

OVERVIEW



The AP Labs FS-5973 is a forced-air, conduction cooled chassis designed for use in avionics environments. Specifically, the FS-5973 chassis meets the environmental requirements of MIL-E-5400 for Class I equipment and will withstand extremes of temperature, vibration, shock, salt spray, sand and chemical exposure while maintaining a sealed environment.

**Mounting & Cooling**

The FS-5973 chassis is designed to adapt to existing ARINC style equipment mounting trays or it can be configured with a number of application driven mounting options, including hard mounted or shock mounted.

The FS-5973 chassis provides a secure enclosure for conduction cooled circuit cards. The heat from the chassis internal system components is conducted to side-wall heat exchangers, where it is dissipated to the ambient environment by forced-air cooling. The FS-5973 chassis is available with an integral DC fan or with an air-plenum to use with an external force air supply.

**Slot Configuration**

CompactPCI boards and the PSU are loaded from the rear of the chassis. The FS-5973 supports one system slot, and 4 spare cPCI for I/O and peripherals. A dedicated power supply supports a blind mating power supply unit.

FEATURES



- **Small form factor based rugged chassis**
- **5 conduction cooled 3U slots to IEEE 1101.2, 0.8" pitch. System slot, 4 spare slots for I/O and peripherals**
- **Custom mounting options available**
- **Meets MIL-STD-5400 Class I thermal performance**
- **73 Watt plug-in Power Supply Unit**
- **Removable Front I/O and rear panels for chassis access**
- **Flexible design allows for easy customized I/O**



# FS-5973 3U cPCI Conduction Cooled Chassis



**PHYSICAL DIMENSIONS**

- |                        |   |
|------------------------|---|
| • <b>Height:</b> 5.59" | • <b>Depth:</b> 11.46"  |
| • <b>Width:</b> 4.88"  | • <b>Weight:</b> 9lbs (typical—includes enclosure, back-plane and power supply) |

**ENVIRONMENTAL SPECS**

- Temperature—-62°C to +95°C
- Operating— -55°C to +55°C at SL; -55°C to +20°C at 50kFT. (with mil-aero fan)
- Vibration— Per MIL-STD-810E, 0.1g<sup>2</sup>/Hz, 15-2 Hz (without shock tray)
- Shock—MIL-STD-810E 20 g, 6-9 ms, half sine wave (without shock tray)
- EMC— Per MIL-STD-461C; CE01, CE03, CS02, CS06, RE02, RS01, RS02, RS03
- Enclosure—MIL-STD-108E

**cPCI BACKPLANE CONFIGURATION**

- 5-slots to PICMg 2.0 R3.0
- 66 MHz operation
- Rear I/O through J2
- Pluggable PSU slot through Positronic P47 connector
- 32 bit data width
- Configurable 3.3V or 5V
- cPCI slot keying

**ELECTRICAL SPECIFICATION**

- Input—18 to 48 VDC
- Input transient protection—Meets or exceeds MIL-STD-704A, MIL-STD-1275A
- Over-voltage shutdown with auto-recovery
- Note: 50msec power hold-up option available (requires one slot)

**CHASSIS CUSTOMIZATION**

Customized to meet specifications, including: outline and mounting, I/O wiring, I/O panels, custom backplanes, environmental and thermal compliance, and power supplies

**DC OUTPUT**

- |                               |      |
|-------------------------------|------|
| • +5V                         | 9A   |
| • 3.3V                        | 5A   |
| • +12V                        | 0.5A |
| • -12V                        | 0.5A |
| • Current limiting            |      |
| • Over temperature protection |      |

**INTEGRATION SERVICES**

- Environmental stress screening (ESS) including thermal and vibration cycling.
- System configuration: Installation of system I/O wiring, and connectors and peripherals as required.
- ATP: Functional testing of configured system using customer or AP Labs developed test procedures.