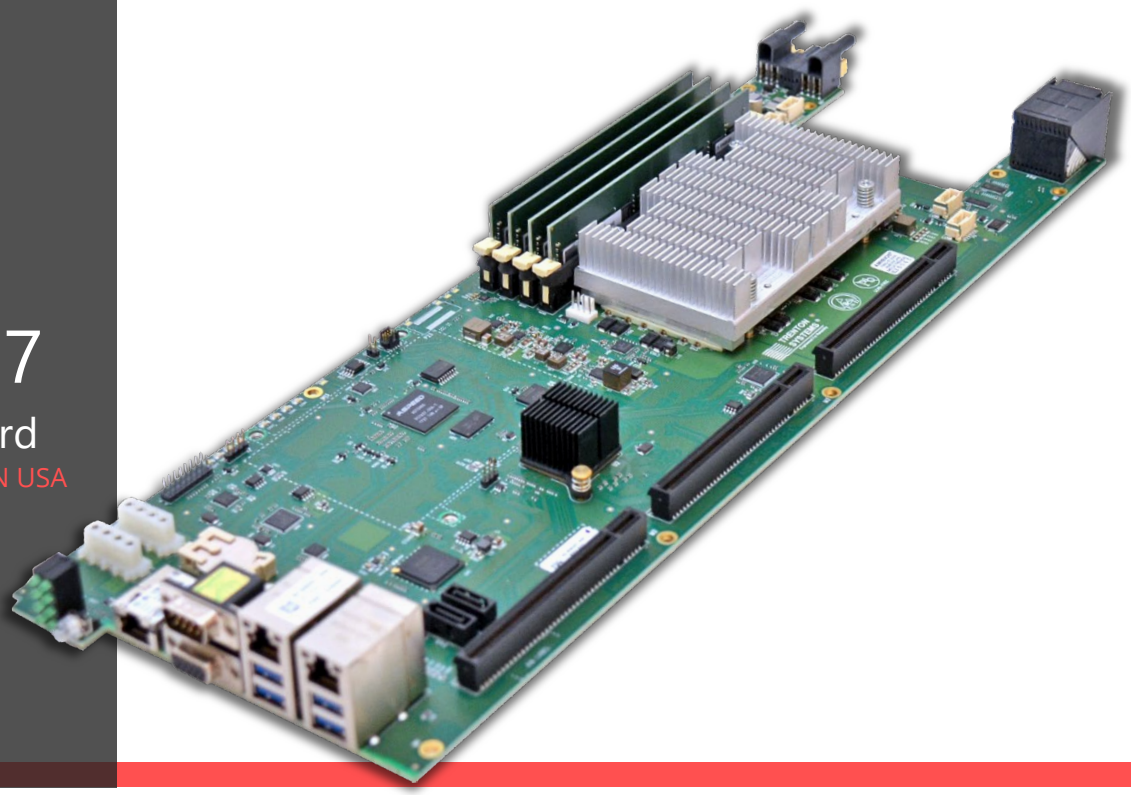
MBK8257

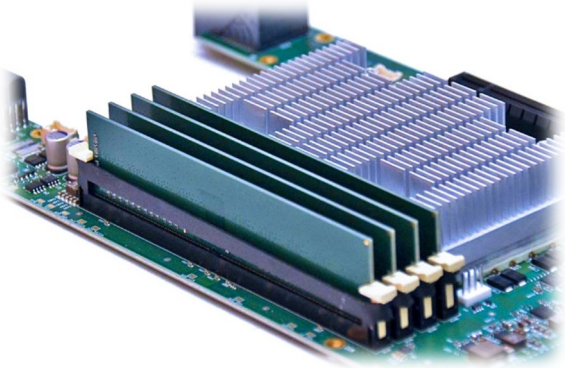
Processor Board

RUGGEDIZED | MADE IN USA



4.6 Pounds of Truly Ruggedized Power

The MBK8257 processor board can take your rugged server, blade server or workstation to the next level using its Intel Core i3, i5 i7 or Xeon E3 v6 processor, four DDR4-2400 memory slots and two PCIe Gen 3 slots. Shall we get to work?



Four DDR-2400 Slots

Achieve peak performance with the MBK8257's four DDR4-2400 SDRAM slots, or a maximum 64GB of RAM.

More PCIe Gen 3 Slots

PCIe Gen 3 slots and compatible riser cards can give your rugged server, workstation or blade the expansion capability it needs.

ECC Memory Support

Stop data corruption dead in its tracks with error-correcting code memory, perfect for mission-critical applications.

