TRENTON SYSTEMS®

CONNECT

Phone: +1 (770) 287-3100

Email: info@trentonsystems.com
sales@trentonsystems.com

Headquarters:
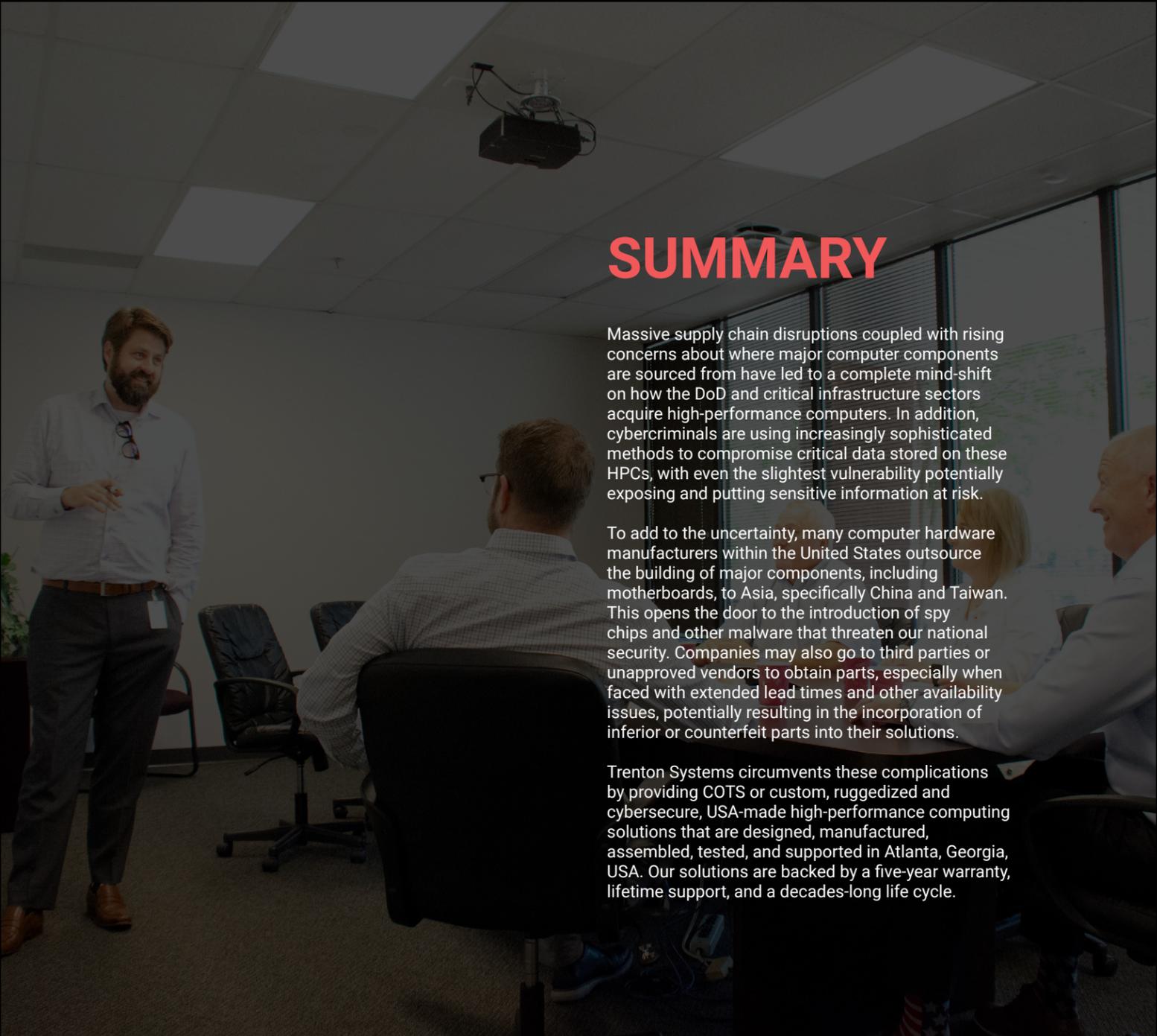3100 Breckinrdige Blvd, Building 1200
Duluth, GA 30096, USA

Manufacturing Facility:
1725 MacLeod Drive
Lawrenceville, GA 30043

The trusted brand in US-made high-performance computing.

