

FEATURES

- Designed to fit a wide variety of mission requirements
- Rugged yet lightweight corrosive-resistant aluminum chassis
- Long-life, single board computer and processor options support long-term project schedules and extended system deployments in the field
- Backplane options support a wide variety of plug-in PCI Express and PCI-X/PCI option cards plus single or two-in-one system configurations
- Expansive data storage capability with up to ten HDD or SSDs
- Flexible power supply options for single or redundant AC or DC inputs
- MIL-STD-810G certifications for a wide variety of harsh environments¹
- MIL-STD-461F certifications for EMI/RFI emissions¹



Trenton TMS4703 Military Computer

Shown with a 14-slot backplane and a dual-processor SBC



TMS4703 OVERVIEW:

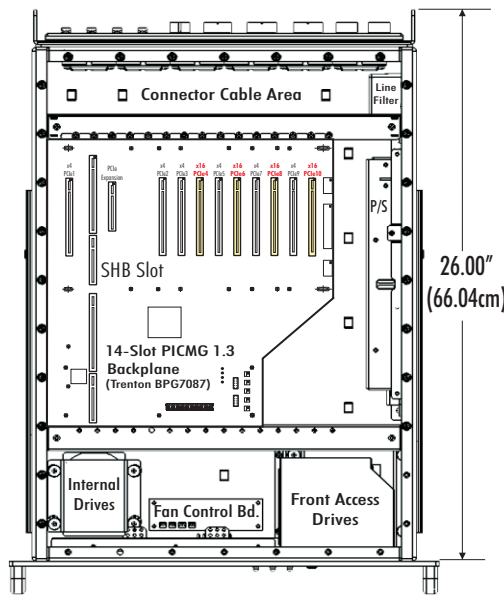
The Trenton Systems TMS4703 is a 4U rackmount military computer with flexible MIL-DTL-38999 and MIL-STD-1553 rear I/O connector configurations designed for specific, customer-defined applications. These sealed connectors plus front and rear-panel air filters enable TMS4703 certification to various MIL-STD-810G and MIL-STD-461F standards and test methods. The TMS4703 utilizes a rugged yet lightweight aluminum chassis with a corrosive-resistant coating applied to both the chassis and fastening hardware. The wide variety of backplane and single board computer options available with the TMS4703 maximizes application agility and performance, while utilizing standard COTS long-life components to support long project life-cycles and extended system deployments. This fully designed and built in the U.S. rackmount computer enables extended PCI Express and PCI-X/PCI option card support in military computing applications.

Single board computer options for the TMS4703 include the dual-processor Trenton BXT7059 featuring multi-core Intel[®] Xeon[®] processors. This high-performance SBC employs long-life embedded processors to maximize system performance & configuration stability. The system 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 or two, 115/230VAC or 18-36VDC power supplies. Additional system configuration options are available, contact Trenton for more information.

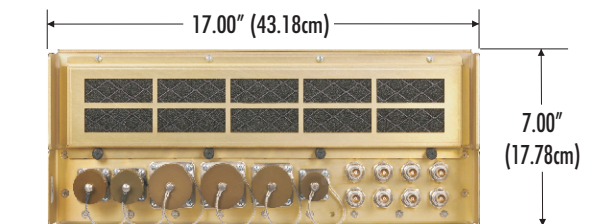
TMS4703 SYSTEM LAYOUT - SINGLE SYSTEM CONFIGURATION with ONE 14-SLOT BACKPLANE AND SINGLE BOARD COMPUTER²:



Side View

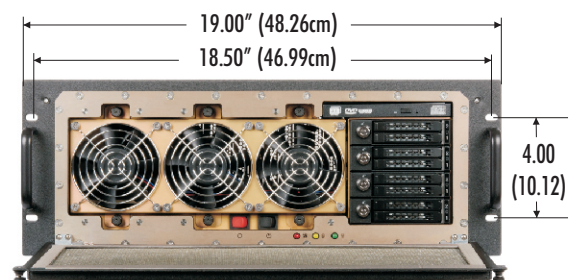


Top View (without card hold-down bar & single system configuration)



Rear View

(Customer-defined configuration with 6, MIL-DTL-38999 & 8, MIL-STD-1553 connectors)



Front View (with chassis door open)

MIL-STD-810 Military Computer: TMS4703

SYSTEM MODEL	DESCRIPTION
TMS4703	4U rackmount MIL-STD-810G/MIL-STD-461F computer featuring a choice of single or dual-processor SBC and backplane with extended PCI Express and PCI-X/PCI option card support, one internal and four front access drive bays, MIL-STD connectors, and a choice of one or two AC or DC power supplies

TECHNICAL SPECIFICATIONS:

MODEL NAME	TMS4703
DESCRIPTION	4U, MIL-STD-810G/MIL-STD-461F certified, rackmount computer with a choice of single board computer and SFF or 14-slot backplane options
SINGLE BOARD COMPUTER	Dual Processor - Trenton BXT7059 single board computer with long-life, Intel® Xeon® E5-2400 v1/v2 processors, other DP SBC options available upon request Single Processor - TSB7053 SBC with a long-life, Intel® Xeon® E3-1200 v2 Series or Intel Core i3/i5/i7 processor, other UP SBC options available upon request
BACKPLANE	14-Slot backplane options include the Trenton Systems BPX8093, BPG7087, BPX6620, BPX6610 and BPG6544 for single power-supply configurations Additional small form factor backplane options available for two-in-one system configurations utilizing two, independent system power supplies
SHOCK & VIBRATION STANDARD¹	Mechanical Shock - MIL-STD-810G, Tested to Method 516.6, Procedure I, functional, sawtooth, 40G, 11 ms, 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.¹	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.¹	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
HUMIDITY STANDARD¹	MIL-STD-810G, Tested to Method 507.5, Procedure II, Figure 507.5-7, exposed to 23° C./50%RH for 24 hours then subjected to 10 cycles of 24-hours where temperature changes between 30° C. and 60° C. while maintaining a relative humidity of 95%
ALTITUDE STANDARD¹	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 STANDARD¹	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 bay 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 or two system power supply configurations available, choice of - 1U, 700W, 90~264 VAC -OR- 18~36VDC NOTE: The two supply configuration is available for dual/independent system applications within the same 4U rackmount enclosure using two, small form factor backplanes
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: 10% to 95% non-condensing Altitude: -1,000ft./304.8m to 15,000ft./4,5072m (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 26.0"/66.04cm (D)
CHASSIS NET WEIGHT	37.8Lbs. (17.16Kg.) - Includes chassis with barrel-style I/O connectors, one BXT7059 dual-processor SBC, one BPX8093 PCI Express Gen3 backplane, one DVD drive, and the single 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. Certification testing performed on TMS4702 base system. Certification testing for additional system configurations is available upon request.
2. The chassis photos are shown for illustrative purposes only. See the Trenton website for chassis layout drawings and the latest system configuration options.

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