

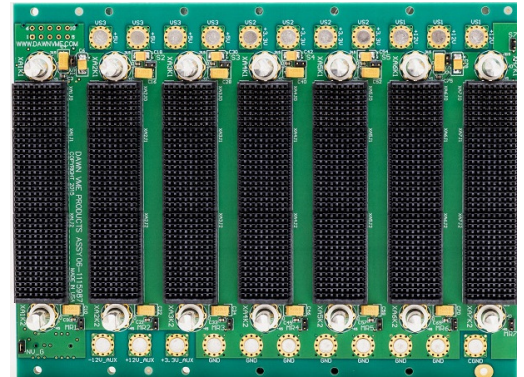
Gen3 3U 7-Slot OpenVPX Backplane

Delivering true signal integrity at Gen3 Bandwidths



Features

- ◆ 7-Slot - BKP3-CEN07 (6 Payload + 1 Switch)
- ◆ 3U OpenVPX compliant, 1" pitch
- ◆ Supporting PCIe Gen3 and 10 GbE (XAUI)
- ◆ Designed for signal integrity at up to 10.3 Gbaud performance
- ◆ Multiple connector choices, including a high vibration option
- ◆ Terminal block and bus bars to facilitate any desired power supply



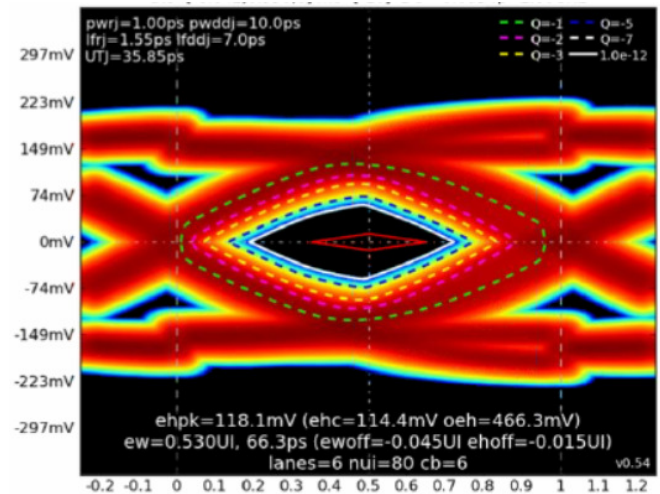
Gen3 Signal Integrity

Dawn's new VPX-5987 3U OpenVPX backplane is designed to deliver robust signal integrity at Gen3 bandwidths. When your systems are built around interconnects operating with Gen3 signaling rates, you need a backplane you can rely on to support the most advanced module configurations.

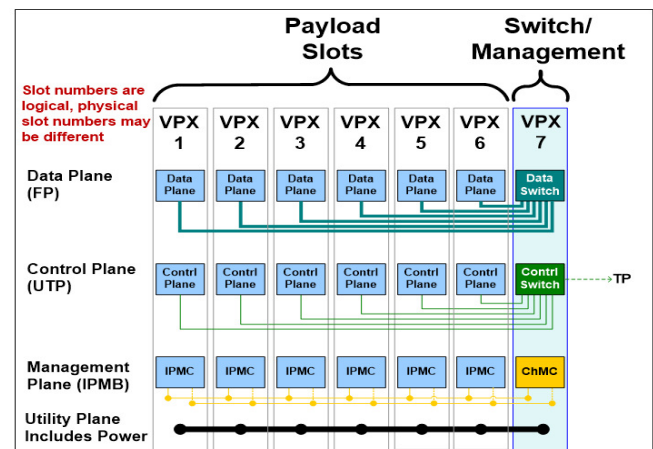
Dawn uses VITA 68 S-parameter simulation models of signal paths across the backplane to insure compliance with signal integrity standards. In the simulation models a signal integrity budget is established for the backplane portion of a system. These models permit simulation of the backplane with available OpenVPX modules and connectors, so full system signal integrity can be achieved.

Using these simulations to guide the backplane designs, Dawn engineers use back drilling to remove stubs and then layout paths to eliminate impedance discontinuities. The goal is to optimize the path between any pair of transmitting and receiving chips in the systems, so communication proceeds without cross talk or other forms of interference.

VITA68 Backplane models are available on request for system simulation.



Eye diagram from signal integrity simulation



Topology of BKP3-CEN07

Easy to Configure

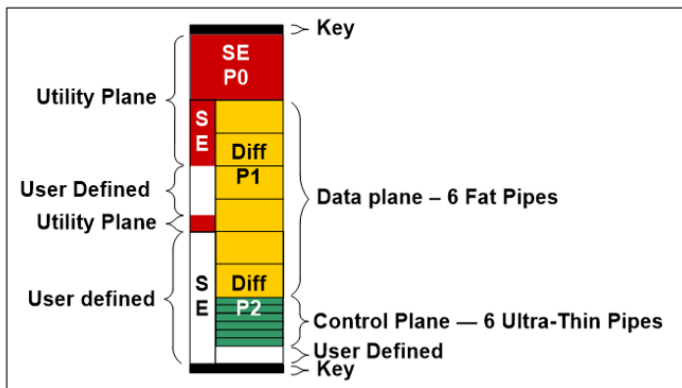
The VPX-5987 offers multiple connector choices from the leading connector vendors, Tyco and EPT. Options include the Tyco MULTIGIG RT 2 and MULTIGIG RT 2-R ruggedized connectors and the EPT Velox® connectors. Amphenol R-VPX or Viper connectors available on request.

