VPX Development Backplane: VPX-5948

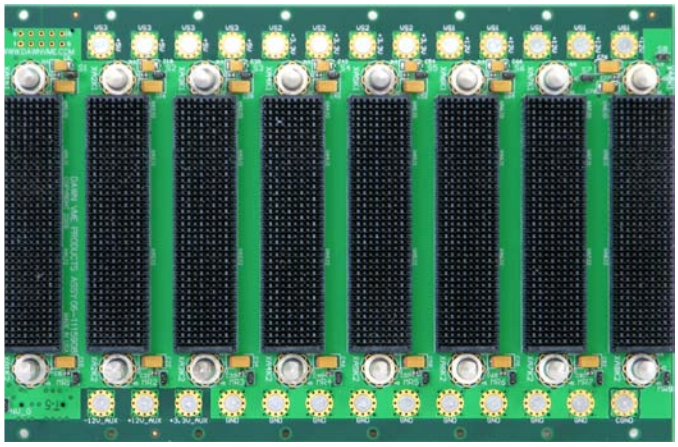
3U VPX Development Backplane 1.0 Inch Pitch
8-Slot Fabric Mapping Module Ready

OpenVPX™

Features

- 8-Slot - BKP3-PGO08, (Power/Ground Only)
- 3U OpenVPX compliant, 1" pitch
- Topology includes Utility Plane with IPMB and Pwr/Gnd(See rear side map)
- Backplane supports additional topologies via Dawn's Patent Pending Fabric Mapping Module* (FMM*) micro-overlays
- Additional mapping such as PCIe, SRIO, and Ethernet is available and may be added to backplane at time of order
- Ultra-high performance stripline / differential signal design.
- User configurable slot key rotation for VPX Cards and RTM.
- Design supports RTM connectors at all rear slots.
- Tyco Connectors may be partially populated for cost savings.
- Integrated RuSH system monitor interface connectors.

* = *Patent Pending*



Overview

Dawn's VPX backplanes provide a natural migratory path from development to production by allowing a unique mappable architecture at time of order without the cost of designing a custom backplane. Connector-less FMMs* (fabric mapping modules) allow for unique backplane connection mapping from standard COTS parts. FMMs can include High speed differential pairs for PCI Express, Serial Rapid I/O, Ethernet, SATA, and other signals. These modules maintain signal integrity by eliminating connector stub issues which can reduce speed capability. FMMs creating a direct stripline interface between slots. Custom FMMs loaded with standard COTS connectors, can also provide low profile signal breakout for applications where transition module cost and size do not work. See separate FMM data sheet for specifics.

Specifications

Compliance
Dawn's 5948 Series VPX Backplanes are designed to be compliant with the following released standards and June 2010 state of draft specifications: VITA 46.0, VITA 46.1, VITA 46.3, VITA 46.4, VITA 46.6, VITA 46.7, VITA 46.9, VITA 46.10, VITA 46.11, VITA 48.0(REDI), VITA 48.1(REDI Air Cooling), Vita 48.2(REDI Conduction Cooling), VITA65.0(Open VPX) ready

Mechanical
Compatibility:VITA46.0,.3,.4,.7,.9 / VITA48, VITA65 (OpenVPX) ready
PCB Material: 370HR RoHS compliant
PCB Design: 18-Layer, Ultra high performance, impedance controlled stripline / differential signal routing.
Power/Ground Planes: Multiple, 2 oz. copper layers for each VSx supply.
Signal: 1 oz. copper
Finish: LPI Green Solder mask
Plating: Gold over Nickel (ENIG)
Dimensions: 5.057" x 7.735", 0.212" Thick.
Weight: 2.00 Lbs fully populated

Electrical
Power Input: #6 Ring Terminals on 6x32 Press-fit power studs
Max. Power Input per Rail: Vs1 = 250A, Vs2 and Vs3 = 200A
Max. Concurrent Power (Vs1, Vs2, Vs3) per Slot = 22A
Continuous Distributed Power per Slot: VS1 (+12v)=14A, VS2 (+3.3v)=14A, VS3 (+5v) =15A.
Maskable Reset: Selectable connection of maskable reset to each slot.
System slot: Select any VPX slot, to be system slot, via jumper.

Environmental
Storage Temperature: -40^{0}C to +105^{0}C
Operating Temperature: -40^{0}C to +105^{0}C
Humidity: <95% non-condensing

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Revision 03/21/12

Ordering Information
Order P/N 06-1115948

(Contact Factory for details if you would like additional topology added to this backplane)

14.2.7 Payload Slot Profile SLT3-PAY-2F-14.2.7

This Slot Profile is for a Utility and Data Plane only Payload Module. Figure 14.2.7-1 gives an overview of this profile. Table 14.2.7-1 and Table 14.2.7-2 give the detail pin assignments. For Module Profiles using this Slot Profile see, Section 16.2.7.

