

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 Low power PC computer, running Intel Core 2 Duo, or Intel Core i7. It is made to be used harsh military environment, such as Helicopters, Transport Aircraft, Autonomous Vehicles, and Naval applications.

The computer includes a passive back-plane for three PCI Express slots of x16, x4, x1 and three PCI slots for 3/4 size PCI cards. 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 mount with four shock isolators.

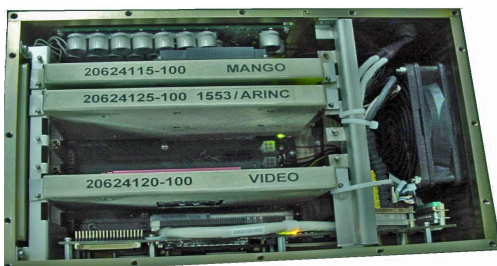
Dimensions & Weight

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

Power Supply

The Power Supply is a Plug-In LRU with the following characteristics

- ◆ Power In:
18-32VDC per MIL 1275B, MIL-STD-704A approximately 3Amp.
- ◆ Power Out:
+5V 14 Amp, +3.3V 8Amp, +12V 7Amp
- 12V



Computer Configuration

- ◆ Processors - Intel Core™ 2 Duo SL9400
- Intel I7-620LE
- ◆ BUS - 667MHz FSB
- ◆ Integrated video, PCI, IDE, PCI-Express, SATA, USB.
- ◆ Memory - 2GB SODIMM DRAM
- ◆ Internal 8GB SATA Flash for OS.
- ◆ Ethernet - Internal Switch provides up to 4 x 10/100x1000Base-T.
- ◆ USB - 4 x USB 2.0.
- ◆ Programmable Hardware Watch dog
- ◆ SATA Removable Disk
- ◆ Voice In/Out - Option

Options

- ◆ NVIDIA or Radeon on PCI-e x 16.
- ◆ Internal NTSC/RS-170 Ethernet Streamer.
- ◆ ARINC-429
- ◆ MIL-STD-1553 Dual Redundant A+B
- ◆ Up to 8 x RS-232/RS-422
- ◆ Internal GPS receiver
- ◆ Internal AIS receiver

BES Electronic Systems Ltd. 6B Tfuzot Israel St. Givataim Israel 53583
www.bes.co.il. Tel: 972-3-571-4998 Fax: 972-3-571-5085 Email: asherlav@bes.co.il

BES Systems Ltd.

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

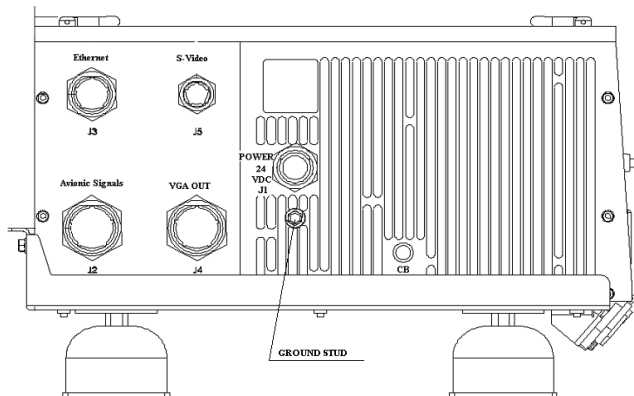
The cooling of the components of the CPU and Power Supply is by conduction through the aluminum enclosure of the unit. The cooling of the plug in boards is by circulated air.

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 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 of Connectors per Customer's requirements.

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: Vibrations

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 (or the equivalent atmospheric pressure), operating and non-operating
- ◆ With Flash disks up to 40,000ft (or the equivalent atmospheric pressure), 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.