COMPANY PROFILE

TRUSTED COMPUITNG INNOVATOR | WWW.TRENONSYSTEMS.COM | 2022

SUMMARY

Massive supply chain disruptions coupled with rising concerns about where major computer components are sourced from have led to a complete mind-shift on how the DoD and critical infrastructure sectors acquire high-performance computers. In addition, cybercriminals are using increasingly sophisticated methods to compromise critical data stored on these HPCs, with even the slightest vulnerability potentially exposing and putting sensitive information at risk.

To add to the uncertainty, many computer hardware manufacturers within the United States outsource the building of major components, including motherboards, to Asia, specifically China and Taiwan. This opens the door to the introduction of spy chips and other malware that threaten our national security. Companies may also go to third parties or unapproved vendors to obtain parts, especially when faced with extended lead times and other availability issues, potentially resulting in the incorporation of inferior or counterfeit parts into their solutions.

Trenton Systems circumvents these complications by providing COTS or custom, ruggedized and cybersecure, USA-made high-performance computing solutions that are designed, manufactured, assembled, tested, and supported in Atlanta, Georgia, USA. Our solutions are backed by a five-year warranty, lifetime support, and a decades-long life cycle.

OUR STORY

Michael Bowling, CEO

Trenton Systems' founder Bill Bowling started developing US-made compute boards for the DoD and industrial sector right out of his garage. As a Vietnam veteran, Bill's vision was to build top-quality and truly USA-made computers for the armed forces and critical infrastructure sectors. In Trenton Systems' earliest days, the company dealt only with processor boards, gradually expanding its capabilities over the years.

Today, Bill's vision has reached new heights, with Michael Bowling, CEO, spearheading initiatives and innovating end-to-end, high-performance edge computing solutions while actively and rapidly growing Trenton Systems' footprint, impact, and headcount out of two state-of-the-art facilities with over 100,000 square feet of space. Partnered with some of the world's largest tech giants, Trenton Systems stands at the forefront of USA-made computing to bring together man and machine across the modern battlespace.

STATE OF THE INDUSTRY

It's increasingly more difficult to protect sensitive data across multiple layers of the compute stack. The attack surface is growing in size and complexity. To make matters worse, sourcing components from trusted, TAA-approved vendors is also quite challenging, all in a heavily constrained supply chain.

A lack of USA-made computers

75 percent of the world's chip manufacturing comes out of Asia, primarily China and Taiwan. By 2030, China is poised to become the largest chip producer in the world.

Computers made outside of the United States are especially vulnerable to being manufactured with counterfeit parts, threatening a computer's security and functionality.

Additionally, spy chips from various sources and countries can be installed on a computer's motherboard with the intent of stealing American intellectual property.

When technology is made in the US, however, the risks are much lower. Extreme vigilance is used during the production process to ensure that only secure, vetted parts are incorporated into systems.

The facilities in which these technologies are created are required to follow strict security protocols, eliminating a point of entry for cybercriminals and reducing the risk of internal threats.

If actions are not taken to ramp up manufacturing efforts here in America, we risk becoming dependent on foreign manufacturers, threatening our economic and national security interests.

And amid constricted supply chains like that which we are currently facing, decreased reliance on foreign manufacturers is necessary to mitigate some issues in obtaining the components needed to build computers.

Uncertain supply chain and unknown chain of custody

Since the start of COVID, the global supply chain has been fraught with shortages, extended lead times, and astronomical cost increases.

Additionally, Chinese and Taiwanese manufacturers have drastically reduced production; at the same time, demand for new technologies used in all sorts of systems and appliances has exploded.

This has led to a widespread availability problem that opens the door to the injection of counterfeit parts that can compromise mission-critical applications.

