Stratus ztC™ Edge 100i-s

Simplify edge computing

There's a lot that's changing about computing at the edge of corporate networks. The growth in Internet connect devices, with real-time data processing, is generating new demand for higher performance computing at the edge. At the same time, geographical distances, resource constraints, and competing OT/IT priorities, are causing companies to rethink traditional people, process, and technology choices at their decentralized, distributed locations.

Given this uncertainty, companies today are looking to modernize their edge computing infrastructure—upgrade to one that efficiently meets today's edge computing needs, and also helps prepare them for the advanced analytics at the edge computing of tomorrow.

Consider ztC Edge

ztC Edge is a rugged, secure, highly automated computing platform that delivers virtualized industrial applications quickly and easily, saving companies time and money, and lowering risk.

"ztC" stands for "zero touch compute". ztC Edge requires very little effort, or operator intervention, to deploy, manage, and maintain.

It offers protection straight out of the box, with numerous features, and a pre-set user interface that's designed to help you easily secure your edge computing system. A rugged, solid state design automatically protects it from the harsh conditions that might damage other industry standard servers. Self-monitoring, ztC Edge tells you when it needs your attention.

Key benefits

- **Lower your software development costs**: extend the useful life of your legacy applications
- **Increase resource utilization**: consolidate server hardware
- **Save money on hardware refreshes**: upgrade your systems less frequently
- **Save time**: only check your systems when notified
- **Protect your investment**: easily upgrade to a redundant solution for higher availability and remote management

A built-in virtualization host makes it easy to reduce your hardware footprint, and extend the useful life of your legacy workloads. It also makes it easy to support any future IoT applications.

Start simplifying edge computing today with Stratus ztC Edge 100i-s.

Stratus ztC Edge 100i-s

Key features

Built in virtualization: ztC Edge ships with an integrated virtualization platform that supports both Windows and Linux guest operating systems. It also supports OVF appliances, including vSphere images. An intuitive management console makes it easy for you to configure, import, export and manage your virtual machines.

Rugged, industrial form factor: ztC Edge is IP40 rated, and can withstand extreme temperature ranges, humidity, and vibration. Having no moving parts, it's ideal for dusty, dirty environments that would bring normal clients, workstations or servers down.

Extended product lifecycle: ztC Edge systems come with an extended five year product lifecycle. This means that you can optimize your refresh cycles, and not upgrade them as frequently.

Self-monitoring system: ztC Edge systems monitor themselves, and can alert you if there is an issue. This way, you don't have to waste your time constantly checking up on your system. And for even greater convenience, Stratus engineers can review system logs and triage your alerts for you, helping you get maximum performance and availability from your investment.

Built in security: ztC Edge is designed to help non-security experts more easily secure their edge computing environment. A host based firewall, restricted USBs, and role based access controls with active directory integration, all work together to minimize your security exposure.

Easy upgradable for higher availability: Customers purchasing ztC Edge 100i-s get investment protection. When paired with an optional second node, the system automatically configures itself for redundant operation and local site disaster recovery.

Technical specifications

ztC Edge 100i-s	
VMs supported	Up to 4
Compute	Intel i7-6700TE, 4 core
Memory	32 GB DDR4 2400
Storage	512 GB SSD
Networking	4 x 1 GbE
Temperature	−40 – 140 °F
Humidity	10 – 95% (non-condensing)
Shock and vibration	50G, 11 ms 3 Grms @ 5 – 500 Hz
Input power	9 – 36V (DC) 24 Vdc 5A 120W (AC)
Dimensions	11.02 in x 7.48 in x 2.99 in
Weight	10.1 lbs.
Certification	FCC, CE, and others
Guest OS support	Windows and Linux
Upgradable to redundant configuration	Yes

For more information

More information about the ztC Edge, and other industrial edge computing solutions from Stratus, please go to www.stratus.com/ztc-edge, or contact your local sales representative.