PROCESSOR BOARD

MBK8257

COMPATIBLE CHASSIS MODEL NUMBER(S)

TRC1001, TRC1002, MBS1001, MBS1002, MBS2000, MBS2001

Contact us for custom options

PROCESSORS

- Intel® Core™ or Xeon® E processors; LGA1151 Socket
- CPU TDP support up to 125W

CPU	Cores/Threads	Frequency	Cache	TDP
i5-7500	4/4	3.40-3.80GHz	6 MB	65W
i7-7700	4/8	3.60-4.20GHZ	8 MB	65W
E3-1275v6	4/8	3.80-4.20GHz	8 MB	73W

MEMORY

Slots: 4x DDR4 with ECC support
Dual: Channel memory support
Capacity: Up to 64GB DDR4 ECC
Type: ECC DDR4-2400 UDIMM
DIMM Sizes: 16GB, 8GB or 4GB
Error Detection: Corrects single-bit errors and detects double-bit errors using ECC memory
*ECC support dependent on CPU installed

STORAGE

Type(s):

- 2x SSD/HDD SATA3 (6 Gbps) drives of any size
- 4x M.2 NVMe PCIe 3.0 x4
- **Capacity:** Up to 12TB per drive (larger capacities available upon request)

SATA Modes: AHCI or RAID
RAID: Intel® RSTe SATA RAID support 0/1/5/10 Modes

PCIE SLOT CONFIGURATION

Type(s): x1 PCIe Gen 3 x16, x1 PCIe Gen 3 x4
**Dependent on riser cards used*

ON-BOARD DEVICES

Chipset: Intel® C236
IPMI: Support for Intelligent Platform Management Interface v2

- IPMI 2.0 with virtual media over LAN and KVM-over-LAN support

Network Controllers:

- Intel® i350 Gigabit Ethernet
- Dual Intel® i210 Gigabit Ethernet

Graphics: ASPEED AST2400 BMC; VGA 1920X1200@60Hz 32bpp
TPM 2.0: Secure cryptoprocessor that helps you with actions such as generating, storing, and limiting the use of cryptographic keys. A requirement for Microsoft's bitlocker drive volume encryption features.

INPUT / OUTPUT

Power: 2x Power Connectors
USB: 6x USB 3.0 Ports
Display: 1x VGA Port
LAN: 3x RJ-45 Gigabit Ethernet LAN ports

- **Optional:** 1x RJ-45 Gigabit Ethernet LAN port

Serial: 1x RS232 Serial Port

PROCESSOR BOARD DIMENSIONS

Length: 17.62" | 44.74 cm
Width: 6.19" | 15.72 cm
Average Weight: 4.6 lbs. | 2.09 kg
**System dimensions and weight dependent on rugged chassis and component selection*

SYSTEM BIOS

BIOS Type: *128Mb Macronix MX25L12835FM2I-10G SPI Serial EEPROM (SPI Flash)*
BIOS Features:

- Plug and Play (PnP)
- TPM 2.0
- PCI 2.2
- ACPI 1.0 / 2.0
- USB Keyboard Support
- SMBIOS 2.3
- UEFI

