Stratus ztC Edge® 200i and 250i

Zero-Touch Edge Computing for up to 10,000 I/Os in Pharma Manufacturing, Food & Beverage, Specialty Chemicals, Oil & Gas, and other industrial verticals

Companies undergoing digital transformation are finding it difficult to upgrade computing infrastructure at the edge of their corporate networks.

Why? Harsh environmental conditions and the lack of skilled resources, make deploying, managing, and maintaining computers at remote plants or branch offices especially challenging.

As more data gets generated by Internet connected devices and processed at these edge locations, companies need advanced computing infrastructure that is simple to deploy and manage, protected against data loss, physical environments, and cyber threats, and autonomous to operate.
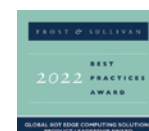
Stratus ztC Edge is the answer

The second generation ztC Edge is a secure, rugged, highly automated computing platform that helps understaffed organizations improve productivity, increase operational efficiency, and reduce downtime risk at the edge of their corporate networks.

Designed for both OT (operational technology) and IT (information technology), ztC Edge is easy to deploy and secure, easy to manage locally and remotely, and easy to maintain and service. Self-monitoring, self-protecting, and self-synchronizing, ztC Edge saves companies time and money. With its built-in virtualization, automated protection, industrial interoperability, OT manageability, and field serviceability, ztC Edge enables the quick, easy delivery of both highly available and fault tolerant virtualized edge applications.

Key benefits

- **Greater efficiency:** With built-in virtualization host, industrial interoperability, and field serviceability, ztC Edge simplifies and shortens the time it takes to deploy, manage, and maintain your critical edge applications, saving you time and effort.

- **Simplified security:** With restricted USB ports, secure communication protocols, secure and trusted boot, role-based access controls, and easy-to-configure host-based firewall, you don't need to be a security expert to secure your ztC Edge platform.

- **Less downtime:** ztC Edge's self-monitoring and self-protecting features help reduce unplanned downtime. And because its operating environment can be updated while it's still running (without requiring a system reboot), customers also experience less planned downtime.

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

Key features

Stratus ztC Edge is a secure, rugged, highly automated computing platform that enables the rapid and efficient delivery of reliable business-critical applications in remote, understaffed locations at the edge of corporate networks. Features like its built-in virtualization, simplified security, industrial interoperability, OT manageability, rugged form factor, automated protection, field serviceability, and complementary services help companies increase productivity, while minimizing downtime risk.

Built-in virtualization: ztC Edge ships with its own operating environment called Stratus Redundant Linux. It contains a virtualization host that supports both Windows and Linux guest operating systems, and OVF files and OVA images, including third-party templates. An intuitive management console makes it easy for local and remote staff to set up, configure, import, and manage their virtual machines.

Industrial interoperability: ztC Edge supports common OT and IT 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.

Simplified security: ztC Edge is designed to help OT more easily secure their Edge Computing environment. A host-based firewall, restricted USB ports, role-based access controls with Active Directory integration, secure communications protocols, and secure and trusted boot all work together to minimize your security exposure.

