

Stratus ztC™ Edge and AVEVA Edge

A reliable component of Edge-to-Enterprise Solutions



There has never been a more dynamic time in the industrial automation market than right now. By embracing the potential of automated technology, organizations of all sizes will have the building blocks to make good on the promises of digital transformation.

A variety of new solutions, products and applications promise greater control of complex environments and deeper insights through advanced analytics and machine learning. Yet this pace of change presents challenges including managing the complexity of new or upgraded applications while ensuring that the overall solution is easy to maintain and expand without requiring expensive resources or internal SMEs whose time is better spent elsewhere.

Two approaches being employed to address these challenges are Cloud-based analytics and Edge computing, each of which are helping companies realize the full benefits of digital transformation and the Internet of Things (IoT). The cloud and edge both offer benefits to address part of this challenge, yet they are very different. Cloud computing provides the storage capability and compute resources to run large scale analytics and apply the latest technology including machine learning. Edge computing enables control, HMI and real-time analytics closer to the asset level environment, while enabling on-premise enterprise-wide systems and cloud applications.

Key benefits

- **Integrated virtualization and redundancy** – ztC Edge virtualization and redundancy are pre-integrated and configured out of the box. Deploying AVEVA Edge doesn't require IT skills.
- **Industrial Grade and Edge Ready** – the ztC Edge is Class I, Division 2 certified, uses a fan-less design, rated at -40 to 60 deg C, 10 to 95% humidity, with 5-500 Hz vibration. You can operate AVEVA Edge anywhere.
- **Reliable Edge to Cloud Architecture** – Stratus ztC Edge and AVEVA Edge handles latency, bandwidth, proximity and security issues that cloud computing can't offer.
- **Single partner from Edge to Enterprise** – Scalable and Extensible, Stratus Technologies Integrates seamlessly with AVEVA Edge and the rest of the AVEVA suite of software solutions.

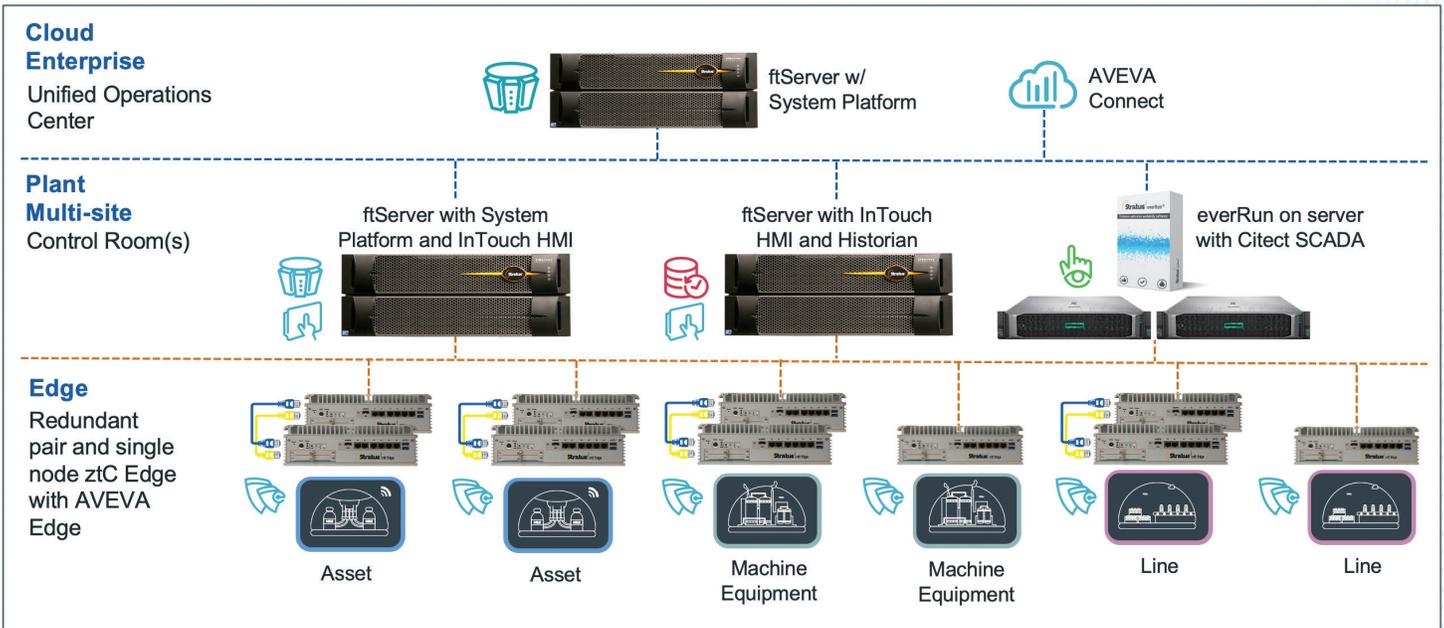
Selecting the right partners for technology implementations at the Edge is critical for automation and control specialists which is why AVEVA and Stratus have partnered to bring you a dependable and reliable solution—from the Edge to the Enterprise and the Cloud.

