FS-5985 Conduction Cooled Chassis

» Small form factor based rugged chassis
» Removable Front I/O and rear panels for chassis access
» Flexible design allows for easy customized I/O
» 200 Watt plug-in Power Supply Unit
» cPCI or VPX Backplane
The Kontron FS-5985 is a forced-air, conduction cooled chassis designed for use in military applications. Specifically, the FS-5985 chassis meets the environmental requirements of MIL-E-5400 for Class 1 equipment and will withstand extremes of temperature, vibration, shock, salt spray, sand and chemical exposure while maintaining a sealed environment.

Mounting & Cooling
The FS-5985 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-5985 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-5985 chassis is available with an integral AC or DC fan or with an air-plenum to use with an external force air supply.

Slot Configuration
Two backplane configurations are available: cPCI and VPX. For both configurations, the boards and PSU are loaded from the rear. The PSU blind mates into the backplane and is designed for quick replacement. For the cPCI backplane option, the FS-5985 supports one system slot and 4 spare cPCI slots for the I/O and peripherals.

**Technical Information**

**Physical Dimensions**
- Height: 5.840”
- Depth: 13.930” (not including handle or connectors)
- Width: 4.880”
- Weight: 9.7lbs (typical—includes enclosure, backplane and power supply)

**Environmental**
- Storage Temperature: -57°C to +85°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, 0.1g²/Hz, 15-2000Hz (without shock tray)
- Shock: MIL-STD-810E, 20 g, 11 ms, half sine wave (without shock tray)
- EMC: Per MIL-STD-461E, CE101, CE103, CS102, CS106, RE102, RS101, RS102, RS103

**Electrical**
- Input: 18 to 36 VDC
- Input transient protection: Meets or exceeds MIL-STD-704, MIL-STD-1275
- Shutdown: Over-voltage shutdown with auto-recovery
- Note: 50msec power hold-up option available

**Backplane Configuration - cPCI or VPX**

- **cPCI**
  - 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 3.3 VI/O or 5 VI/O
  - cPCI slot keying

- **VPX**
  - 5-slots, system cards, 0.8 inch pitch
  - 1 Slot Power Supply, blind mate type via Positronics connector
  - Compliant with:
    - VPX baseline architecture: ANSI/VITA 46.0-2007
    - OpenVPX draft ANSI/VITA: 65-2010
    - PCIe Express® on VPX Fabric Connector: Draft 0.15 Vita 64.4 July 21th 2010

**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.

**DC Output**
- +5V 34A, 3.3V 8A, +12V 0.5A, -12V 0.5A Current limiting, Over temperature protection

**Chassis Customization**
- Can be customized to meet specifications, including: outline and mounting, I/O wiring, I/O panels, custom backplanes, environmental and thermal compliance, and power supplies.