Optional redundant deployment

Stratus

www.stratus.com

Stratus® ztC™ Edge

Zero touch computing for your critical edge ICS

Each year the expectations increase—higher output, better quality, less scrap. What makes it harder is that your budgets aren't also increasing.

Updating your aging, standalone computers, and virtualizing your industrial control applications is one way to increase reliability and efficiency. But who has the spare time, spare resources, or skills to do this?

What would be ideal is a turnkey computing platform—one with virtualization and reliability already built-in—so that you can deploy a redundant SCADA/HMI system quickly and easily. A secure, highly automated platform that's specifically designed for the unique requirements of industrial edge computing. One that's easy to set up, manage and maintain, and reduces your dependence on IT, allowing you to focus on running your plant—not your computers.

ztC Edge is the answer

Ready to use in under 30 minutes, ztC Edge can instantly improve the reliability of your SCADA environment and reduce unplanned downtime. ztC Edge is a versatile, secure, highly automated industrial computing platform that helps under-staffed manufacturers increase productivity and reduce risk. A redundant pair of rugged hot-swappable nodes, with built-in virtualization, automated recovery, and cloud-based systems health management services, ztC Edge helps plant engineers deliver industrialized IoT and control applications quickly, easily, and reliably.

Stratus ztC Edge systems include many integrated and automated capabilities and eliminates the need for specialized IT skills.

Key benefits

- **Greater efficiency**: With virtualization host pre-loaded, automated VM and data protection, and hot swappable nodes that synchronize themselves, ztC Edge simplifies and shortens the time it takes to deploy, manage and maintain your critical applications, saving you time and effort.

- **Improved security**: With restricted USB ports, default secure communication settings, trusted boot, active directory integration, and easy-to-configure host-based firewall, you don't need to be a security expert to secure your ztC Edge system.

- **Less downtime**: ztC Edge's self-monitoring and self-protecting features help reduce unplanned downtime. Because its virtualization host software can be updated while the system is still running (without requiring a system reboot), customers experience less planned downtime also.

- **More flexibility**: ztC Edge's rugged, compact, industrial form factor performs equally well in the control room, control panel, or shop floor, giving customers more choice. Its automated capabilities make it suitable for unmanned stations, or remote, decentralized locations with limited resources.
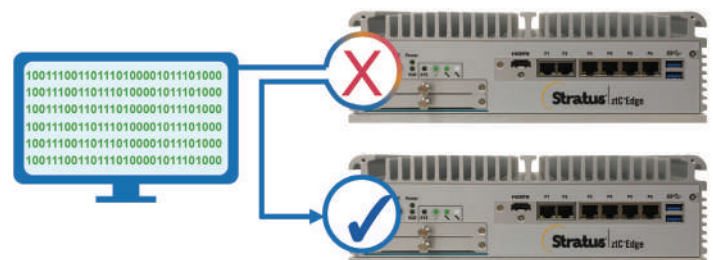

Automated recovery

Key features

Stratus ztC Edge systems include many integrated and automated capabilities, designed to help save customers time and effort, and eliminate the need for specialized IT skills.

Built in virtualization: ztC Edge ships with an integrated virtualization platform and availability engine called Stratus Redundant Linux. As a virtualization host, it supports both Windows and Linux guest operating systems, and OVF appliances, including vSphere images. An intuitive management console makes it easy for plant staff to set up, configure, import and manage their virtual machines.

Redundant solid state nodes: ztC Edge is comprised of two compact, rugged, redundant nodes that act as a single system. Designed for harsh, industrial environmental conditions, ztC Edge nodes can be deployed in the control room, control panel, or on the shop floor.

Automated restart and data protection: With live migration and data replication, ztC Edge provides instant protection for your VMs and data. The system can proactively move VMs from one node to the other, to help ensure applications are available. If it detects a networking or disk failure on one node, it automatically re-routes traffic or uses data on the other node, without any operator intervention.

Automated local site recovery: Individual ztC Edge nodes can be deployed in different physical locations, as long as there's a direct network connection between them. In the event of a catastrophic node failure, VMs that are running in one room, floor, or building, can resume in another location, with minimal interruption of service, and without operator intervention, providing local site area disaster recovery.


