

CMC-e Military PC Airborne, Naval, Vehicles

Military PC Platform, Radeon or NVIDIA Graphics, PCI-Express & PCI slots Removable disk Customized Round Connectors

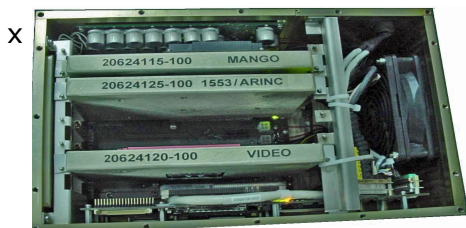
CMC-e, is a fully qualified military rugged PC computer, running Intel Core 2 Duo, or Intel Core i7. The computer is used as a LRU on Helicopters, Transport Aircraft, as well as on Vehicles, and for Naval applications.

The computer has a passive back-plane with three PCI Express slots (x16, x4, x1), and three PCI slots. The length of add on cards is up to 20cm. The CMC-e computer provides EMI/RFI and environmental protection for COTS PC boards and various modules. It supports Windows XP Professional, Windows XP Embedded, Windows 7 and Linux. Built as a LRU for easy maintenance, the CMC-e is supplied with a mounting tray supported by four shock isolators, or as a 19" Rack mounted drawer.

Computer Configuration

- ◆ Processors
Intel Core™ 2 Duo SL9400, or Intel I7-620LE
- ◆ BUS - 667MHz FSB
- ◆ Integrated video, PCI, IDE, PCI-Express, SATA, USB.
- ◆ Memory - 2-4GB SODIMM DRAM
- ◆ Internal 8GB SATA Flash for OS.
- ◆ Ethernet - Internal Switch provides up to 4 x 10/100x1000Base-T.

- ◆ USB - 4
USB 2.0.



Standard shock mount Configuration



19" Rack Configuration

Options

- ◆ NVIDIA or ATI Radeon on PCI-e x 16.
- ◆ Internal NTSC/RS-170 Ethernet Streamer.
- ◆ ARINC-429
- ◆ MIL-STD-1553
- ◆ RS-232/RS-422
- ◆ Internal GPS receiver
- ◆ Internal AIS receiver.
- ◆ VGA/RS-170 Video Out
- ◆ RS-170 to MPEG4 via Ethernet Streaming
- ◆ Ethernet Recording
- ◆ 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

18-36VDC per MIL 1275B, MIL-STD-704A approximately 3Amp.

Internal power supply

- ◆ +5V 14 Amp, +3.3V 8Amp, +12V 7Amp
-12V 1.5Amp, -5V 1.5Amp
- ◆ 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-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 the subassemblies or 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

BES Customizes the panel and the external connectors on it, per Customer's specifications.

Identification and Marking

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

Environmental

Temperature range:

- ◆ Operating: 0°C to +60°C
Option: -25°C to +60°C .
- ◆ Non-operating: -40°C to +75°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

- ◆ CE102, conducted emissions, power leads, 10 kHz to 10 MHz.
- ◆ 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.