

PICMG 1.3 Servers | 7th Gen Core[®] or Xeon[®] E

2U, 4U, and 5U rugged servers equipped with the TKL8255 processor board to tackle the widest range of industrial and embedded computing challenges. Customize and scale your system as workloads evolve according to your most complex requirements.



MAXIMUM FLEXIBILITY AND SCALABILITY

Configure/reconfigure a system to meet increasingly demanding tasks for critical applications, networks, and services.



MODULAR DESIGN FOR INTEROPERABILITY

Easily integrate the processor board into various chassis and backplane configurations without compatibility issues.



CONFIGURABLE TO YOUR SPECS

Choose your rugged chassis, a PCIe backplane, rugged storage options, and customize your own I/O interface.



Overview

The PICMG 1.3 servers—in 2U, 4U, and 5U height—utilize a standard processor board (TKL8255) within system architectures, simplifying upgrades and reducing total cost of ownership.

Deliver enhanced compute and connectivity within a flexible, SWaP-C optimized solution that can easily adapt to changing workload requirements, all without loss of performance!



SOLUTION HIGHLIGHTS



Multi-layer cybersecurity creates a secure computing platform while enhancing resilience against sophisticated cyberthreats.



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 PCIe Expansion Kits, 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.

Technical Overview

SPECIFICATION	DETAILS
CPUs	Single Intel® Xeon® E or 7 th Gen Core® (Kaby Lake)
Memory	4x DDR4-2400 ECC UDIMM slots
Storage	Up to 8x U.2 NVMe, 16x SATA SSDs (FIPS 140-2/3 available)
Form Factors	2U/4U/5U rack servers ranging from 16" - 26" depth
Network Interface	3x 1GbE ports
Power	Low/Mid/High Wattage, redundant/non-redundant, 461/non-461, fixed/removable

PROCESSORS (UP TO 4 CORES PER CPU, UP TO 8 TOTAL)

Single 7th Gen Intel® Core® or Intel® Xeon® E (Kaby Lake) up to 65 W
Chipset: Intel® C236 Sky Lake

MEMORY (UP TO 1.5 TB)

4x DDR4-2400 ECC UDIMM slots

I/O

- ▶ **NVMe:** 1x M.2 x4 PCIe 3.0
- ▶ **SATA:** 6x SATA ports
- ▶ **USB:** 4x USB2 ports via header, 4x USB2 ports via PICMG connection to backplane, 2x USB3 ports via header, 2x USB3 ports on rear I/O
- ▶ **LAN:** 1x 1GbE RJ-45 port to backplane driven from an Intel® i219 controller, 2x 1GbE RJ-45 ports on rear I/O driven from a dual Intel® i350 controller
- ▶ **Serial:** 1x RS232, 1x R422/R485 port

SECURITY

- ▶ **TPM 2.0**

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

COOLING (BMC Controlled)

6x 4 pin system fan headers, 2x 4 pin CPU fan headers

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

OS COMPATIBILITY

- ▶ Windows Enterprise, Server
- ▶ Linux
 - RHEL
 - Ubuntu
 - SUSE

*Contact us for the full compatibilities list

DIMENSIONS

4.98 in. x 13.33 in. (12.64 cm x 33.86 cm)

ENVIRONMENTAL SPECIFICATIONS

- ▶ Operating Temperature: 0°C - 50°C
- ▶ Storage Temperature: -40°C - 70°C
- ▶ Operating Humidity: 8% - 90% non-condensing
- ▶ Non-Operating Humidity: 5% - 95% non-condensing

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

*Conformal coating available upon request.

COMPLIANCE

Designed to meet the following standards/certifications:

- ▶ MIL-STD-810H
- ▶ MIL-STD-461G
- ▶ MIL-STD-1310
- ▶ MIL-STD-464C
- ▶ DO-160F
- ▶ 2014/35/EU (LVD)
- ▶ 2014/30/EU (EMC)

*Environmental specifications and compliance apply within Trenton 2U/4U/5U chassis.

The PICMG 1.3 Servers can be customized to your most complex technical, performance, and environmental specifications in consultation with our team.