Why AVEVA and Stratus?

Industrial Edge deployments often are in remote locations where support can be challenging for OT professionals and where IT is generally not present at all. The more remote the environment, and the more critical the application, the greater the requirement to have proven, reliable solutions that can be remotely managed and upgraded. That is where the combination of Stratus ztC Edge and AVEVA Edge become a valuable and powerful solution.



Edge Infrastructure with AVEVA Applications Running on Stratus Computing



Stratus Technologies’ ztC™ Edge simplifies Edge computing. Stratus purpose-built platforms are simple to deploy and operate, protected to provide security from unplanned downtime and cyber-attacks, and operate autonomously, indicating when and what support and maintenance may be required.

AVEVA provides state-of-the-art automation solutions with a modern design, mature architecture and rich feature set that is open-standards based and easy to use. For Edge deployments, AVEVA Edge can be tailored to specific requirements. The core applications are HMI with SCADA, but also include IoT/Industry 4.0 solutions for a broad range of operating environments.

The combination of AVEVA Edge running on Stratus ztC Edge provides a flexible and comprehensive solution that can be rapidly deployed and easily maintained and updated providing peace of mind to the OT team tasked with keeping an increasing number of Edge applications controlling and monitoring production lines up and running. As IoT and Industry

4.0 applications are increasingly adopted, AVEVA Edge running ztC Edge can be used to collect and analyze data from multiple assets or production lines. This allows the OT team to capture real-time analytics and aggregate, filter and normalize data before transport to the cloud for additional analysis.

“One of the biggest concerns of any operator is uptime—you need a reliable ‘always up’ solution to run our software, and Stratus plays a very important role in the deployment of a secure and always up solution.”

Dr. W. Jarrett Campbell
 Director, Strategic Alliances Marketing at AVEVA

AVEVA Edge

AVEVA Edge includes all the tools you'll need to make SCADA and HMI applications with real power behind them. The development environment enables you to develop once and deploy anywhere. AVEVA Edge HMI supports:

- Windows runtime platforms (including 32 and 64 bit), ranging from Windows Embedded Compact, Windows Embedded Standard, Windows 7/8/10 and Windows Server Editions (Server 2012/2016), along with built-in support for local or remote (web) based visualization.
- Runtime edition (IoTView) available for Linux and other embedded platforms.
- OPC UA and OPC Classic (HDA and DA), trends, alarms, reports, recipes and built-in SQL database support as standard features.
- Customers can build powerful graphical displays and can take advantage of 250+ available communication drivers for all major PLC products.



ztC Edge

Stratus ztC Edge is a simple, protected and autonomous Edge Computing platform for industrial and related applications. ztC Edge delivers industrial applications quickly and easily, increases efficiency, and minimizes risk. ztC Edge requires little operator time and effort to deploy, manage and maintain, reducing overall TCO.

- **Simple**

- **Ease of Management** – Deploying AVEVA software in the Stratus Technologies platform is as easy as installing an image of your application which facilitates install and deployment across multiple locations or sites.
- **Faster Commissioning time** – Once your AVEVA Edge, System Platform, Historian, or MES applications are complete, tested and ready to run, it's just a matter of installing into the Stratus Edge Computing Platform.