OT manageability: ztC Edge ships with its own tool, the ztC Edge Console, that simplifies system and software management. With it, administrators can remotely access their systems, set thresholds and alerts, check for updates, backup and restore system settings and preferences, and easily manage their VMs.
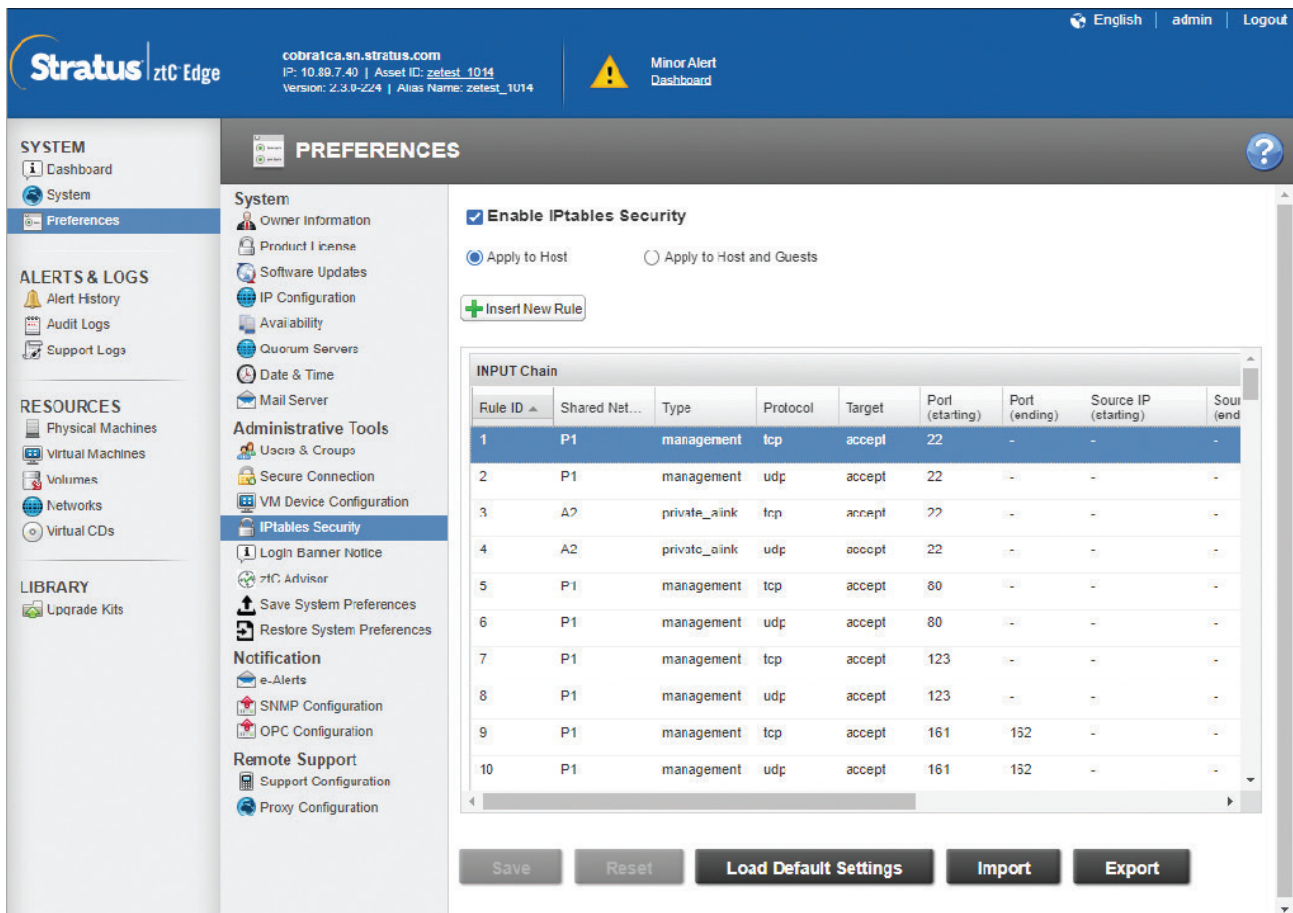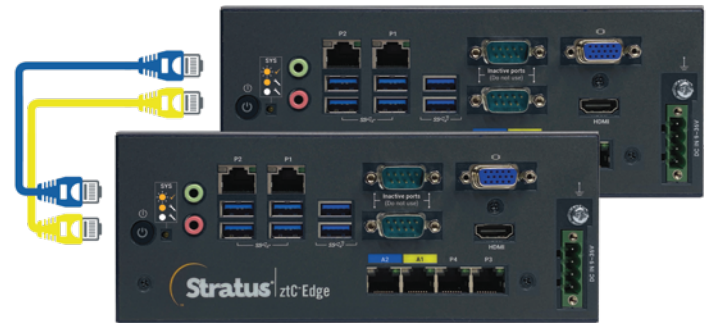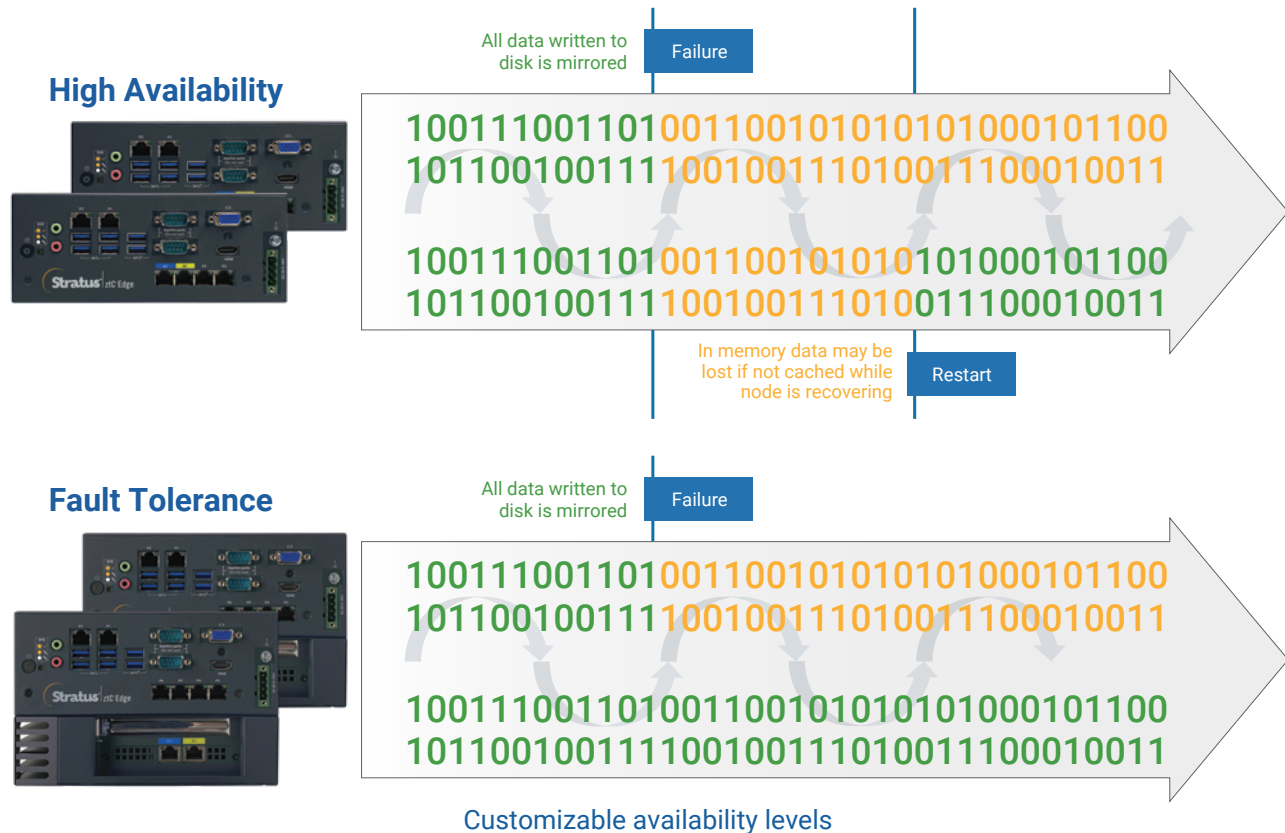