When parts are scarce, that increases opportunities for nefarious players to infiltrate the supply chain with bad parts. Now, they could just be out to make money with counterfeit parts, or they could be hackers looking to compromise the security of critical data.

In addition, hardware manufacturers are also getting end-of-life (EOL) notices with no runway. Usually, when EOL notices are sent out, companies have time to buy a part until it is no longer

Now, however, manufacturers have been getting these notices, but they don't have any time to get these parts because they have just disappeared in the supply chain.

In the face of massive supply chain disruptions, customers are looking for a supplier who can help them navigate these complications. This will help ensure that programs are delivered on time and security measures are kept at top of mind.

Increasingly sophisticated cyberattacks and lack of confidential computing

In the first half of 2021, cyberattacks increased 125 percent globally, with the average cost of a data breach totaling $4.24 million, nearly a 10 percent increase from 2020.

Cyberattacks have become more sophisticated, with cybercriminals using tactics backed by social engineering and artificial intelligence, rendering conventional defense methods ineffective.

In addition, cyber threats are now not just coming from external sources but are emerging internally through a company's network and even from its own employees. In fact, insider threats are responsible for over half of data breaches.

Since technologies are implemented across a system's many layers, organizations and individuals must take the necessary steps to address vulnerabilities at any layer.

In response to this growing threat, layered security is emerging as a preferred safeguard for high-performance computers against hacker intrusion across the hardware, firmware, software, and network stack, specifically among various U.S. government agencies.

In the event of a cyberattack, any one of these layers can be targeted, so multi-layer security minimizes risk, with each layer of security working together to form a set of barriers to detect and thwart attacks.

In addition, manditory employee training and certifications to detect and report cyber threats, securing facilities to the most stringent cybersecurity standards, and isolating computing operations in one place (i.e. on a piece of computer hardware) will help reduce the risk of internal and external threats.

INTRODUCING TRENTON SYSTEMS

High-performance, tamper-proof, confidential computing solutions by Trenton Systems are designed, manufactured, assembled, tested, and supported in Atlanta, GA, USA. **Yes, we make our own boards.** Each solution is equipped with the latest multi-layer cybersecurity technologies across the hardware, firmware, software, and network stack.

PROUDLY POWERED BY

intel.

TRUSTED COMPUTING INNOVATOR™

Compute with confidence and confidentiality.
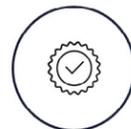
Our Core Values

QUALITY
We strive for quality in our products and services through organizational quality, performance excellence, and continuous improvement.

INNOVATION
We lead the way in creative problem-solving. Highly adaptable to change, we strive to deliver better products and services that create lasting solutions for customers.

INTEGRITY
We make sure to honor our commitments to our customers and colleagues, knowing that accountability is the foundation of organizational effectiveness.

CUSTOMER FOCUS
We are a customer-centric company and are committed to exceeding our customer's expectations on quality, service, and support.

COMMUNITY
We bring about a feeling of collective community with our clients, partners, and the local communities in which we physically reside.

OUR PRODUCTS

Trenton Systems' USA-made high-performance computers power military, industrial, and commercial applications across the sea, land, air, space, and cyber domains. Specializing in rack servers and small form factor or embedded computers, we can design in an end-to-end, out-of-box solution equipped with the desired hardware, firmware, software, and even networking capabilities to function in the data center and at the tactical edge.

CUSTOM SOLUTIONS: Board and Systems

Customized, end-to-end computing solutions offer enhanced processing, secure storage, flexibility, and intelligence anywhere, anytime. All our products are tested and certified to our customers' technical, performance, and environmental specifications.

We provide custom boards, systems, and end-to-end solutions

Our in-house mechanical, software, and electrical engineers provide full customization down to the board and chip level to help optimze performance for evolving workloads and advanced applications.

BAM: Rack servers and storage

A family of ruggedized, AI-powered rack mount servers equipped with Intel® Xeon® Scalable Processors for high-performance computing and inferencing to deliver actionable, real-time insights at the strategic, tactical, and operational levels.

