ION MINI PCs | 8th and 9th Gen Core®

Supercharge mission-critical land, sea, air, space, and cyber applications and streamline dedicated functions with an expertly crafted, high-performance, ruggedized, SWaP-optimized mini PC.

HARSH-ENVIRONMENT PROTECTION

All key components are stress-tested to pass stringent military standards, ensuring stability in harsh environments.

SERVER-CLASS FEATURES

A Mini PC powerhouse with server-class specs like IPMI for remote management and virtualization for increased flexibility and scalability.

FULL CONTROL & CUSTOMIZATION

Our in-house software engineers can tweak BIOS source code to bolster firmware security and meet your exact needs.

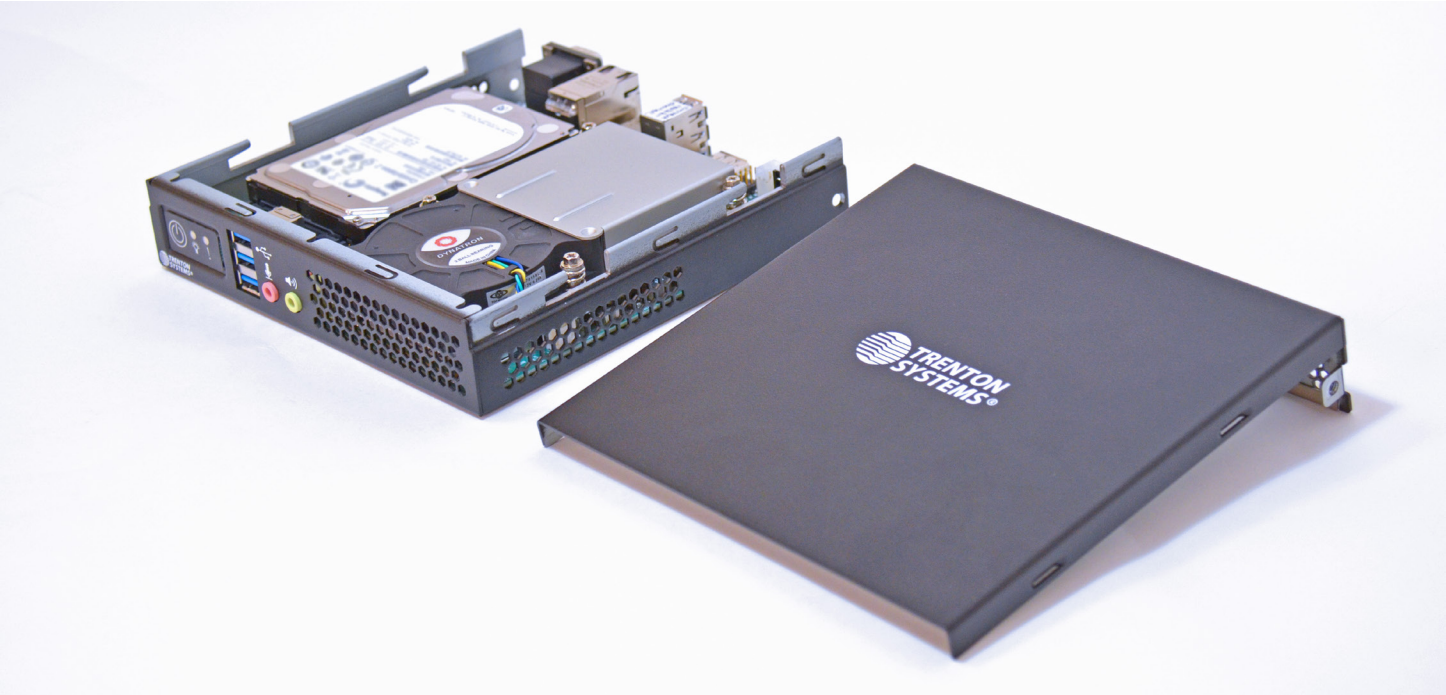
Overview

Whether deployed in or on land vehicles, helicopters, fixed-wing aircraft, UAVs, naval ships, submarines, or other apparatuses subject to harsh conditions, the ION Mini PC perseveres.

With advanced, hardware-based edge computing technologies, accelerate multiple workloads while reducing compute density and total cost of ownership.