SYSTEM VARIATIONS

#	CHASSIS	BACKPLANES	POWER SUPPLY	DEPTH	STORAGE	SLOTS
1	TRC2009 (2U)	8219	1X 650W NON-REDUNDANT, NON-461, FIXED, OR 2X 600W REDUNDANT, NON-461, REMOVABLE	18"	UP TO 6X FRONT-REMOVABLE SATA DRIVES OR 4X FRONT-REMOVABLE U.2 NVME DRIVES (REQUIRES RAID CONTROLLER)	4X FLFL PCIE 3.0
2	TRC4007 (4U)	8155	1X 1200W NON-REDUNDANT, NON-461, FIXED, OR 2X 800W REDUNDANT, NON-461, REMOVABLE	20"	UP TO 12X FRONT-REMOVABLE SATA DRIVES (REQUIRES RAID CONTROLLER) OR 8X FRONT-REMOVABLE U.2 NVME DRIVES (REQUIRES RAID CONTROLLER)	DEPENDENT ON BACKPLANE
3	TRC4008 (4U)	8155	1X 1200W NON-REDUNDANT, NON-461, FIXED, OR 2X 800W REDUNDANT, NON-461, REMOVABLE	20"	UP TO 12X FRONT-REMOVABLE SATA DRIVES (REQUIRES RAID CONTROLLER) OR 8X FRONT-REMOVABLE U.2 NVME DRIVES (REQUIRES RAID CONTROLLER)	DEPENDENT ON BACKPLANE
4	TRC4010 (4U)	8155	1X 1200W NON-REDUNDANT, NON-461, FIXED, OR 2X 800W REDUNDANT, NON-461, REMOVABLE	16"	UP TO 8X FRONT-REMOVABLE SATA DRIVES (REQUIRES RAID CONTROLLER) OR 4X FRONT-REMOVABLE U.2 NVME DRIVES (REQUIRES RAID CONTROLLER)	DEPENDENT ON BACKPLANE
5	TRC4015 (4U)	8032, 8194	1X 1200W NON-REDUNDANT, NON-461, FIXED, OR 2X 800W REDUNDANT, NON-461, REMOVABLE	26"	UP TO 16X FRONT-REMOVABLE SATA DRIVES (REQUIRES RAID CONTROLLER) OR 8X FRONT-REMOVABLE U.2 NVME DRIVES (REQUIRES RAID CONTROLLER)	DEPENDENT ON BACKPLANE
6	THS4086 (4U)	8155	1X 1200W NON-REDUNDANT, NON-461, FIXED, OR 2X 800W REDUNDANT, NON-461, REMOVABLE	16.5"	UP TO 12X FRONT-REMOVABLE SATA DRIVES (REQUIRES RAID CONTROLLER) OR 8X FRONT-REMOVABLE U.2 NVME DRIVES (REQUIRES RAID CONTROLLER)	12X FHFL PCIE 3.0
7	TMS4702 (4U)	8155	1X 700W NON-REDUNDANT, 461-FILTERED, FIXED, OR 1X 750W NON-REDUNDANT, NON-461, FIXED	22"	UP TO 12X FRONT-REMOVABLE SATA DRIVES (REQUIRES RAID CONTROLLER) OR 8X FRONT-REMOVABLE U.2 NVME DRIVES (REQUIRES RAID CONTROLLER)	12X FHFL PCIE 3.0
8	TMS4711 (4U)	8155	2X 500W REDUNDANT, 461-FILTERED, REMOVABLE	20"	UP TO 12X FRONT-REMOVABLE SATA DRIVES (REQUIRES RAID CONTROLLER) OR 8X FRONT-REMOVABLE U.2 NVME DRIVES (REQUIRES RAID CONTROLLER)	12X FHFL PCIE 3.0
9	TRC5004 (5U)	8194, 8032	2X 1200W REDUNDANT, NON-461, REMOVABLE	18"	UP TO 6X FRONT-REMOVABLE SATA DRIVES OR 4X FRONT-REMOVABLE U.2 NVME DRIVES (REQUIRES RAID CONTROLLER)	DEPENDENT ON BACKPLANE
10	TRC5005 (5U)	8194, 8032	1550W N+1, 2430W N+1, 3800W N+1, 3X-4X DEPENDING ON ZIPP MODEL, NON-461, REMOVABLE	23"	UP TO 12X FRONT-REMOVABLE SATA DRIVES (REQUIRES RAID CONTROLLER) OR 8X FRONT-REMOVABLE U.2 NVME DRIVES (REQUIRES RAID CONTROLLER)	DEPENDENT ON BACKPLANE
11	2U-5U	TRENTON BACKPLANE	LOW/MID/HIGH WATTAGE, REDUNDANT OR NON-REDUNDANT, 461-OPTIONAL, FIXED OR REMOVABLE	18"-26"	SAS/SATA/NVME DRIVES (INTERNAL, FRONT-REMOVABLE, VIA RAID CONTROLLER, OR VIA RISER)	HALF-HEIGHT AND FHFL PCIE 3.0/4.0/5.0

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.

Contact us for pricing and availability.

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