

# BES Systems Ltd.

## **CMC-PC**

***Pentium M Military PC,  
Extended Temperature  
Provides environmental  
and EMI/RFI protection  
for COTS half size PCI or  
ISA PC Boards.***

CMC-PC, is a rugged Low power Pentium M based PC computer specially designed for use in harsh military environment, Land, Naval, Transport Aircraft and Helicopters.

Built with a passive back-plane for half size ISA and PCI cards, it provides environmental and EMI/RFI protection for COTS half size PC boards. The computer is shock mounted.

CMC-PC is capable of supporting a variety of Operating Systems such as LINUX, Windows® XP, and Windows® 2000.

### ***Dimensions & Weight***

230x240x370 (WxHxL) [mm]

with base and mounts

Weight approx.8.0Kg with base and mounts

### ***Major Assemblies***

Power Supply Assy.

Passive back plane - 6 Slots. Four (4) half length PCI/ISA Slots plus two (2) ISA Slots.

Custom made Connection Panel.

Removable Hard Disk (Flash Disk - Optional)

Optional Internal Flash disk up to 40GB

### ***Power Supply***

Power In:

18-32VDC per MIL 1275A, MIL-STD-704A



### ***CPU Typical Configuration***

The following represents a typical configuration of the CMC-PC CPU.

- ◆ Processor - Pentium ®M 1.8 GHz
- ◆ Chipset - Intel 82855GM, 400MHz FSB, integrated graphics
- ◆ DRAM - 512MByte or 1.0GByte. DDR-SO-DIMM,
- ◆ CASHE - 2M 2nd Level Two
- ◆ Internal Hard Disk or FLASH Disk
- ◆ Removable Hard Disk or FLASH Disk
- ◆ Sound - AC97 controller, line-input/output
- ◆ Video Controller - Intel Extreme Graphics2 32 MByte UMA Video RAM
- ◆ Resolution - Up to QXGA 2048x1536
- ◆ Ethernet - 10/100Base-T Intel ®82562
- ◆ USB - up to 4 USB 2.0 OHCI ports
- ◆ 2 x RS-232
- ◆ 2 x RS-422

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## ***Growth potential***

The system has a significant growth potential for additional boards that will enhance the system capability as a stand alone unit or as part of a network through dedicated Data link communication. The CMC-PC design allows for easy to install upgrades with future building block versions (Stronger CPU ,Memory, I/O ports etc).

## ***Reliable and rugged***

The CMC-PC can withstand severe environmental conditions. Compact and easy to install, the unit is self-cooled and operates autonomously from a 28 VDC power source. The CMC-PC uses either solid-state or hard-drive recording media, with the storage capacity for many hours of continuous operation

## ***CMC-PC Construction***

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

## ***Thermal Design***

The cooling of the components on the CMC-PC CPU and Power Supply is accomplished by conduction through the aluminum enclosure of the unit . The cooling of the plug in boards is accomplished 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.

## ***Identification and Marking***

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

## ***Environmental***

### **Temperature range:**

Operating: 0°C - 60°C; or optional extended temperature range -40°C - 65°C

Non-operating: -40°C - 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

**Vibrations:** MIL-STD-810F Category 9 (per MIL-STD-167)

**Shock:** MIL-STD-810F for flight equipment 30g, 11ms saw tooth

Altitude: 50,000ft (or the equivalent atmospheric pressure) operating and non-operating

## ***EMI/RFI***

MIL-STD-461C Categories CE03, RE02, RS03, CS02

Fungus: MIL-STD-810E

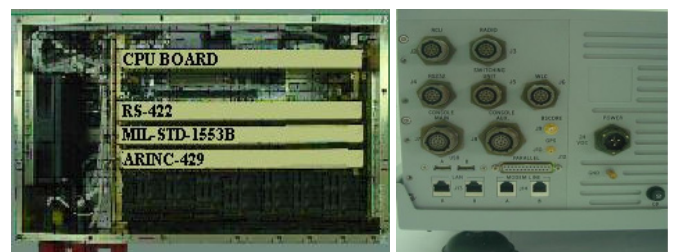
Sand and Dust: per MIL-STD-810E

## ***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.



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