SOLUTION HIGHLIGHTS

- **Weighing just 3.2 pounds,** the ION is a lightly constructed computing solution designed for programs with stringent size and weight requirements.
- **Install mounting brackets** for enhanced stability, improved deployment control, and better cable management.
- **Ultra-slim, energy-efficient design** allows for low-cost deployment in highly space-constrained environments.
- **Strict revision control is achieved** through Trenton's actively managed approved vendor list (AVL), ensuring engineer-vetted parts.
- **Counterfeit Protection Program (CPP)** helps Trenton detect, remove, and destroy counterfeit parts and components.
- **Vetted supply chain** helps protect your system from potentially compromised counterfeit electronic parts and components.
- **In-house engineers** (hardware, software, mechanical, and electrical) control the design of your system down to the board and chip level.
- **TAA compliance** is achieved because Trenton manufactures the ION, and its other solutions, in the United States.
- **CSfC, ITAR, ISO9001, and AS9100 adherence and compliance** allow Trenton to consistently provide secure, high-quality computing solutions.



Technical Overview

SPECIFICATION	DETAILS
CPUs	Single Intel® 8th and 9th Gen Core®
Memory	2x DDR4 2400/2666 ECC SODIMMs slots
Storage	Up to 1x SATA, 1x M.2 NVMe SSD (FIPS 140-2/3 available)
Form Factors	SFF computer at 6.8" depth
Network Interface	3x 1GbE ports, 1x supporting IPMI
Power	1x 85W, non-redundant, non-461, fixed

The ION Mini PCs can be customized to your most complex technical, performance, and environmental specifications in consultation with our team.

Contact us for pricing and availability.

770.287.3100 | info@trentonsystems.com

TECH SPECS - MXT8288 Board

PROCESSORS (UP TO 8 CORES PER CPU)

Single Intel® 8th and 9th Gen Core® (TDP support up to 35W)

Chipset: Intel® C246 Coffee Lake

MEMORY (UP TO .14 TB)

2x DDR4 2400/2666 ECC SODIMMs

I/O

- **NVMe:** 1x PCIe M.2 port
- **SATA:** 1x SATA port
- **USB:** 3x USB3 ports
- **IPMI:** IPMI 2.0 with virtual media over LAN and KVM-over-LAN support
- **Graphics:** Intel® Integrated Graphics & ASPEED AST2500 BMC
- **Video:** 1x VGA port
- **LAN:** 3x 1GbE RJ-45 ports driven from a dual Intel® i350 controller (1x Shared IPMI)
- **Serial:** 1x RS232 serial port

SECURITY

- **TPM 2.0**
- **Intel® vPro**

*For a comprehensive list of cybersecurity features, please contact one of our team members.

SYSTEM COOLING (BMC Controlled)

1x PWM CPU Blower Fan; DC 12 V

SYSTEM BIOS

- InsydeH20 UEFI BIOS from Insyde
  - Plug and Play (PnP)
  - PCI 2.2
  - ACPI 1.0 / 2.0
  - USB Keyboard Support
  - SMBIOS 2.3
  - UEFI

SYSTEM MANAGEMENT (BMC)

ASPEED AST2500 baseboard management controller: rKVM, system monitoring, out-of-band management

DIMENSIONS

6.7 in. x 6.7 in. (17.01 cm x 17.01 cm)

ENVIRONMENTAL SPECIFICATIONS

- Operating Temperature: 0°C - 45°C
- Storage Temperature: -40°C - 70°C
- Operating Humidity: 8% - 90% non-condensing
- Non-operating Humidity: 5% - 95% Non-Condensing

Numbers noted are dependent on CPU selection. Please contact Trenton Systems for specific CPU environmentals.

Preliminary numbers noted. Final numbers expected to outperform current specifications.
Conformal coating available upon request.

COMPLIANCE

Designed to meet the following standards/certifications:

- RTCA DO-160 Shock: 11ms Terminal Peak Pulse with amplitude 6G – 3 axis
- RTCA DO-160 Vibration: Random vibration – 10Hz – 2000Hz – 3 axis
- CE certified to health, safety, and environmental protection standards for products sold within the European Economic Area

Environmental specifications and compliance apply within Trenton chassis.

ADD-ONS (CONTACT US FOR MORE INFO)

- 1 piece mounting bracket
- 2 piece mounting bracket

SYSTEM VARIATIONS

#	SYSTEM	BOARD	DEPTH	POWER	STORAGE
1	ION MINI PC	MXT8288	6.8"	1X 85W NON-REDUNDANT, NON-461, FIXED	UP TO 1X SATA, 1X M.2 NVME INTERNAL DRIVES
2	SFF COMPUTER	COTS, MOTS, CUSTOM	DESIGNED TO SPECS	LOW WATTAGE, NON-REDUNDANT, NON-461, FIXED	UP TO 2X INTERNAL SATA/NVME DRIVES

If you need a different system variation not listed above, please contact a Trenton Systems engineer to configure a system or solution to your specific application or program requirements.