Data protection
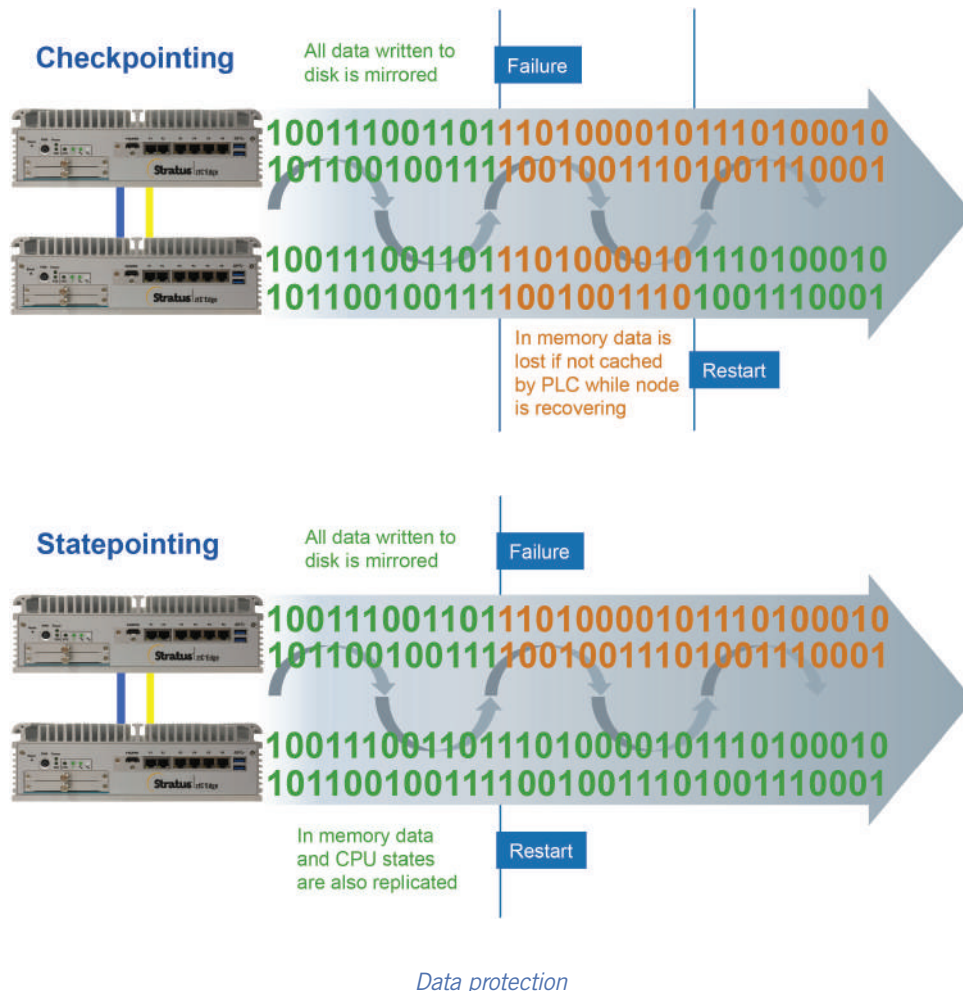
Simplified security: ztC Edge is designed to help plant engineers more easily secure their edge computing environment. A host-based firewall, restricted USB ports, role-based access controls with active directory integration, and secure boot, all work together to minimize your security exposure.

Customizable availability: ztC Edge systems can be configured to support both fault tolerant (FT) or highly available (HA) workloads, giving customers more choice, and allowing them to match the level of availability to the criticality of their application.

Industrial interoperability: ztC Edge supports common industrial protocols, making integration into existing industrial automation environments easier. SNMP requests and traps can be used to configure notifications and alarms. Customers can use OPC UA attributes, or a REST API, to present relevant system data within most third party systems management tools and dashboards.