- **Protected**

- **Integrated virtualization and redundancy** – The virtualization and redundancy capabilities of Stratus Technologies are all pre-integrated and configured out of the box. There are no package hardware pairs or clustering that need to be specially cabled together or configured.
- **Industrial Grade** – For AVEVA software installed at the Edge, the Stratus ztC Edge is Class I Division 2 certified, uses a fan-less design that can be wall or DIN rail mounted inside control panel, rated at -40 to 60 deg C, 10 to 95 % humidity, with 5-500 Hz vibration.
- **Cyber security** – Security capabilities can be embedded at the machine level including logging onto the platform, secure password requirements, multiple login levels for access control, and tracking and IP address limits.

- **Autonomous**

- **Greater Visibility** – With monitoring of SSD, application and guest OS, OPC UA Support, you can embed all these Edge Computing diagnostics into your AVEVA Edge or System Platform applications seamlessly.
- **System Health and Support** – 24x7 health monitoring, set thresholds and receive alerts, log review, predictive failure analysis, and automatic update and patch management, all of which enhances the total reliability of your solution.
- **Remote Management** – ztC Advisor allows you to easily view the health and utilization of your entire Edge Platform inventory, helping to remotely triage issues, improve productivity, and mitigate risk. In addition, simplified backup and restore allows you to remotely backup and restore any Edge platform.

A rugged, solid state design protects it from the harsh, environmental conditions that might damage other industry standard servers. Self-monitoring provides proactive notification. A built-in virtualization host makes it easy to deploy applications and enable running AVEVA Edge applications and IDE on the same machine for small systems.

What benefits does Stratus provide within the AVEVA Cloud and SaaS Strategy?

Information is currency. It enables organizations to make correct business decisions. It makes them change or modify plans in anticipation of market or production changes. It provides insights on facts that were previously hidden. With the new AI solutions, it predicts what is going to happen in the future so you can perform anticipatory activities to minimize risk and maximize opportunities.

AVEVA Connect pulls in massive amounts of data coming from the individual plants, lines, equipment, machines, and assets on the Edge.

Latency, bandwidth and security

When you're pulling in massive amounts of data points from assets, machines, equipment, and lines on the Edge into the Enterprise or Cloud, you need to be aware of latency and bandwidth problems that could arise, especially if the volume of data is large and the speed of communications is an issue. AVEVA customers choose to install Edge Computing platforms at the Edge where it is on or near the production and operation area, to solve these latency and bandwidth challenges when connectivity to the Cloud is needed but may not always be practical.

A Stratus ztC Edge computing platform running AVEVA Edge, combined with the AVEVA Historian, is a powerful yet local, edge-based data collection and storage solution. With the capabilities of AVEVA Historian to store-and-forward information, and the inherent virtualization, and redundancy features of the ztC Edge, customers have a reliable, secure and latency free configuration that will enable customers to easily push massive amounts of data into the Cloud.

Information collection is only as good as the Edge Computing solution it's running on

To really have an effective information collection architecture from Edge, Enterprise and to the Cloud, your data needs to be protected and it must be continuous—there should be no disruption in the flow of information because of component or communications failure. You can have the best cloud infrastructure in the world, but it is worthless if it can't get the information it needs.

Summary

The industrial automation market is experiencing unprecedented change while new approaches such as digital transformations, Internet of Things (IoT) and Industry 4.0. take hold. In this dynamic environment, it is important to select solutions that have a track record of performance, stability and enhancements. AVEVA Edge and Stratus Technologies' ztC Edge delivers a proven, reliable solution that is flexible, feature rich and robust. With AVEVA and Stratus, edge implementations can be deployed with confidence from the plant floor to the enterprise and on to the Cloud.

Learn More

Contact your preferred authorized reseller of AVEVA and Stratus solutions. Or visit us online: www.AVEVA.com
www.Stratus.com/AVEVA

“The Edge is capable of handling latency, criticality and proximity issues with granularity and precision that Cloud computing just can't offer.”

John Vicente
CTO, Stratus Technologies

