FDR-1000 Military Dual Core PC with RMM

Extended Temperature Range

FDR-1000 is a miniature fan-less PC computer with a Removable Memory Module (RMM), running XP Embedded, or Linux.

The RMM is used for classified data handling, and recording during missions, in military platforms such as Fighters, helicopters and large UAVs.

The FDR-1000 is built for operational maintainability, with a quick release mounting tray. The computer can be customized with various interfaces, additional serial ports, Video, A/D, 1553 ARIN-429, CAN BUS etc'.

Dimensions & Weight

135x118x250 (WXHXL) [mm], 2.8Kg

- Standard temperature range –20ºC to +71ºC,
- Extended temperature range from –40ºC to +71ºC,

Base Line Configuration

- Dual Core ATOM D525 (2 Cores 4 Threads).
- L2 Cache 1MB.
- 8-128GB Flash Disk.
- DRAM - 1GB
- 4 x RS-232 4 x RS-422.
- VGA
- 4 x USB 2.0 (or 2 x PS2 + 2 x USB 2.0)
- 4 x 100 BaseT LAN ports
- Output discrete signals
  8 outputs of discrete signals via SI2308DS MOSFET. Each of the outputs is capable of sinking Continuous load current ratings to 800 mA @71°C, withstanding 60V in the off state.
- Input Discrete Signals
  4 x TTL discrete signals.
  4 x HV (28VDC) Isolated discrete signals.
- 1PPS interrupt time sync.
- Power Supply: 9-36VDC per MIL-704E, MIL-STD-1275B
- Environmental Conditions per MIL-STD-810F
- EMI/RFI per MIL-STD-461E

Options

- RS-170, S-Video AUDIO Recording & Streaming via TCP/IP (MPEG4, H.264).
- Video Out—RS-170 & VGA
- MIL-STD-1553 - 1 or 2 channels with BC, RT, Monitor.
- ARINC-429
- A/D CONVERTER
- CAN Bus.

Software development

FDR-1000 is loaded with a development environment, drivers and code examples.

Test Cables

BES offers a set of test cables that could be used in software lab to run the computer during development.

BES Systems Ltd. 6B Tfuzot Israel St. Givataim Israel 53583 www.bes.co.il
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Environmental Conditions

Temperature:

The FDR-1000 will not be damaged or affected by the effects of ambient air temperature as follows: Operating: The FDR-1000 shall meet performance requirements specified herein after exposure to temperatures from -20°to +71°C or-40° to +71°C.
Non-operating: (Storage/transportation) from -54° to 85°C.

Relative humidity

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

Vibration

According to MIL-STD-810F for Airborne, Helicopter or Vehicle environment.

Shock

According to MIL-STD-810E, 40g saw tooth for duration of 11msec.

Fungus

The FDR-1000 is non-nutrient to fungus growth according to the requirements in MIL-STD-810F.

Sand and Dust

The FDR-1000 shall operate as specified herein while and after being subjected to sand and dust as encountered in dry arid arias according to the requirements of MIL-STD-810F.

Salt Fog:

The FDR-1000 is resistant to the corrosive effects of salt fog environment per MIL-STD-810F.

Reliability:

MTBF of 10,000 hours
Mean Time To Repair (MTTR) < 30 minutes.

Thermal Design

The cooling of the components on the FDR-1000 PC cards, Power Supply and the Pentiums chip is accomplished by conduction through the aluminum enclosure of the unit.

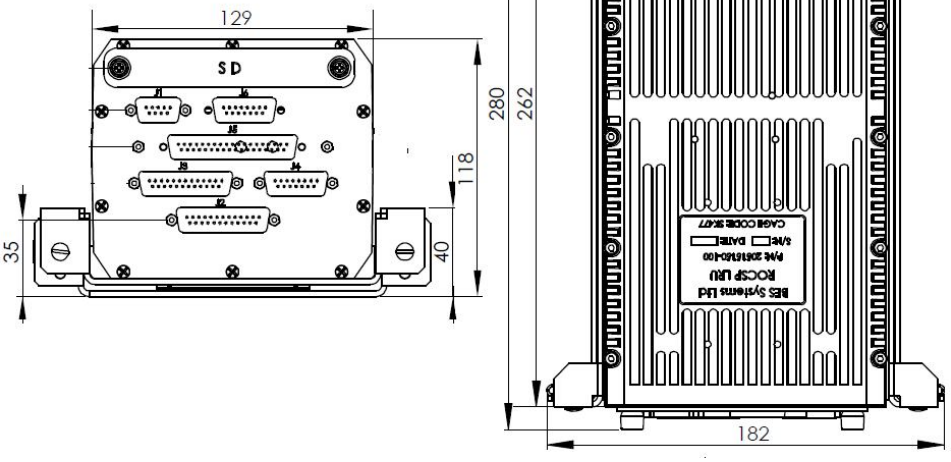
External Connectors

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.

Electromagnetic Interference:

FDR-1000 complies to MIL-STD-461E.

- CS101 Conducted Susceptibility, Power Leads, 30HZ-150KHz.
- CE101 Conducted Emissions, Power Leads, 30Hz - 10kHz
- CE102 Conducted Emissions, Power Leads, 10kHz - 10MHz
- RE102 - Radiated Emissions, 10 KHz to 18 GHz
- RS103 - Radiated Susceptibility, Electric Field, 2MHz –18GHz
- CS114 - Conducted susceptibility, bulk current



FDR-1000 with a tray, dimensions

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