OT maintainability: ztC Edge nodes are hot swappable, auto-detecting, and auto-synchronizing, making repairs quick and easy. Maintenance or repairs on individual nodes can be done to a running system (without a system reboot) to help ensure service continuity. This allows system repair to be planned and serviced by plant staff when its convenient for them, without having to depend on skilled IT resources.

Simplified security

For an **Always-On** World   www.stratus.com
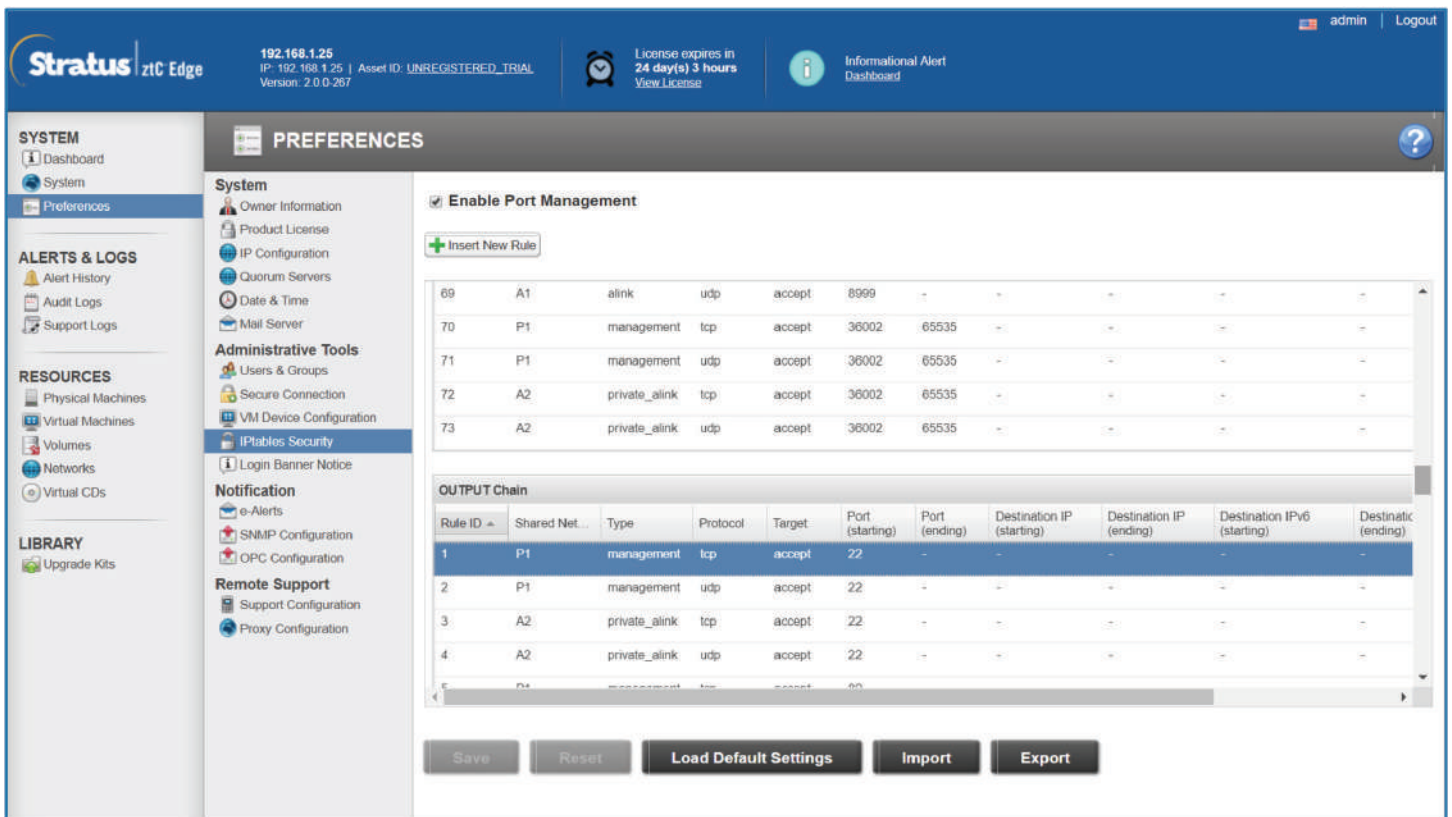
Optional system health monitoring and managed support services

Available with ztC Edge are optional system health monitoring and managed support services. These services help ensure that critical workloads continue to run with minimal customer effort. Stratus takes care of your ztC Edge systems so that you don't have to, letting you focus on more value-added activities.