Simplified security

Rugged redundant nodes: Designed for the harsh conditions typically found in industrial locations, ztC Edge nodes are UL Class I Div 2 certified and IP40 rated for deployment anywhere from the control room or control panel to machines on the shop floor, closer to your devices that are generating data. More durable than standard servers or workstations, ztC Edge offers customers greater reliability and deployment flexibility.

Automated protection: When deployed as a redundant pair, ztC Edge provides instant protection for your workloads. Data is automatically replicated across platforms. VMs running on one platform will automatically restart (High Availability mode) or resume (Fault Tolerant mode) on the other in the event of a failure. If ztC Edge detects a networking or disk failure on one computer, it automatically re-routes traffic or uses data on the other computer, without any operator intervention. Platforms can even be deployed across physical distances, for automated local site recovery.

Field serviceability: When deployed as a redundant pair, ztC Edge platforms are hot-swappable and auto-synchronizing, making field repairs quick and easy. Maintenance or repairs on individual computers can be done to a running system (without a system reboot) to help ensure service continuity. This allows system repair to be planned and completed when its convenient for OT or IT staff.

ztC Edge 200i

High Availability

All data written to disk is mirrored

Failure

1001110011010011001010101010000101100
1011001001111001001110100111100010011

1001110011010011001010101010000101100
1011001001111001001110100111100010011

In memory data may be lost if not cached while node is recovering

Restart

Fault Tolerance

All data written to disk is mirrored

Failure

1001110011010011001010101010000101100
1011001001111001001110100111100010011

1001110011010011001010101010000101100
1011001001111001001110100111100010011

Customizable availability levels

Complementary services: Complementary services available with ztC Edge include System Support, System Health Add-ons, and Managed Support Services to enable system health monitoring, ensuring 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. Also available are Stratus Cloud, secure access to a cloud-based storage facility, and ztC Advisor, a web-based tool for monitoring and managing multiple ztC Edge platforms.

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

ztC Edge Services

System Support	Features
8x5 web-based support	3
Root cause problem determination	3
Software updates and upgrades	3
Secure access to self-service portal	3
System Health Add-ons	**Features**
24x7x365 web and phone support w/30 min. critical response SLA	Optional
Advanced parts exchange	Optional

Proactive uptime monitoring
   Alert triage Optional
   System log file review
   Predictive failure analysis
	Optional

Media retention	Optional

Stratus Cloud: Secure, cloud based repository for customers to safely transmit, store, and retrieve their ztC Edge platform preference templates for simplified backup and restore, and scalable provisioning. Automatically authenticates users and groups using the same redentials specified in their Customer Service portal account.

ztC Advisor: A systems management solution that anyone can use, ztC Advisor simplifies the centralized monitoring and management of multiple Edge Computing platforms. Through a secure web-based portal, customers can quickly and easily view the health and utilization of their entire ztC Edge inventory, helping them remotely triage issues, improve productivity, and mitigate risk.

For more information about ztC Advisor, please visit www.stratus.com/solutions/ztc-advisor/

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

Technical specifications: The second generation ztC Edge is available in two models, the 200i and 250i. Systems may be wall or DIN rail mounted, and offer a fan-less, solid state design. The ztC Edge 250i is a more powerful system to support larger software workloads that require more storage, processing power, and fault tolerance.

	ztC Edge 200i	ztC Edge 250i
Compute	Intel Xeon W-1250TE, 2.4 GHz, 12 MB cache, 6 HT cores	Intel Xeon W-1290TE, 1.8 GHz, 20 MB cache, 10 HT cores
Memory	32 GB DDR4 2666 MHz (ECC)	64 GB DDR4 2666 MHz (ECC)
Storage	1 TB SSD (NVMe)	2 TB SSD (NVMe)
Networking	2 x 1 GbE (for a-links) 4 x 1 GbE (for networks)	2 x 10 GbE (for a-links) 6 x 1 GbE (for networks)
Operating Temperature[1]	−20 to 60 °C (−4 to 140 °F)	−20 to 60 °C (−4 to 140 °F)
Humidity	95% @ 40 °C (non-condensing)	95% @ 40 °C (non-condensing)
Shock and vibration	20G, 11 ms 3 Grms @ 5 − 500 Hz	10G, 11 ms 1.5 Grms @ 5 − 500 Hz
Input power[2]	9V − 36V (DC)	9V - 36V (DC)
Dimensions	230 x 192 x 77 mm (9.1 x 7.6 x 3.0 in)	230 x 192 x 127 mm (9.1 x 7.6 x 5.0 in)
Weight	3.3 kg (7.2 lbs)	4.6 kg (10.2 lbs)
Availability support	High availability	10G, 11 ms 1.5 Grms @ 5 − 500 Hz
Shock and vibration	20G, 11 ms 3 Grms @ 5 − 500 Hz	Fault tolerance and high availability
Certifications	CI D2, FCC, CE and others[3]	CI D2, FCC, CE and others[3]
Host OS support	Stratus Redundant Linux[4]	Stratus Redundant Linux[4]
Guest OS support	Windows and Linux[5]	Windows and Linux[5]

[1]Operating temperature ranges listed are for DC power. When AC power is used (using an optional AC Adapter), the recommended range for both the ztC Edge 200i and 250i is 0 to 50 °C (32 to 122 °F).

[2]An optional AC Adapter (100-240V, 2.5A, 50-60Hz) may also be used.

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

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

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

Stratus®

Specifications and descriptions are summary in nature and subject to change without notice.