



**Trenton TMS4704 Military Computer**  
Shown with a dual-processor embedded motherboard

### FEATURES

- Designed to fit a wide variety of mission requirements
- Rugged yet lightweight corrosive-resistant aluminum chassis
- Embedded motherboard and processor options support long-term project schedules and extended system deployments in the field
- Dual-processor extended-life motherboard options support a wide variety of plug-in PCI Express and PCI-X/PCI option cards
- Expansive data storage capability with up to ten HDD or SSDs
- Flexible power supply options for both AC or DC inputs
- Based on MIL-STD-810G certified design for harsh environments
- Based on MIL-STD-461F certified design for EMI/RFI emissions

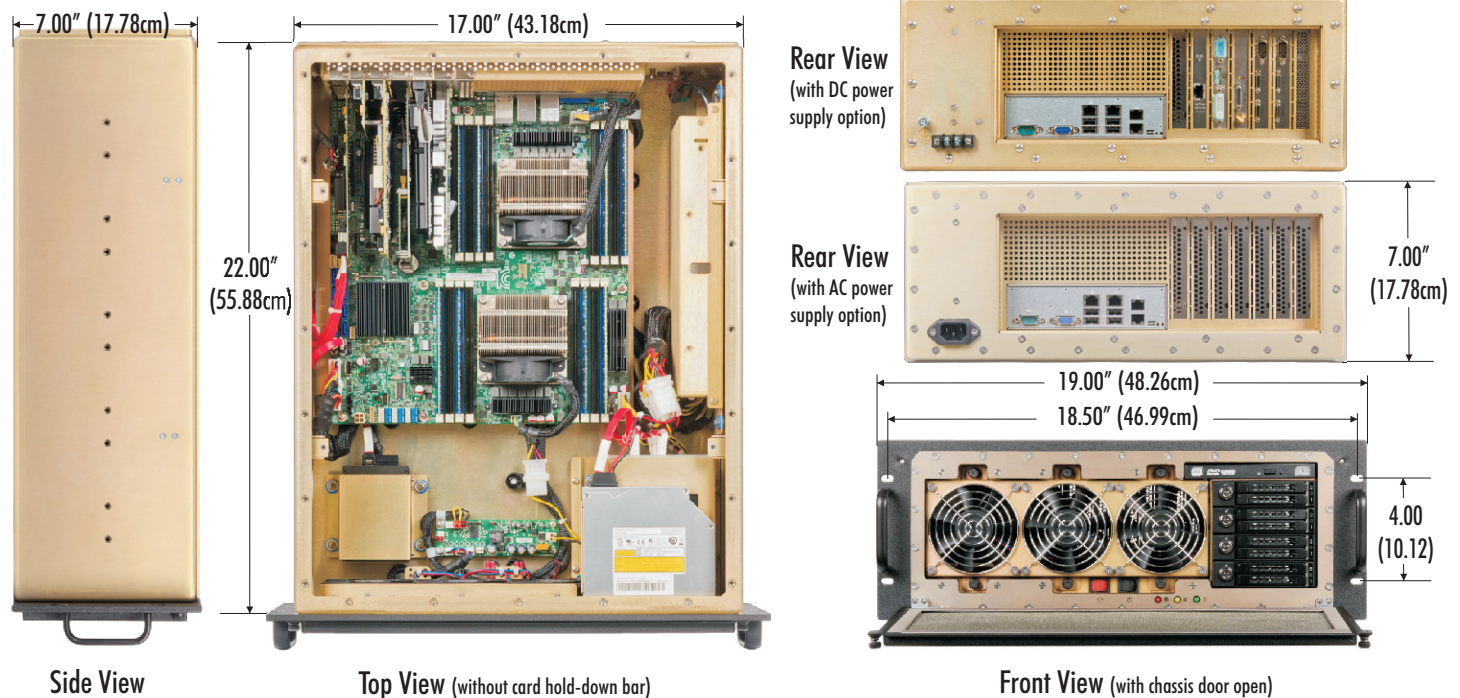


### TMS4704 OVERVIEW:

The Trenton Systems TMS4704 is a 4U rackmount military computer is based on the TMS4702 platform design that is certified to a number of different MIL-STD-810G and MIL-STD-461F environmental and electrical standards and test methods. This proven design enables the TMS4704 to be deployed with confidence in a variety of military applications. A rugged yet lightweight aluminum chassis is used in the TMS4704 and a corrosive coating is applied to both the chassis and fastening hardware. Both long-life embedded motherboards manufactured by Trenton and extended-life Intel® motherboard options maximize application flexibility and performance while utilizing COTS available long-life components to support long project life-cycles and extended system deployments. This fully designed and built in the U.S. rackmount computer enable extended PCI Express and PCI-X/PCI option card support in military computing applications.

Motherboard options for the TMS4704 include the dual-processor Trenton JXM7031 uATX motherboard featuring multi-core Intel® Xeon® processors. This long-life motherboard utilizes embedded CPUs to maximize system longevity and application stability. The TMS4704 supports up to ten 2.5" HDDs or SSDs mounted in front-access carriers and internal drive bays. Other system options include the choice of one 115/230VAC or 18-36VDC power supply. Additional configuration options are available so contact Trenton Systems for more information.