TAC: SFF Mission Computers

The Tactical Advanced Computers (TAC) are a SWaP-C optimized, small form factor mission computer family designed in fanless, sealed enclosures with the latest in embedded computing technology for various applications across the modern battlespace.

OUR CAPABILITIES

Trenton Systems is a one-stop shop for end-to-end, high-performance edge computing solutions designed to complex specs and requirements across the defense and critical infrastructure sectors, empowering today's professionals to survive and thrive no matter where the program leads.

Made in the USA

Trenton Systems designs, manufactures, assembles, tests, and supports COTS and custom high-performance computing solutions on US soil, circumventing major supply chain issues and external/internal system-level threats from the hardware layer up.

American-made hardware
We design, manufacture, assemble, test, and support all solutions at our secure, TAA-compliant manufacturing facility in Atlanta, Georgia, USA.

COTS, mCOTS, and customized solutions
Our technical sales and engineering teams will help you architect a custom solution per your technical, performance, and environmental requirements, from enclosure down to the BIOS.

Future-proof solutions
As a member of the Intel® Partner Alliance and Early Access Program, our solutions allow our customers to have access to the latest Intel® technologies before they even hit the market.

Tested to your specs
We perform various tests at the board and system level in-house and through third parties to stringent military standards and requirements to ensure the efficiency, quality, and ruggedization of your solution.

We maintain a tight grip on our supply chain

Navigate around issues arising from today's constricted supply chain with proactive risk management methodologies. Since we control the entire design process, we can design around any supply chain issues that may arise.
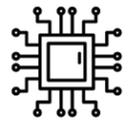
Supplier quality surveys
We thoroughly vet all suppliers to protect your system from potentially compromised software applications and electronic parts.

Counterfeit Protection Program (CPP)
To ensure the quality and efficiency of our solutions, we avoid, inspect, detect, identify, document, remove, and replace suspected counterfeit parts.

BIOS control and customization
Our in-house software engineers work directly with the BIOS source code to create firmware enhancements and security measures that meet your needs.

Strict revision control
We only obtain parts from those listed on our approved vendor list (AVL). This a living, breathing document which manages your computer's life cycle and facilitates secure integration of alternative parts.

"Engineering in"
If a part goes missing in the supply chain, we "engineer in" an alternative part that we create, or, if appropriate, we purchase one from our approved vendor list.

End-of-life (EOL) notices
If contractually required, we notify you as far in advance as possible when parts are going end of life, so we can help you make a smooth transition to a different, newer product.


Advanced, multi-layer cybersecurity

Guard sensitive and classified data across the hardware, firmware, software, and network stack with advanced encryption measures.

Zero-trust security
Our solutions are equipped with military-grade, FIPS 140-2 certified SSDs and encryption algorithms for securing classified, secret, and top-secret information up the US government's highest level.
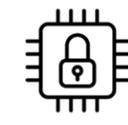
Intel® TXT, PFR, SGX, TME, and Secure Boot Guard
We employ various hardware, firmware, and software-based mechanisms to protect critical data and thwart unauthorized access.

Military-grade, NSA-approved, AES-encryption
Our systems are equipped with the industry's tried-and-true gold standard of data encryption.

### Secure manufacturing facility with insider threat protection
We currently meet the CMMC Level 2 certification and are moving towards Level 3. We also provide employee training to ensure security measures are closely to minimize threat risk.

