

TAC MISSION COMPUTERS | Xeon® D

A family of fanless, durable, SWaP-C optimized small form factor mission computers providing maximum ruggedization, processing, storage, and security at the edge across the modern, multi-domain battlespace.



READY FOR EXTREMES

Lightweight, sealed, and designed to operate between -40°C and +70°C in harsh environments.



MILITARY-GRADE CONNECTORS

Protect against dust, dirt, debris, and water as well as electromagnetic interference.



ZERO-TRUST ARCHITECTED

Hardware-based security measures encrypt and isolate data as it is being processed.



Overview

The TAC is a truly made-in-USA, small-form-factor, embedded, passive-cooled, sealed mission computer based on the COM Express Type 7 architecture.

Designed with tomorrow's warfighters and servicemembers in mind, as well as the various tactical air, sea, land, space, and cyber environments they encounter daily, the TAC is ruggedized and secured with the latest hardware, firmware, and software security technologies adherent to DaR requirements, NIST, and CSfC.



SOLUTION HIGHLIGHTS



Intel® SGX includes predefined portions of memory that can better protect sensitive information.



Strict revision control is achieved through Trenton's approved vendor list (AVL), ensuring engineer-vetted parts.



In-house engineers (hardware, software, mechanical, and electrical) control the design of your system down to the board and chip level.



Five-year warranty means we will repair, replace, or refund for any potential defects in material, workmanship, and design.



Counterfeit Protection Program (CPP) helps Trenton detect, remove, and destroy counterfeit parts and components.



TAA compliance is achieved because Trenton manufactures BAM servers, and its other solutions, in the United States.



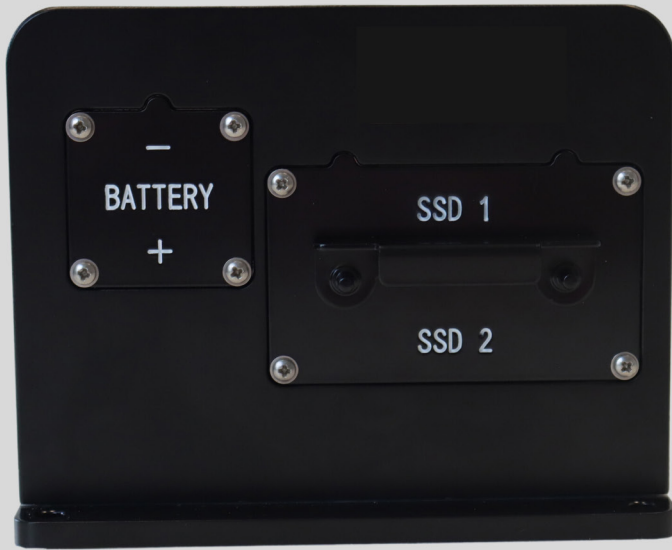
Lifetime support gives you unlimited access to our team of experts that help troubleshoot problems and offer solutions.



Vetted supply chain helps protect your system from potentially compromised counterfeit electronic parts and components.



CSfC, ITAR, ISO9001, and AS9100 adherence and compliance allow Trenton to consistently provide secure, high-quality computing solutions.



TAC FANLESS COMPUTERS

Technical Overview

SPECIFICATION	DETAILS
CPUs	Intel® Xeon® D
Memory	3x DDR4 2400-2933 ECC DIMM slots
Storage	Up to 2x high-capacity SATA SSDs (FIPS 140-2/3 available)
Form Factors	SFF computer up to 9.375" depth
Network Interface	3x 1GbE ports
Power	1x 40W, non-redundant, 461-filtered, fixed

The TAC Mission Computers 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

CARRIER BOARD

COM Express Type 7

PROCESSORS (UP TO 10 CORES PER CPU)

Intel® Xeon® D

*Other CPUs available. Please contact our team to discuss your requirements.

MEMORY (UP TO 128GB RAM)

3x DDR4 2400-2933 ECC DIMM

I/O [2x 38999 connectors: AMPHENOL TV07WCI-21-35P]

- ▶ **USB:** 4x USB 2.0 ports
- ▶ **Video:** 1x DVI port (optional HD-SDI)
- ▶ **LAN:** 3x 1GbE RJ-45 ports
- ▶ **Serial:** 4x RS232/RS422 serial ports
- ▶ **SATA:** 2x 6Gb/s SATA connectors

SWaP

As small as...

- ▶ **Size:**
 - Height: 2.75" (6.985 cm)
 - Width: 5.875" (14.9225 cm)
 - Depth without flanges: 7" (17.78 cm)
 - Depth with flanges: 7.75" (19.685 cm)
- ▶ **Weight:** less than 6 lbs.
- ▶ **Power:** 28VDC power source, as little as 40W

SECURITY

- ▶ **TPM 2.0**

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

FANLESS SYSTEM COOLING

The TAC's passive-cooling design is perfect for debris-heavy environments and noiseless operation.

SYSTEM BIOS

SYSTEM BIOS

- ▶ **BIOS Type:** SPI NOR Flash with Insyde BIOS
- ▶ **BIOS Features:**
 - Plug and Play (PnP)
 - APM 1.2
 - PCI 2.2
 - ACPI 1.0 / 2.0
 - USB keyboard support
 - SMBIOS 2.3
 - UEFI

ENVIRONMENTAL SPECIFICATIONS

Designed to meet the following specifications:

- ▶ Operating Temperature: -40°C - +70°C
- ▶ Storage Temperature: -55°C - +85°C
- ▶ Shock: 3 axis, 6g, 11ms
- ▶ Vibration: 4.76Grms, 10Hz to 2000 Hz (SSD)

*Crash shock levels vary per axis & go as high as 20g for 3s

*Preliminary numbers noted. Final numbers expected to outperform current specifications.

*Conformal coating available upon request.

COMPLIANCE

Designed to meet the following standards/certifications:

- ▶ IP67
- ▶ MIL-STD-810H
- ▶ MIL-STD-461F
- ▶ MIL-STD-704F
- ▶ DO-160G
- ▶ 2014/35/EU (LVD)
- ▶ 2014/30/EU (EMC)

*Environmental specifications and compliance apply within Trenton chassis.

SYSTEM VARIATIONS

SYSTEM	BOARD	DIMENSIONS	POWER	STORAGE
TAC1000	8291	2.75" (H) X 5.875" (W) X 7.25" (D)	1X 40W, NON-REDUNDANT, 461-FILTERED, FIXED	UP TO 1X FRONT-REMOVABLE SATA DRIVE (OPTIONAL: PLP, FIPS, HIGH-TEMP)
TAC2000	8291	4.00" (H) X 6.00" (W) X 7.25" (D)	1X 40W, NON-REDUNDANT, 461-FILTERED, FIXED	UP TO 2X FRONT-REMOVABLE SATA DRIVES
TAC2001	8291	4.75" (H) X 6.00" (W) X 9.375" (D)	1X 40W, NON-REDUNDANT, 461-FILTERED, FIXED	UP TO 2X FRONT-REMOVABLE SATA DRIVES
SFF COMPUTER	DESIGNED TO SPECS	7.25"-9.375" DEEP	LOW-WATTAGE, NON-REDUNDANT, 461-FILTERED, FIXED	REMOVABLE SATA 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.