



RCP640 Ruggedized Computer Platform

Features

- Application Ready Rugged Computing Platform
- Compliant to:
 - MIL-STD-810
 - MIL-STD-461
 - MIL-STD-704
- Conduction Cooled
- Compact Size
- Light Weight
- Standard EBX Form Factor
- Customizable I/O Interfaces
- PC/104 Expansion
- D38999 Connectors
- Ideal for any application:
 - Flight Hardware
 - Ground Mobile
 - UAV
 - UGV
 - UUV

Summary

Phillips' RCP640 is a ruggedized computer platform based on the EBX form factor. The RCP640 is designed for harsh environment applications.

The RCP640 is available in a 2" height format. The EBX single board computer provides one PC/104 site for I/O expansion. This slot may be populated with a wide range of COTS PC/104 cards.

Internal components are conformal coated and mechanically stabilized to provide a high level of resistance to extreme temperature, shock, vibration and humidity conditions.

The RCP640 uses a range of D38999 connectors for I/O and one 6-pin D38999 connector for MIL-STD-704 compliant input power. Other connector configurations are available per application requirements.

The team at Phillips Aerospace works with our customers to understand and design the RCP640 solution to be application ready and compliant. The RCP640 is delivered integrated and configured as a turn key solution.

Each RCP640 receives a single thermal cycle test and functional test to ensure application readiness. Additional testing can be performed as required.

Mechanical

- Dimensions : 11"L x 2"H x 8.5
- Weight : 4.4 lbs
- Connectors
 - J1 : MS27508E16F35S
 - J2 : MS27508E16F35SA
 - P1 : MS27508E10F98PA

Operating Temperature

- Standard : -40°C to +75°C

Qualifications

MIL-STD-810E

- High temp methods 501.1, low temp method 502.1
- Altitude, method 504.1, cat 1 except 45,100 ft and 1,000 ft
- Vibration, 2.05 GRMS for up 2 hours in each direction of 3 axes
- Shock, method 516.2, Proc II, 40 Gs 11 ms, sawtooth, 3 shocks in each direction of 3 axes
- Acceleration, 3 Gs in each of six directions for one minute
- Humidity, method 507.1

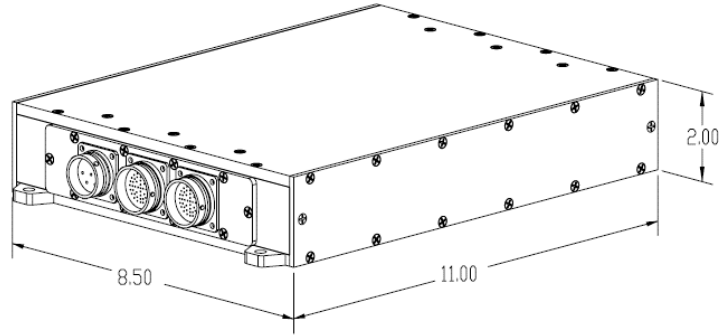
MIL-STD-461D

- CE102 section 3.2.1
- CS114 section 3.2.1
- RS103, 10kHz to 18 GHz, @ 60 V/m max per section 3.2.1
- Lighting induced transient susceptibility per section 3.2.1.1
- Power line spike susceptibility per section 3.2.1.2

Power

- 28VDC, up to 60W
- 50ms hold-up
- OC, OV, and inrush protection
- Meets MIL-STD-704E, MIL-STD-461E

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Intel SBC's

- Intel® Atom™ 1.6 GHz
- Intel® Core™ Duo 1.6 GHz
- Intel® Core™ 2 Duo 1.6 GHz
- Up to 3 GB of DDR2 DRAM
- Up to 64GB of CompactFlash
- (1) 10/100BASE-T Ethernet port
- (3) Gigabit Ethernet ports
- (2) DVI Video Ports
- (8) USB 2.0 Ports
- (6) COM Ports
- (4) SATA Ports
- (3) BT878 Video Input Channels
- PC/104 site for I/O
- Windows, and Linux BSP's

PC/104 Options

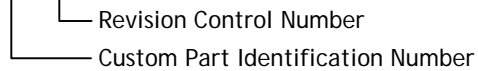
- CAN Bus
- RS-232/422/485
- Digital I/O
- Analog I/O
- Telemetry I/O
- Servo Control
- Gigabit Ethernet Switch
- Fiber Optic Interface
- ARINC-429
- MIL-STD-1553
- Ethernet
- USB
- High-Performance Video
- Frame Grabber/Image Processing
- Solid State Storage
- Disk Storage
- FPGA Co-processor
- DSP
- Additional Processor
- Encryption Processor
- Custom Solutions

Any combination of standard and/or specialized PC/104 can be integrated within the RCP-300 family of systems from Phillips Aerospace.

RCP640 Configuration Table

- RCP-640-xxxx-00
Single Slot Version, supporting (1) SBC.

RCP-6xx-xxxx-xx



All designs are custom configured to meet customer's application requirements.



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