sensors, video cameras, and operational systems, into a common dashboard for better visibility into all operations.



Solution brief

Deploy AI at the Industrial Edge with a comprehensive solution



Value for business leaders and IT:

- Accelerated time to value with pre-integrated software, pre-configured, fully tested, and validated on the HPE EL8000 Converged Edge System
- Reduce complexity of developing enterprise AI applications

Value for data scientists:

- Training and inferencing solutions at the edge solve the challenge of latency inherent to the data center or cloud, including issues of latency, security and data egress cost.

Resources

hpe.com/edgeline

[Intel newsroom: 3rd Gen Xeon Scalable Processors](#)

[Intel Deep Learning \(DL\) boost](#)

[Openshift.com/products/container-platform](https://openshift.com/products/container-platform)

C3.ai/c3-ai-suite

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By capturing all relevant data—with the capability to analyze it in near real-time—businesses can transform their operations from reactive (e.g., scheduled maintenance) to **predictive**. The business benefits are multifold, including improved decision-making, better plan resource utilization and spares inventory, and a reduction in unplanned downtime while improving operational efficiencies (i.e., overall equipment effectiveness).

For companies utilizing computer vision technology for quality control, this AI solution enables rapid, accurate insights into potential anomalies. Additionally, it helps lower the total cost of applying computer vision, sensor data aggregation, and various types of analytics by providing a comprehensive AI platform with a “single pane of glass” view of the data. This holistic approach to AI enables businesses to accelerate and improve their quality control processes, which can increase factory throughput, product quality, and worker productivity while reducing waste. Now, operations managers can equip their production line with monitoring and automation, faster.

DEPLOYING A COMPREHENSIVE AI PLATFORM

HPE leads the industry in delivering high-performance platforms that enable unmatched speed and resilience. This AI solution is built on HPE Edgeline EL8000 Converged Edge systems to meet the demands of diverse AI workloads and edge deployments. The HPE Edgeline EL8000 Converged Edge system is designed to execute high-performance AI and analytics tasks with increased agility and ultra-low latency. This system is engineered to withstand harsh environments and provides remote access to the same applications used in the core. It is portable in an **airline carry-on case** that you can take with you to the data source. It is also backed by edge-optimized serviceability and remote systems management, so you can focus on turning data into better manufacturing

outcomes. The server architecture is based on Intel Xeon Scalable processors to give you increased compute performance and speed and comes in a broad range of configuration choices in accelerators, networking, storage, and I/O for optimizing your unique edge workloads.

CONCLUSION

The expansion of AI is revolutionizing the manufacturing industry. Companies are hard at work to capitalize on this new era of intelligence by pursuing AI innovation at the edge that can scale. At HPE, we understand that AI, data, and analytics are integral to your production goals and would like to help your organization unlock the full value of edge computing. HPE offers industry-leading solutions and services with cutting-edge C3 AI tools in a comprehensive container environment to help operationalize your environment for AI.

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