

SEA-KBL-MC

Extreme Rugged Cold Plate Mount System with Intel® Xeon® Processor and MIL-DTL-38999 Connectors

Features

- VITA 75 Cold Plate mounting
- Intel® Xeon® Processor E3-1505M v6, quad-core
- 16GB DDR4-2400 with ECC soldered down
- Quad Gigabit Ethernet and 6x USB ports
- Available GPGPU on PCI Express x16 Gen3
- 3 independent displays (DVI/VGA)
- Wide temperature range: storage -40°C to +85°C, operating -40°C to +75°C
- OS support: Windows 10, RHEL 7.3

Specifications

• Processor & System

CPU

Intel® Xeon® E3-1505M v6 3.0GHz, Quad core **Chipset**

Intel® CM238 Chipset

GPGPU

MXM NVIDIA Quadro series with 4GB GDDR5 (optional)

Memory

16GB DDR4-2400 ECC soldered down

32GB DDR4-2400 ECC soldered down (optional) **BIOS**

AMI EFI

Expansion Busses

MXM (PCIe x16 GEN3)

PCI/104 Express Type 2 (PCIe Gen2)

PCI Express Mini Card (PCIe Gen2)

• Standard I/O

Video

2x DVI and 1x VGA (3 simultaneous display outputs)

Audio

1x amplified stereo output

1x stereo input

LAN Chipset

4x Intel® I210 Ethernet controller

LAN Speed

10/100/1000 Mbps

USB

6x USB 2.0

Serial Port

7x RS-232/422

GPIO

8x digital IO



• Internal Storage

Removable SATA

2x 2.5" SLC/MLC SSD on SATA 6 Gb/s

RAID 0/1

Support up to 12Gb/s

Removable SD

1x SDHC - SLC (up to 64 GB)

• Security

TPM

Infineon SLB 9665XT2.0

Secure Erase (option for SSD)

Hardware input triggered

Software triggered

• Power

Input: 18-36VDC

Performance: S-States S3, S4

Thermal

Internal Transfer: Passive conduction to body

Cold plate conduction

VITA 75.22 mount

Storage Temperature

-40°C to +85°C

Operating Temperature

Extreme Rugged: -40°C to +75°C (ambient)

(Note: Max. operating temperature is dependent on an external thermal solution design that keeps the temperature at any point on the cold plate surface below +85°C.)



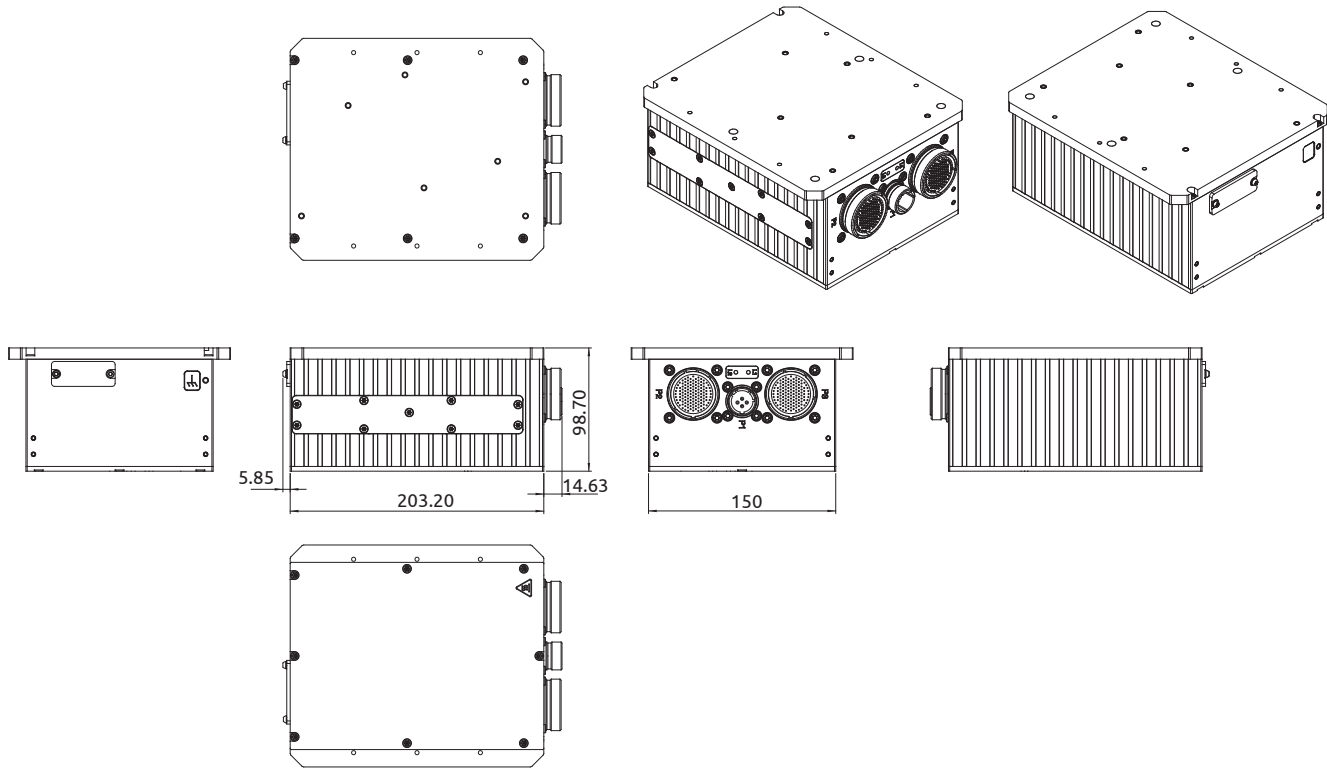
MIL-STD-810G - 502.5, Procedure 1 and 2

(Please contact SEATRONX for other OS support)

The diagram illustrates the system architecture of the Intel® Xeon® E3-1240 v5. At the center is the Intel® Xeon® E3 processor, which is connected to 16 GB of DDR4 RAM with ECC via a double-ported memory controller. The processor is also connected to the Intel® CM238 PCH (Platform Controller Hub) via a double-ported bus. The PCH manages various I/O functions, including SATA 6 GB/s storage (SSD and SSD Flash), SDHC, and USB. The system includes an NVIDIA Quadro P1000 MXM graphics card connected via PCIe x16 Gen 3. Power is supplied by a MIL-STD-704/MIL-STD-1275 PSU (18-36V DC). The system also features a PCI/104 Express card and a Mini PCIe card, both connected via PCIe. The system is designed for rugged environments, with components like the PSU and storage media (SSD, SSD Flash, SDHC) meeting MIL-STD-704/MIL-STD-1275 specifications. The system is also compatible with the MIL-STD-704/MIL-STD-1275 PSU and the MIL-STD-704/MIL-STD-1275 PSU.

Mechanical Drawing

(Units: mm)



Ordering Information

- **SEA-KBL-MC**
Cold plate, Intel® Xeon® E3-1505M v6, 16GB RAM

Accessories

- **SEA-X-03**
Breakout cable kit including Amphenol MIL-STD Nkey & Akey (I/O cables), and AC Adapter
- **SEA-GPU MXM module**
MXM NVIDIA Quadro P1000 GPU card, with 4GB GDDR5 memory (must be pre-assembled at SEATRONX factory)