Any standard power supply can be configured with the VPX-5987, using its available terminal block and bus bars to facilitate the power connection.

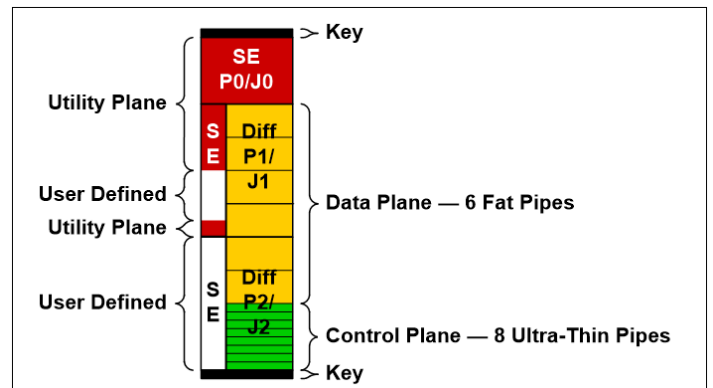
This backplane is designed to operate within standard 1101.10 3U VPX enclosures. Dawn offers a range of compliant 3U enclosures for both development and deployment.

OpenVPX Profiles: A selection of supported slot profiles (two switch and four payload).

Switch Profiles

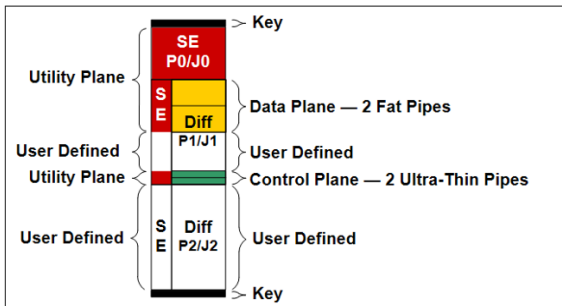


SLT3-SWH-6F6U

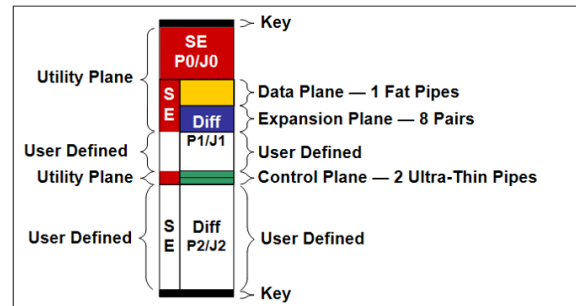


SLT3-SWH-6F8U

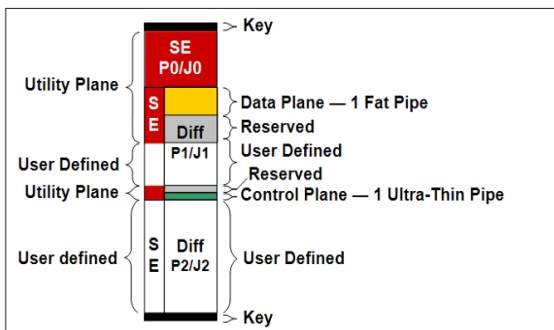
Payload Profiles



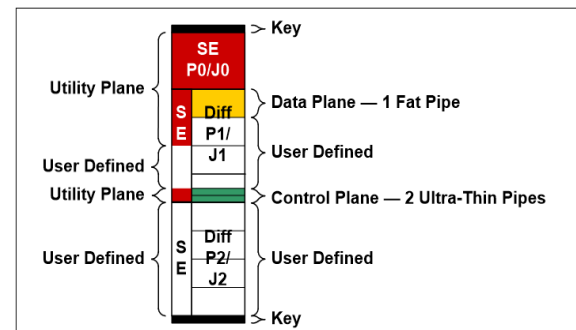
SLT3-PAY-2F2U



SLT3-PAY-2F1F2U



SLT3-PAY-1F1U



SLT3-PAY-1F2U

Specifications

Compliance

Dawn's 598x Series VPX Backplanes are designed to be compliant with the following released standards and December 2015 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: VITA48

PCB Material: Isola I-Speed RoHS compliant

PCB Design: 22-Layer, Ultra high performance, impedance controlled stripline / differential signal routing with backdrill.

Power/Ground Planes: Multiple, 1 oz. copper layers for each VPX supply voltage.

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 6-32 Press-fit power studs. Bus bars included.

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.

System slot: Select any VPX slot, to be system slot, via jumper.

Environmental

Storage Temperature: -40°C to +105°C

Operating Temperature: -40°C to +105°C

Humidity: <95% non-condensing - with conformal coat option.

Cable Options for RTM Signals

Meritec VPX-Plus shrouds and cables available on request for custom RTM signal breakout.

Ordering Information

P/N 06-1115987: Fully loaded, VPX connectors in all 7 slots, front and rear

P/N 06-1115987-01: VPX connectors in all 7 slots, front only. Rear is not loaded.

Note: For all other options, including conformal coating and Meritec frames, consult factory for details and part numbers.

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 30th anniversary on February 19, 2015.