

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

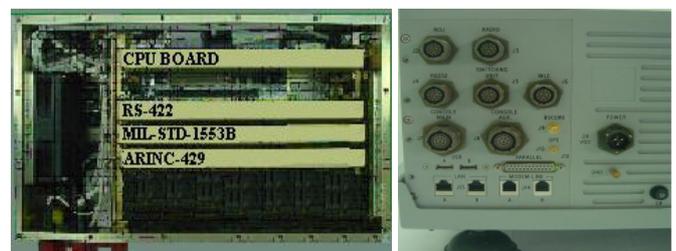
Sand and Dust: per MIL-STD-810E

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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