

CMC-e Military PC, Removable SSD

Quad Core Performance for Airborne, Naval, Vehicles

Quad Core i7-3612QE (4 x 2.1 GHz), Airborne, Naval Military PC computer, Enhanced Graphics, Expansion Slots. Fixed & Removable Flash disk (SSD) MIL-STD-38999 Connectors.

CMC-e, is a fully rugged military PC, with Intel Quad Core i7-3612QE (4x 2.1 GHz), L2 Cache 6 MB, and Intel HD 4000 Graphics. It supports Windows XP Professional & Embedded, Windows 7 & Embedded, Windows 8, and Server 2003, 2008. Delivered per customer specified configuration, it includes a passive back-plane with three PCI Express slots (x16, x4, x1), and three PCI slots.

The computer provides EMI/RFI and environmental protection for COTS PC boards and other modules and is qualified for Helicopters, Transport Aircraft, Vehicles and Naval Vessels. It is supplied with a mounting tray with four shock isolators, or as a 19" Rack mounted drawer.

Removable Media Module (RMM)

The CMC-e includes a removable media module (RMM), used for recorded data. The RMM is compatible with a USB Media Adapter, made for interface with a Ground PC via USB 2.0 port

Salient Features

- ◆ Removable SATA Flash DISK: 32-500GB
- ◆ Expansion slots: 3 x PCI-e (x 1, 4, 16), 3 x PCI
- ◆ Internal SATA Flash Disk (SLC): SATA, 8-64GB
- ◆ Ethernet: Internal Switch , 4 x 100/1000Base-T.
- ◆ USB 2.0: 6 x USB 2.0
- ◆ Up to 8 x RS-232/RS-422
- ◆ Programmable Hardware Watch Dog
- ◆ Voice In/Out

Graphics

- ◆ I7 internal Integrated GMA HD4000 , or
- ◆ Graphics from NVIDIA or AMD PCI-e x 16 cards.



Standard shock mount Configuration



19" Rack Configuration



RMM Adapter

Options

- Ã1 Internal NTSC/RS-170 Ethernet Streamer.
- Ã1 ARINC-429 , MIL-STD-1553
- Ã1 Internal GPS receiver, AIS receiver.
- Ã1 Internal Video Out: DVI/VGA/RS-170/RS-170 RGB
- Ã1 RS-170 to MPEG4 via Ethernet Streaming
- Ã1 Ethernet Recording
- Ã1 Server Configuration

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Dimensions & Weight

222x243.5x383.3 (WxHxL) [mm] including base.
Weight approx. 13 Kg with base.

Power Supply

- ◆ **Power In**
12-36, or 18-36VDC per MIL 1275B,
MIL-STD-704A approximately 3Amp.
- ◆ Hold-Up time minimum 80msec.

Reliable and rugged

The CMC-e withstands severe environmental conditions. Compact and easy to install, the unit is self-cooled. It operates autonomously from a 18-36VDC power source. The CMC-e uses either solid-state or hard-drive recording media, with the storage capacity for many hours of continuous operation.

CMC-e PC Construction

The CMC-e is designed and constructed in accordance with the general requirements of MIL-STD-454.

Thermal Design

The cooling of the components of the CPU and Power Supply is by conduction through the aluminum enclosure of the unit. The cooling of the plug in boards is by forced air.

Processes and Treatment

Processes and treatments (welding, soldering, brazing) and corrosion (resistance protection) of the enclosure is in accordance with MIL-STD-454.

External Connectors

External MIL-38999 circular connectors are used for interfacing with other equipment and are in accordance with requirement of MIL-STD-454. Connector mating bodies are keyed, and keyed locations are varied to prevent improper installation.

Connector's Panel

The configuration of the MIL-38999 on the panel is custom made per Customer's specifications.

Identification and Marking

The marking and labels of the equipment meet the requirements of MIL-M-13231.

Environmental

Temperature range:

Â Operating: -10°C to +65°C

Option: -30°C to +71°C.

Â Non-operating: -54°C to +85°C;

Relative humidity:

Up to 95% relative humidity,
non-condensing, MIL-STD-810F

Salt Fog:

5% solution per MIL-STD-810F method 509.3

Vibration:

MIL-STD-810F Method 514.5 Procedure I

Shock:

MIL-STD-810F for flight equipment 40g, 11ms saw tooth

Altitude:

- ◆ With standard hard disks up to 15,000ft, operating and non-operating
- ◆ With Flash disks up to 40,000ft, operating and non-operating.

Fungus, Sand and Dust

MIL-STD-810F

EMI/RFI

Per MIL-STD-461F

Â CE102, conducted emissions, power leads,
10 kHz to 10 MHz.

Â RE102, radiated emissions, electric field,
100 kHz to 1.0 GHz.

- ◆ RS103, radiated susceptibility,
electric field, 2 MHz to 2.0 GHz.
- ◆ CS114, conducted susceptibility, DC cable injection, 10 kHz to 400MHz.

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