TMS4702

TRENTON 4U MIL-STD MILITARY COMPUTER

Trenton TMS4702 Military Computer
Shown with a 14-slot backplane and a dual-processor SBC

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 SDDs
- Flexible power supply options for both AC or DC inputs
- MIL-STD-810G certifications for a wide variety of harsh environments
- MIL-STD-461F certifications for EMI/RFI emissions

TRENTON SYSTEMS™
Engineered For Reliability

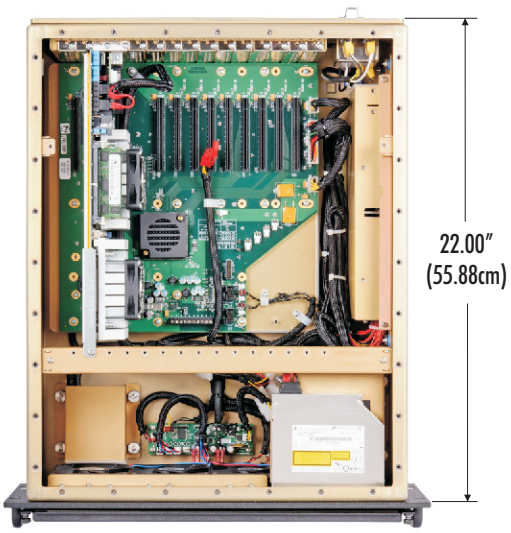
TMS4702 OVERVIEW:

The Trenton Systems TMS4702 is a 4U rackmount military computer that has been certified to a number of different MIL-STD-810G and MIL-STD-461F environmental and electrical standards and test methods. These certifications enable the TMS4702 to be deployed with confidence in a variety of military applications. A rugged yet lightweight aluminum chassis is used in the TMS4702 and a corrosive coating is applied to both the chassis and fastening hardware. The wide array of backplane and robust single board computer options available with the TMS4702 maximizes 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, including the boards inside the system, enable extended PCI Express and PCI-X/PCI option card support in military computing applications.

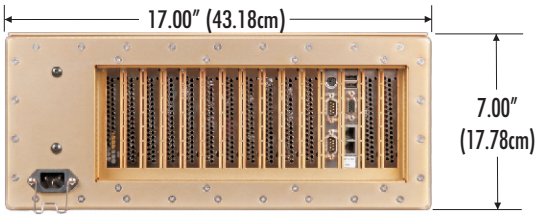
Single board computer options for the TMS4702 include the dual-processor Trenton BXT7059 featuring multi-core Intel® Xeon® E5-2400 series processors. This long-life and high-performance SBC utilizes embedded CPUs to maximize system longevity and application stability. The TMS4702 supports up to ten 2.5″ 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 configuration options are available so contact Trenton Systems for more information.

TMS4702 SYSTEM LAYOUT - SINGLE SYSTEM CONFIGURATION with ONE 14-SLOT BACKPLANE AND SINGLE BOARD COMPUTER[1]:

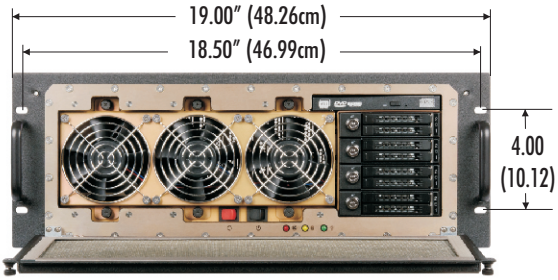
Side View



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



Rear View (with AC power supply option)



Front View (with chassis door open)

MIL-STD-810 Military Computer: TMS4702

SYSTEM MODEL	DESCRIPTION
TMS4702	4U rackmount MIL-STD-810G/MIL-STD-461F computer featuring a choice of single or dual-processor SBC and small form factor (SFF) or 14-slot backplanes with extended 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 one or two AC or DC power supplies

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TECHNICAL SPECIFICATIONS:

MODEL NAME	TMS4702
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 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 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), 55º C. for 2 hours after temperature stabilization Low Temp. - MIL-STD-810G, Tested to Method 502.5, Procedure II (operational), -10º C. for 2 hours after temperature stabilization
STORAGE TEMPERATURE STD.	High Temp. - MIL-STD-810G, Tested to Method 501.5, Procedure I (storage), 71º C. for 2 hours after temperature stabilization Low Temp. - MIL-STD-810G, Tested to Method 502.5, Procedure I (storage), temperature soak at -51º 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 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: -10º C to 50º C (operating) and -40º C to 70º (storage), Humidity: 5% to 90% non-condensing, Shock: 20G (operational), Altitude: -1,000ft./304.8m to 15,000ft./4,5072m (operating) and -1,000ft./304.8m ro 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 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.

[1]NOTES: 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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