### TMS4704 SYSTEM LAYOUT (Shown with the dual EATX Trenton BXM7504 embedded motherboard):



### MIL-STD-810 Military Computer: TMS4704

SYSTEM MODEL	DESCRIPTION
TMS4704	4U rackmount computer based on a certified MIL-STD-810G/MIL-STD-461F design and featuring a choice of single or dual-processor embedded motherboard with PCI Express and PCI-X/PCI option card support, one internal and four front access drive bays, standard I/O connectors, and a choice of an AC or DC power supply

## TECHNICAL SPECIFICATIONS:

MODEL NAME	TMS4704
DESCRIPTION	Based on the TMS4702 MIL-STD-810G/MIL-STD-461F certified 4U rackmount computer design, the TMS4704 product variation offers a choice of dual or single-processor long-life embedded motherboard options
TRENTON-BUILT MOTHERBOARDS	ExtendedATX (EATX) Form Factors - WTM7026 - Dual, Intel® Xeon® 5600 series processors, other dual and single-processor options available upon request MicroATX (uATX) Form Factors - JXM7031 - Dual, Intel® Xeon® C5500 series processors, other single-processor options available upon request
TRENTON-VALIDATED MOTHERBOARDS	EATX Form Factor - BXM7504 - Dual, Intel® Xeon® E5-2600 series processors, other dual and single-processor options available upon request MicroATX (uATX) Form Factor - Single, Intel® Xeon® E3-1200 v2 or Intel® Core™ i3-3200 series processors, other single-processor options available upon request
SHOCK & VIBRATION STANDARD*	Mechanical Shock - MIL-STD-810G, Tested to Method 516.6, Procedure I, functional, sawtooth, 20G, 11ms, 3 per axis Vibration - MIL-STD-810G, Tested to Method 514.6, Procedure I, Category 4, operating, 10-500Hz & MIL-STD-810G, Method 514.4, Category I
OPERATING TEMPERATURE STD.*	High Temp. - MIL-STD-810G, Tested to Method 501.5, Procedure II (operational), 55° C. for 2 hours after temperature stabilization Low Temp. - MIL-STD-810G, Tested to Method 502.5, Procedure II (operational), -10° C. for 2 hours after temperature stabilization
STORAGE TEMPERATURE STD.*	High Temp. - MIL-STD-810G, Tested to Method 501.5, Procedure I (storage), 71° C. for 2 hours after temperature stabilization Low Temp. - MIL-STD-810G, Tested to Method 502.5, Procedure I (storage), temperature soak at -51° C. for 2 hours after temperature stabilization
ALTITUDE STANDARD*	Operational - MIL-STD-810G, Tested to Method 500.5, Procedure II, 15,000 ft./4,570 m. for 1 hour after stabilization Storage - MIL-STD-810G, Tested to Method 500.5, Procedure I, 15,000 ft./4,570 m. for 1 hour after stabilization
EMI/RFI EMISSIONS STANDARD*	MIL-STD-461F, Methods CE101, CE102, CS101, CS114, RE101, RE102, RS101, RS103 and CS116
CHASSIS CONSTRUCTION	Rugged aluminum chassis coated per MIL-DTL-5541
DRIVE BAYS	10 total drives are supported via 4 - front removable 3.5" drive bays supporting up to eight 2.5" HDD/SSD carriers and 1 - internal, shock-mounted drive bays supporting up to two additional 2.5" HDD/SSDs. A slim-line device bay is also available for an optical drive media.
POWER SUPPLY	One - 1U, 700W, 90~264 VAC -OR- 18~36VDC power supply
COOLING	3 - 92mm Fans, 102CFM each with chassis temperature monitoring speed control
SWITCHES	Power On/Off and Reset
INDICATORS	Front-panel LEDs for HDD/SDD activity, Power, and Cooling Fan Status
ENVIRONMENTAL SPECIFICATIONS	Temperature: -20° C to 50° C (operating) and -40° C to 70° (storage), Humidity: 5% to 95% non-condensing, Shock: 20G (operational), Altitude: -1,000ft./304.8m to 15,000ft./4,572m (operating) and -1,000ft./304.8m to 40,000ft./12,192m (non-operating)
DIMENSIONS	19.0"/ 48.26cm (W) x 7.0"/17.78cm (H) x 22.0"/55.88cm (D)
CHASSIS NET WEIGHT	35.8lbs. (16.25Kg.) - Includes chassis with standard I/O connectors, one BXM7504 dual-processor motherboard, one DVD drive, and one AC power supply option

Trenton Systems offers complete system integration of a wide variety of standard and customer supplied operating systems and application software packages. Various Microsoft®, Linux and RTOS operating systems can be loaded on to your system by our highly skilled factory technicians. Other system integration services include loading and testing of industry standard or COTS option cards as well as custom designed boards.

Standard industry certifications and approvals for your specific system configuration are also available from Trenton Systems.

Final system weight, environmental specifications and total power consumption estimates are a function of the specific system configuration. Preliminary estimates and final validated values are provided by Trenton for each rackmount computer system we build.

### \*NOTES:

1. The chassis photos are shown for illustrative purposes only. See the Trenton website for chassis layout drawings and the latest system configuration options.
2. Certification tests were run on the TMS4702 base system

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