RCP600 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 CPCI form factor
- Customizable I/O Interfaces
- Up to four PMC/XMC expansion sites
- D38999 Connectors
- Ideal for any application:
  - Flight Hardware
  - Ground Mobile
  - UAV
  - UGV
  - UUV

Summary

Phillips' RCP600 is a ruggedized computer platform based on the CompactPCI form factor. The RCP600 is designed for harsh environment applications.

The RCP600 is available in one or two slot versions. The single board computer provides two PMC sites. The two slot version provides an additional 6U expansion slot, allowing for a total of four conduction cooled PMC sites for customized I/O solutions.

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

The RCP600 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 RCP600 solution to be application ready and compliant. The RCP600 is delivered integrated and configured as a turn key solution.

Each RCP600 receives a single thermal cycle test and functional test to ensure application readiness. Additional testing can be preformed as required.

Mechanical

| Dimensions: | RCP610: | 11"L x 2"H x 8"W |
| | RCP620: | 11"L x 3"H x 8"W |

| Weight: | RCP610: | 5.5 lbs |
| | PCP620: | 6.6 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 150W
- 50ms hold-up
- OC, OV, and inrush protection
- Meets MIL-STD-704E, MIL-STD-461E

RCP600 Ruggedized Computer Platform
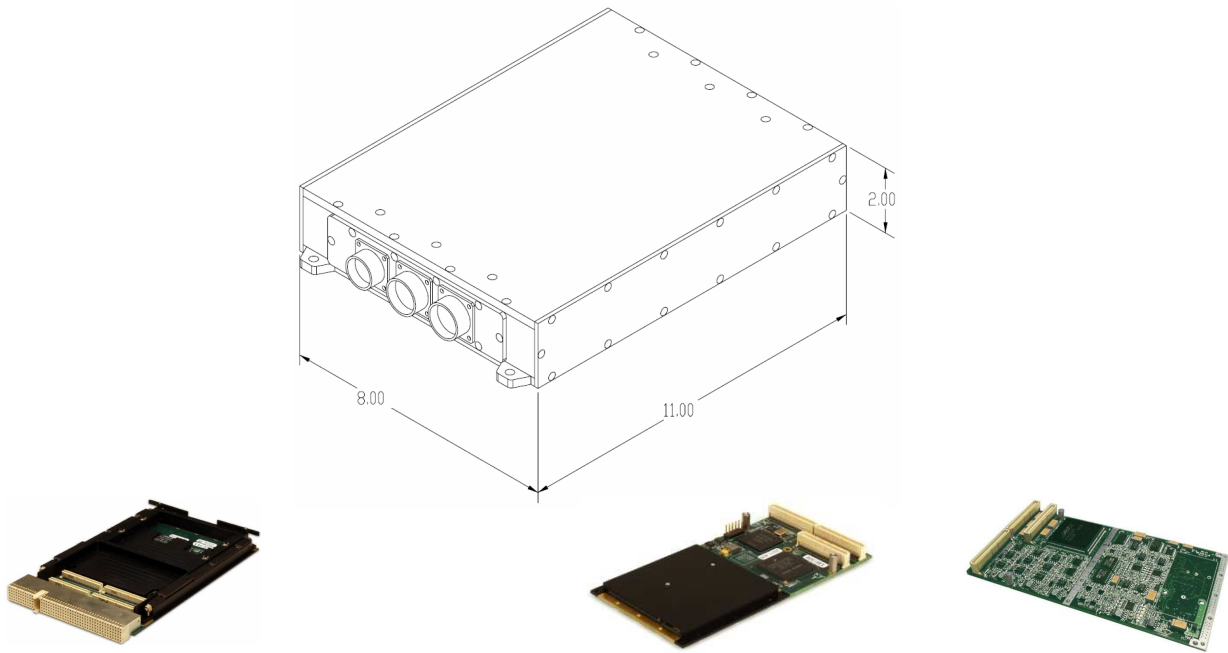
Intel SBC's

- Intel Pentium M 1.4 GHz
- Intel Core 2 Duo 1.5 GHz

- Up to 4 GB of ECC DRAM
- Up to 4 GB of NAND flash
- (2) Gigabit Ethernet ports
- USB 2.0, COM, SATA ports
- PMC/XMC site for I/O

- Windows, QNX, VxWorks, Integrity and Linux BSP's

PowerPC SBC's

- MPC 7447A 1 GHz
- MPC 7448 1.4 GHz
- MPC 750FL/FX 600/733 MHz
- MPC 8640 dual e600 cores 1.25 GHz
- MPC 8545E PowerQUICC 1.3 GHz

- Up to 1 GB of ECC DRAM
- Up to 2 GB of NAND flash
- (2) Gigabit Ethernet ports
- USB 2.0, COM, SATA ports
- PMC/XMC site for I/O

- Windows, QNX, VxWorks, Integrity and Linux BSP's

PMC 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 PMC/XMC's can be integrated within the RCP-300 family of systems by Phillips Aerospace.

RCP600 Configuration Table

- **RCP-610-xxxx-xx**
  Single Slot Version, supporting (1) SBC and (2) PMC/XMC I/O cards.

- **RCP-620-xxxx-xx**
  Dual Slot Version, supporting (1 or 2) SBC's or (1) SBC and
  (1) Carrier. Both configurations support (4) PMC/XMC I/O cards.

RCP-6xx-xxxx-xx
- Revision Control Number
- Custom Part Identification Number
- Version
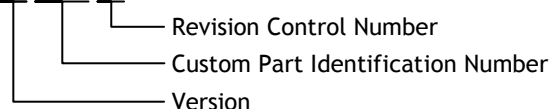
All versions are custom configured to meet customer's application requirements.

Phillips Aerospace
16125 East Gale Ave.
City of Industry Ca 91745
www.paero.com = info@paero.com
(626) 855-4600