

BES Systems Ltd.

RCS-PC Computer

RCS-PC is a rugged PC compatible computer specially designed and qualified for use in harsh Ground mobile, airborne and Naval military environment.

RCS-PC computer includes a unique passive back-plane featuring PCI and ISA buses. The computer is designed for Pentium III Single Board Computer class cards.

RCS-PC salient features are:

- ◆ Up to 1.1GHz Pentium III CPU, up to 1GB
- ◆ Power Supply 18-32VDC
- ◆ Floppy drive - F1
- ◆ Removable DVD
- ◆ Removable disk (30GB)
- ◆ 30GB fixed Hard Disk
- ◆ 4 dual function slots (PCI or ISA)
- ◆ 2 ISA Slots
- ◆ Connector Panel.

RCS-PC Power Supply

18-32VDC per MIL 1275 A,
Current: approx. 4Amp. Power supply Assembly includes a DC/DC converter. with following voltages: -5V, +5VDC, +12VDC and -12VDC.

RCS PC CPU Card

- ◆ Intel® Pentium® III processor-Low Power at up to 1GHz and 256 KB of 64-bit L2 Cache, 512MB of SDRAM.
- ◆ USB, Serial and Parallel Ports
- ◆ Two Ultra DMA/33 IDE channels, Optional CompactFlash™ Disk
- ◆ Dual 10/100Base-TX Ethernet support
- ◆ 64-bit AGP Video with 2 MB SDRAM
- ◆ ATX support (Power-saving features such as Wake-on-LAN and more).

Powered by a Pentium® III processor at speeds of up to 1GHz, the RCS-PC includes 512MB SDRAM and 10/100Base-T Ethernet. It offers a full feature-set of two Ultra DMA/33 IDE channels, a range of power-saving functions, serial and parallel ports. Other features include two enhanced IDE hard disk interfaces, 64-bit SVGA controller, Watchdog Timer, and two USB ports.

The RCS-PC is capable of supporting a variety of software interfaces including Windows® NT 4.0, Windows® 2000, Windows 98, and Linux.



Dimensions

225X200X490mm (WXHXL)

Interchangeability

The components of the RCS-PC are physically and functionally interchangeable in accordance with MIL-STD-454. Parts or components of the same part number procured to this specification are physically and functionally interchangeable without selection, adjustment or fit.

Maintainability and Modularization

The RCS-PC is designed such that it is completely maintainable by replacement of assemblies. Maximum use is made of plug in module assemblies.

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RCS-PC Construction

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

Thermal Design

The cooling of the components on the RCS-PC cards is accomplished by forced flow of air. The cooling of the RCS-PC Power Supply and the Pentium chip are accomplished by conduction through the aluminum enclosure of the unit.

Processes and Treatment

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

Moisture and Fungus Resistance

RCS-PC assemblies are moisture resistant and are not nutrients for fungi. The PC Cards are treated with Conformal coating, according to MIL-I-46058C.

External Finishes

The computer external surfaces are chemically treated prior to painting. All residues and contaminants are removed prior to applying one coat of primer.

The finish is semi-gloss per FED-STD-595.

External Connectors

External connectors are used for interfacing with the subassemblies or equipment and are in accordance with requirement of MIL-STD-454.

Electromagnetic Interference

The RCS-PC as specified complies the requirements of MIL-STD-461C as follows:

CE03

Electromagnetic emissions do not appear on In leads in excess of values shown in MIL-STD-461C, Fig 4-3.

RE02

Electromagnetic emissions are not radiated from the RCS-PC equipment in excess of values shown in MIL-STD-461C, Fig 4-14, 4-15.

RS03

The RCS does not exhibit any permanent degradation of performance or any deviation from its specifications when subjected to radiated electrical of 1 Volts/meter from 14KHz to 10GHz.

CS02

The RCS does not exhibit any permanent degradation of performance or any deviation from its specifications when subjected to 100 Volt from a 50 ohm source to its AC power leads.

Temperature

RCS-PC will not be damaged or affected by the effects of ambient air temperature as follows:

Operating: The RCS-PC shall meet performance requirements specified herein after exposure to temperatures from 0° to 60°C.

Non-operating: -20° to 85°C.
(Storage and transportation)

Extended temperature from -55°C to 60°C according to Customer's specifications are available.

Relative humidity

RCS PC, in an operating/non-operating condition, shall not be affected by humidity for both continuous and intermittent periods, including conditions wherein condensation takes place in and on the equipment in the form of water.

Operating: 95% relative humidity (RH) with no condensation. Non-operating: 95% RH.

RCS-PC meets the requirements specified in MIL-STD-810E.

Vibration

RCS-PC has been tested according to MIL-STD-810E for airborne, ground and Naval environment.

Note: Shipboard vibration spectra have a random component induced by the variability of cruising speeds, sea states, maneuvers, etc., and periodic components imposed by propeller shaft rotation and hull resonance.

RCS-PC withstands levels found in MIL-STD-810E, Category 9 according to MIL-STD-167 for type (Environmental Vibration).

Shock

RCS-PC operates as specified herein after being subjected to operational shock as encountered on board (airborne, naval) or during vehicular transport. Testing according to MIL-STD 810E, 40 g for duration of 11msec.

Fungus

RCS-PC is non-nutrient to fungus growth. RCS-PC meets the requirements specified in MIL-STD-810E.

Sand and Dust

The RCS-PC shall operate as specified herein while and after being subjected to sand and dust as encountered in dry arid areas. The RCS-PC shall meet the requirements specified in MIL-STD-810E.

Salt Fog

The RCS-PC is resistant to the corrosive effects of salt fog environment. The RCS-PC meets the requirements specified in MIL-STD-810E Method 509.3 Procedure I.

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