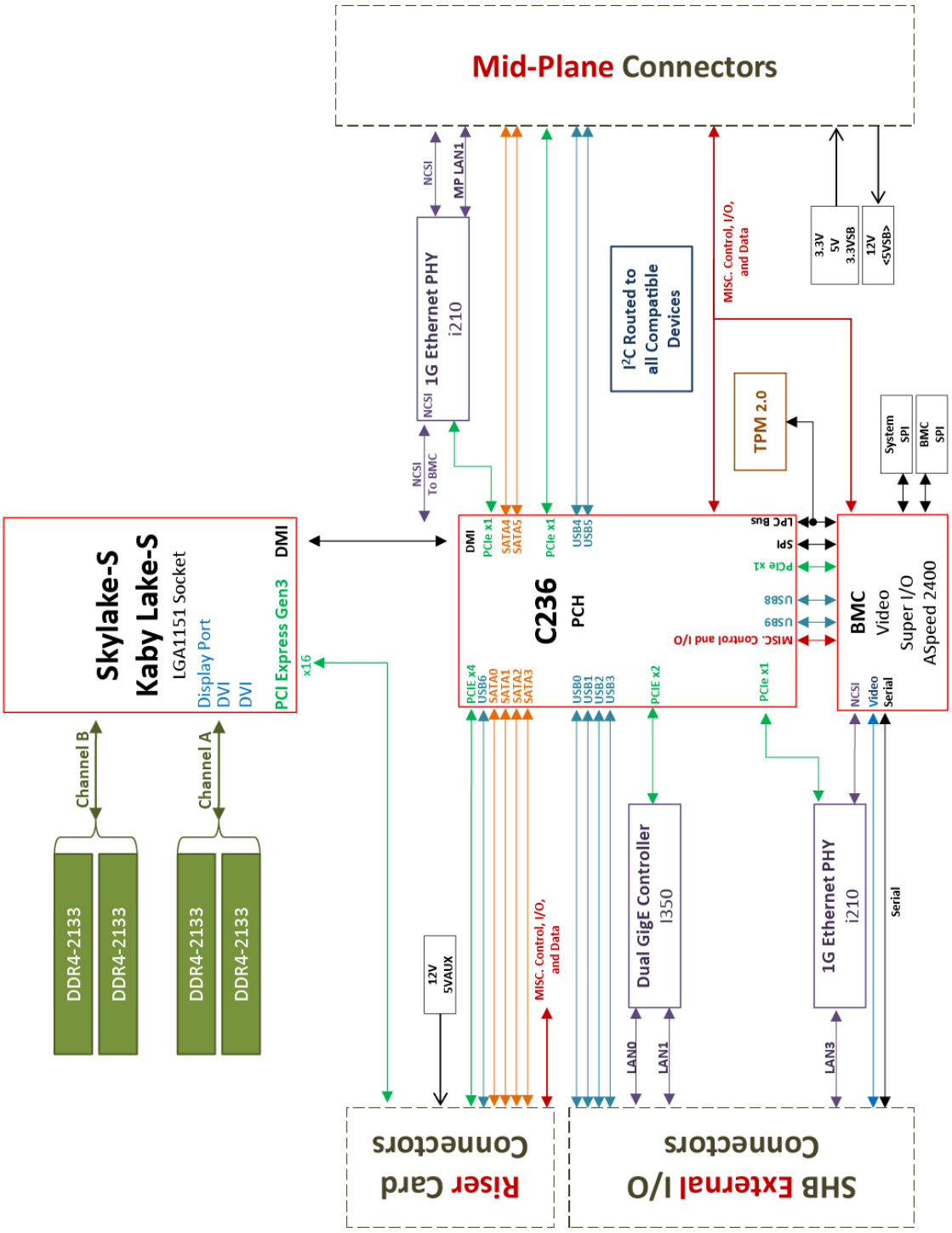
SYSTEM MANAGEMENT

ASPEED AST2400 Baseband Management Controller: rKVM, System Monitoring, Out of Band Management

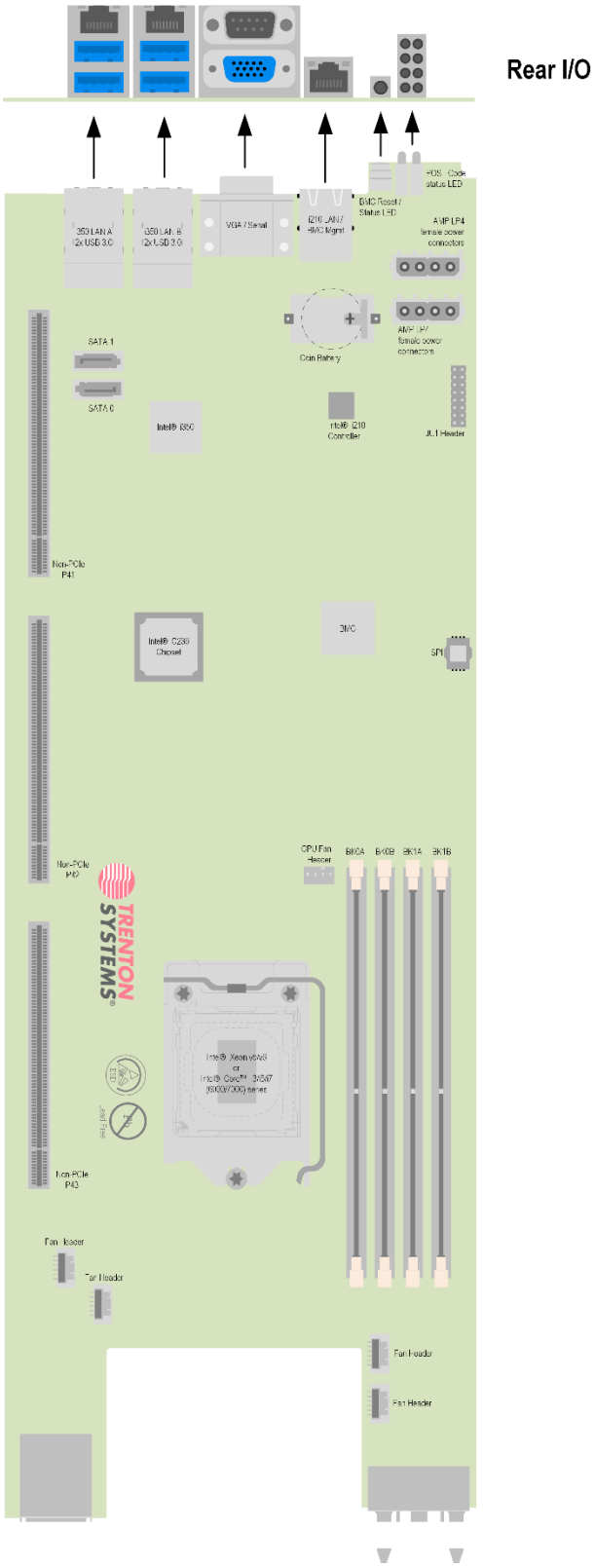
ENVIRONMENTAL SPECIFICATIONS

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
Trenton Systems Model TRC1002 with MBK8257 tested and passed RTCA/DO-160G (Section 21) Category B and Category M.
Trenton Systems Model TRC1002 with MBK8257 tested and passed MIL-STD-461G, CE102, and RE102 requirements
**Numbers noted are dependent on CPU selection. Please contact Trenton Systems for specific CPU environmental specs.*

BLOCK DIAGRAM



LAYOUT DRAWING



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