> *"Concern over sophisticated cyberattacks on government and business has created a cybersecurity renaissance in our industry, with an increased desire for made-in-the-USA computers with secure hardware, firmware, and software for the foreseeable future. Trenton Systems is the tangible solution for protecting and strengthening the cyberwarfighter of tomorrow."*
>
> **-Sean Campbell, Chief Commercial Officer**
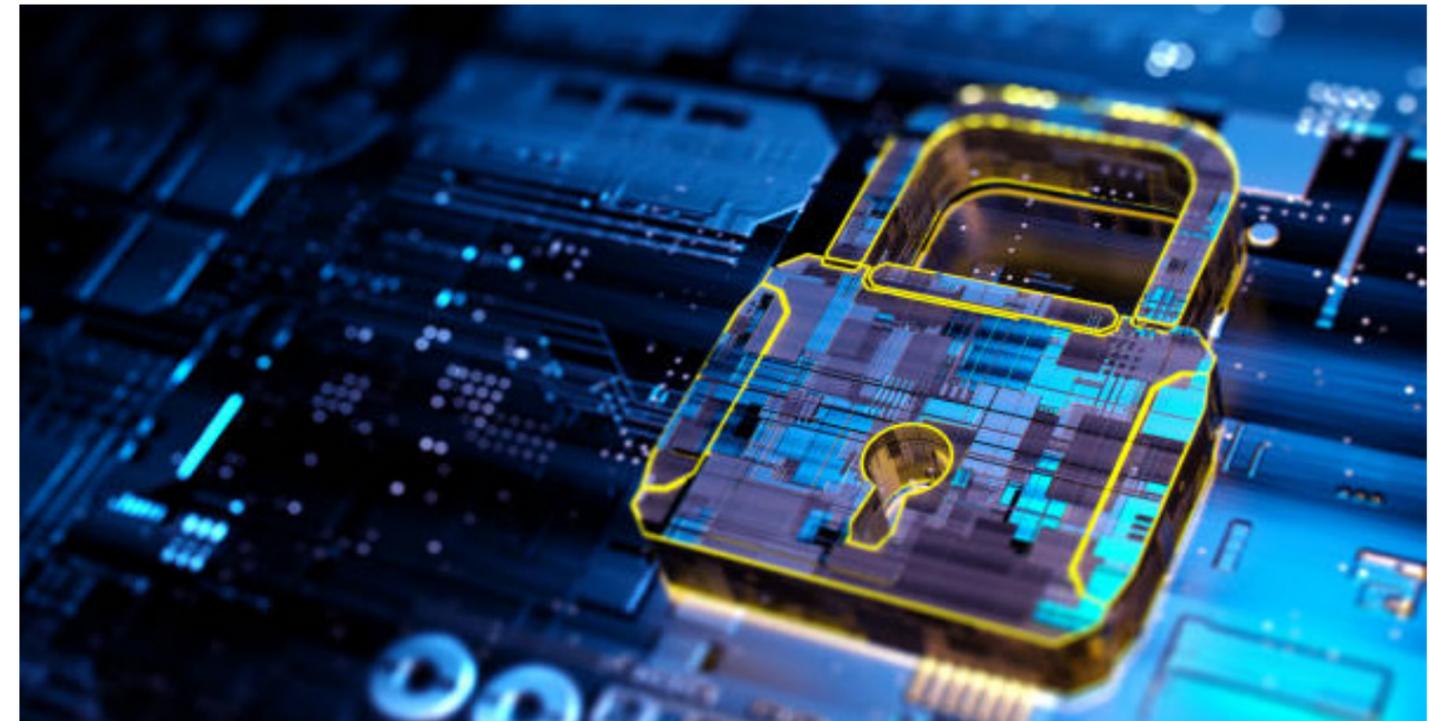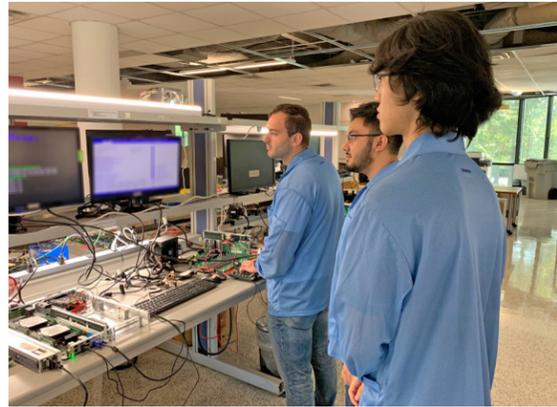
Testing

Our engineers spend countless hours running test plans filled with complex test cases that encompass a myriad of use cases and applications our customers face each day in the field, ensuring your systems never fail when it matters most.

Engineering tests: We perform verification and validation testing to ensure our products meet customers' technical, performance, and environmental specifications.