Service level	Feature
System Support	24/7/365 web or phone support with 30 minute critical response SLA
	3-day advance parts exchange
	Root cause problem determination
	Security patches and updates
	Access to service history and knowledgebase through secure self-service portal
System Health	Everything in System Support
	24/7/365 health monitoring
	Alert triage
	System log file review
	Predictive failure analysis
	Media retention
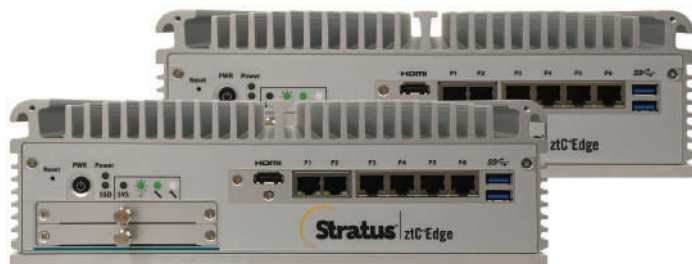
ztC Edge 110i system

Technical specifications

ztC Edge is available in two models, the 100i and 110i. Both systems are IP40 rated, can be wall or DIN rail mounted, and offer a solid state design. The 110i is a more powerful system, to support FT workloads, and those requiring more storage.

	ztC Edge 100i	ztC Edge 110i
Compute	Intel i7-6700TE, 2.4 GHz, 8 MB cache, 4 HT cores	Intel i7-8700T, 2.4 GHz, 12 MB cache, 6 HT cores
Memory	32 GB DDR4 2400	32 GB DDR4 2400
Storage	512 GB SSD	2 TB SSD
Networking	2 x 1 GbE (for a-links) 2 x 1 GbE (for plant networks)	2 x 10 GbE (for a-links) 6 x 1 GbE (for plant networks)
Temperature	-40 – 140 °F	-4 – 140 °F
Humidity	10 – 95% (non-condensing)	10 – 95% (non-condensing)
Shock and vibration	50G, 11 ms 3 Grms @ 5 – 500 Hz	50G, 11 ms 3 Grms @ 5 – 500 Hz
Input power	9 – 36V (DC) 24 Vdc 5A 120W (AC)	24V (DC) 24 Vdc 5A 120W (AC)
Dimensions	11.02 in x 7.48 in x 2.99 in	11.02 in x 8.26 in x 3.42 in
Weight	10.1 lbs (20.2 lbs for system)	13.5 lbs (27 lbs for system)
Certifications	FCC, CE and others[1]	FCC, CE and others[1]
Host OS support	Stratus Redundant Linux 2.0, 1.3, 1.2	Stratus Redundant Linux 2.0
Guest OS support	Windows and Linux[2]	Windows and Linux[2]
Availability support	High availability	Fault tolerance and high availability

[1]https://www.stratus.com/services-support/customer-support/platform-support/ztc-edge-certification

[2]https://www.stratus.com/services-support/customer-support/platform-support/ztc-edge-guest-operating-system-support/

Other edge computing solutions

In addition to ztC Edge, Stratus offers ftServer, a rack mount fault tolerant server that's designed to run larger scale tier 1 mission critical workloads. Supporting 30+ VMs, ftServer delivers continuously available manufacturing operations and centralized control applications. For more information about ftServer, please visit **www.stratus.com/ftserver**

For more information

For more information about ztC Edge, and other reliable industrial computing solutions from Stratus, please contact your local sales representative, or visit **www.stratus.com/ztc-edge**