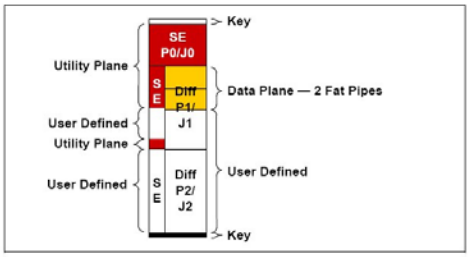


Figure 14.2.7-1 Payload Slot Profile SLT3-PAY-2F-14.2.7

14.3.1 Peripheral Slot Profile SLT3-PER-2F-14.3.1

The Peripheral Slot Profile SLT3-PER-2F contains 2 Fat Pipes and user defined areas. Figure 14.3.1-1 gives an overview of the Slot Profile. Table 14.3.1-1 and Table 14.3.1-2 give the detailed pin assignments. For Module Profiles using this Slot Profile, see Section 16.3.1.

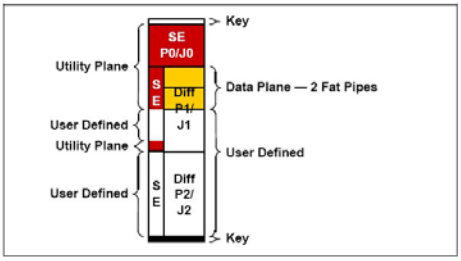


Figure 14.3.1-1 Peripheral Slot Profile SLT3-PER-2F-14.3.1

14.3.2 Peripheral Slot Profile SLT3-PER-1F-14.3.2

Slot Profile is for a Utility and Data Plane only Peripheral Slot configured with one Fat Pipe as shown in Figure 14.3.2-1. Detailed pin assignments are shown in Table 14.3.2-1 and Table 14.3.2-2 . For Module Profiles using this Slot Profile, see Section 16.3.2.

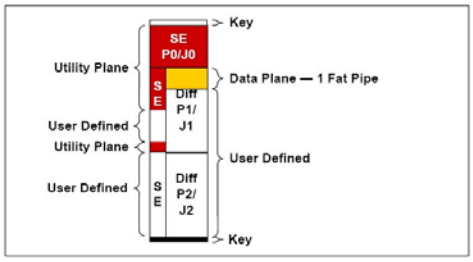
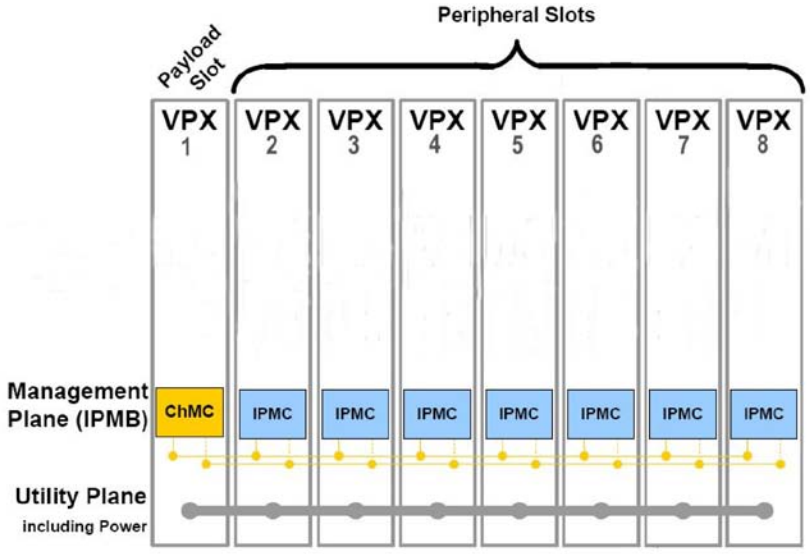


Figure 14.3.2-1 Peripheral Slot Profile SLT3-PER-1F-14.3.2



Topology of 8 Slot – BKP3-PGO08

Other Products and Services Available from Dawn:

- Conceptualization, design and production of custom enclosures and backplanes.
- Conduction or Convection Cooled ATR Chassis Design and production
- Thermal Design and Analysis
- Microprocessor based sensor monitoring and control.
- Technologies Supported: cPCI 2.1, cPCI 2.16, PXI, VME, VME64, VME64x, VXI, VXS(Vita 41), VPX(Vita46), VPX REDI(Vita 48), OpenVPX(Vita 65)

About Dawn:

Dawn is a certified veteran owned small business based in Fremont, CA. serving the real time computer and embedded systems market.

Dawn specializes in conceptualization, design, and production of high technology enclosures and backplanes for thousands of companies within the commercial, industrial, aerospace and defense markets.
Our customers consist of Major OEM's, National Labs, Universities, all aerospace and defense contractors, and the U.S. Government.

Our Quality Standards are designed and tuned to support the needs of the vast market we serve.

Dawn celebrated its 25th anniversary of business on February 19, 2010.