Compliance tests: We test our products to ensure that they meet customer requirements and are complaint with all laws and regulations, both nationally and internationally.

Burn-in tests: We stress-test all products at varying temperatures, shock, and vibration to detect infant mortality and ensure proper functionality.


Product Development

Systems engineering: From a system engineering approach, control over the design and manufacture of board-level subsystems provides the foundation for creating customer-driven computing solutions designed to handle the impact of shock and vibration, as well as thermal and EMI issues.

Electronic design: Our subsystem-board designs must maintain signal integrity with high-speed interfaces and address power distribution, signal trace routing, and thermal management issues while adhering to UL/CSA and IEE agency standards.

Mechanical design: In addition to well-designed and manufactured electronic subsystems, systems packaging is a critical design element when crafting solutions for harsh environments. Our chassis are combat-proven and battle-tested to perform reliably in a variety of applications.

IPMI Control: IPMI implementation provides seamless and efficient remote monitoring of temperatures, fan speeds, power supply status, and other system conditions.
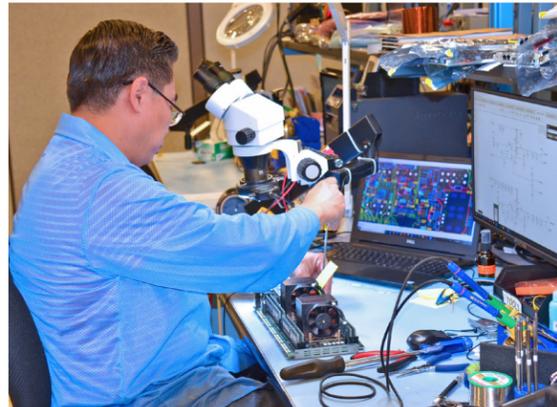
Quality Control

We strive to satisfy customers' needs with on-time delivery and quality of products and services.

ISO- and AS9100-certified: Our USA manufacturing and engineering facilities are certified to the latest ISO 9001:2015 and AS9100D standards.

Documentation: Trenton Systems has the appropriate failure analysis processes and reporting mechanisms with multiple production and quality control checkpoints. Documentation that supports our quality management system can be provided upon request.

Inspections: We welcome customers to our Georgia location for a source inspection and any additional quality review and audits deemed necessary.

Customer feedback: Continual improvement and preventative actions are foundational to Trenton Systems' culture. Whether positive or negative, customer and employee feedback is viewed as a learning experience toward our goal to be a top-tier supplier that enables customer success.

Product Support and Warranty

Your peace of mind is our top priority, and that's why our customers enjoy the industry's leading five-year warranty program and lifetime support.

We also offer:

Troubleshooting: Let us debug and troubleshoot your exact configuration and provide you with a step-by-step solution.

Repair and replace: Risk management assessments are a part of life, but we make sure to repair your hardware fast or we replace it.

Engineering on standby: You have direct access to our in-house hardware and software teams, ready to answer your complex questions, fast! We also have all the hardware that we need to work with you during a call.

CUSTOMER BENEFITS

Ruggedized, cybersecure high-performance computing solutions made right here in the USA customized to your most complex specifications.

Enjoy the experience with Trenton Systems.

Wrap it up

Ensure mission success across all domains of the modern battlespace at the edge with Trenton Systems' line of next-gen computing technology.

Benefits

1. Customized, USA-made solutions
2. Supply chain risk management
3. Advanced cybersecurity measures

What does this mean?

1. Craft authentic, future-proof solutions, free from board- and system-level vulnerabilities.
2. Navigate supply chain constrains to ensure timely delivery of products and keep programs on schedule.
3. Counter increasingly sophisticated cyberattcks with advanced, multi-layer cybersecurity to guard critical data at the highest level

TRUSTED BY

Inquiries

Phone: 1 770-287-3100
www.trentonsystems.com

Email:
sales@trentonsystems.com

Location

Headquarters
3100 Breckinridge Blvd, Building 1200
Duluth, GA 30096, USA

Manufacturing
1725 MacLeod Drive
Lawrenceville, GA 30043, USA