SOLUTION BRIEF

Edge Orchestration at Scale: Centralized Control of Remote, Rugged Computing

Enterprises are pushing intelligence closer to the operational edge. Edge computing and containerized applications provide improved uptime, real-time insights, and more flexible operations across distributed locations. Yet many enterprises struggle to deploy and manage these systems consistently at scale.

Avassa and OnLogic address this challenge together. By combining rugged industrial hardware with a centralized edge application management platform, the joint solution enables enterprises to deploy, operate, and scale edge workloads across their entire edge environment with confidence. The result is a practical, production-ready foundation for modern businesses.

Unpack the challenges.



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The Challenge

As businesses expand digital initiatives across physical locations, several challenges repeatedly surface.

1. **Harsh remote environments:** Edge systems operate in all types of edge environments, exposed to heat, dust, vibration, electrical noise, public areas, and limited physical access. Hardware failures or instability directly impact operations.
2. **Fragmented operations across sites:** Enterprises often run multiple locations with different configurations, vendors, and processes. Inconsistent deployment and management of edge applications increases operational risk and device support costs.
3. **Scaling edge workloads securely:** Deploying containerized applications across dozens or hundreds of sites requires secure, repeatable processes for updates, monitoring, and access control. Manual workflows do not scale.
4. **Pressure to improve efficiency without disruption:** Businesses must introduce new capabilities while minimizing downtime and service calls, and maintaining safety and compliance.

Together, these challenges slow adoption and limit the value of edge computing.





The Solution: A Full-Stack Edge Platform

Avassa and OnLogic deliver an integrated edge solution designed for enterprises.

OnLogic provides rugged, configurable industrial computers designed for long-term operation. Avassa provides a centralized platform for deploying, managing, and securing containerized applications across distributed edge locations.

The solution supports edge computing use cases including automation, machine vision, quality inspection, predictive maintenance, energy optimization, and edge AI. By aligning reliable hardware with automated software operations, businesses gain a standardized edge platform that scales across sites.

The joint solution supports customer choice of Linux operating system, enabling businesses to align edge deployments with existing IT and OT standards, security policies, and long-term support models. Avassa operates independently of the underlying operating system, while OnLogic systems provide a flexible hardware foundation that avoids OS lock-in and simplifies integration with established software environments.

Use Cases

- Standardized edge platforms across multiple distributed locations
- Offline resilience and autonomy
- Remote management and deployment of edge applications and AI models
- Machine vision and quality inspection at the edge
- Predictive maintenance and condition monitoring
- Local analytics for production optimization
- Secure remote access and monitoring for OT and IT teams



Why OnLogic

Reliability and longevity are critical for enterprise business operations. OnLogic systems are purpose-built for industrial environments where downtime impacts throughput, safety, and revenue.

- Built-to-order systems tailored to each customers' requirements, including CPU, memory, storage, and I/O
- Industry certifications and application-specific testing for enterprise use cases
- Customization options such as custom BIOS, system images, branding, and even full custom system development
- Security features, including Intel® Platform Trust Technology and optional TPM
- Long lifecycle support aligned with multi-year projects

OnLogic Features for the Edge

- Flexible I/O for direct connection to sensors, GPUs, cameras, PLCs, and other existing infrastructure
- Fanless designs for enclosed cabinets and particulate-rich edge environments
- Rugged platforms supporting wide temperature ranges and variable power input, and resistant to damage due to shock, vibration, and interference

Why Avassa

Avassa enables enterprises to operate edge applications and infrastructure as a managed platform rather than a collection of isolated systems.

The platform simplifies deployments, updates, and monitoring of applications across operational edge sites. It allows businesses to roll out new capabilities, respond to issues faster, and maintain visibility across edge locations without increasing operational complexity.

Key Capabilities

- **Remote lifecycle management —** Automated deployment and updates of applications and operating systems across distributed locations.
- **Application resilience —** Built-in fault tolerance and self-healing to maintain production during network disruptions or partial failures.
- **Operations at scale —** Designed to manage large fleets of edge systems across multiple locations and regions.
- **Linux flexibility —** Support for customer-selected Linux operating systems, enabling consistent governance, validation, and lifecycle management across locations without changing the edge management model.
- **Intrinsic security —** Secure communication, protected application data, and controlled access between edge locations, data centers, and cloud systems.
- **Device discovery and observability —** Automatic detection of connected devices combined with real-time system insight and remote diagnostics.
- **Multi-tenancy —** Strong isolation between applications, enabling multiple workloads to run safely on shared edge infrastructure.





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Next Steps

Learn how Avassa and OnLogic can help enterprises standardize edge deployments, improve operational resilience, and scale digital initiatives across distributed edge locations with a proven edge computing platform.

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