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# 6U VPX Development Backplane 1.0 Inch Pitch 6-Slot Fabric Mappable

## **Features**

- ♦ Backplane Topology BKP6-DIS06-11.2.10-n
- ♦ Switch Profile SLT6-SWH-4F24T-10.4.4
- ♦ Payload Profile SLT6-PAY-4F2T-10.2.2
- ♦ 6U OpenVPX compliant, 1" pitch
- Topology includes Utility Plane with Pwr/Gnd, IPMB, and PCI express daisy chain (See rear side map)
- Backplane supports additional topologies via Dawn's Fabric Mapping Module\* (FMM\*) micro-overlays
- Additional mapping such as custom 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 connectors for RuSH system monitor interface.

## **Overview**

According to the VITA65 specification, BKP6-DIS06-11.2.10-n backplane profiles are intended for development environments. Some systems might be able to deploy with these backplanes. This backplane contains 5 Payload Slots and 1 Control Plane or Switch Slot. Payload Slot Profile for all slots is SLT6-PAY-4F2T-10.2.2. Switch Slot Profile is SLT6-SWH-4F24T-10.4.4. The data plane is distributed whereas the control plane is switched.

Dawn's implementation of this profile allows for a choice of RTM connectors or use of FMM\* modules. Custom FMMs\* loaded with standard COTS connectors, can 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 7407 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)

PCB Material: PCL-FRP-370HR RoHS compliant

PCB Design: 22-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:** 10.317" x 4.765", 0.212" Thick. **Weight:** 3.00 Lbs Estimated fully populated

#### Electrical

Power Input: #6 Ring Terminals on 6x32 Press-fit power studs

Max. Power Input per Rail: Vs1, Vs2, Vs3 = 100A

Max. Concurrent Power (Vs1, Vs2, Vs3) per Slot = 22A Continuous Distributed Power per Slot: VS1 (+12v)=14A,

VS2 (+12v)=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°C to +105°C
Operating Temperature: -40°C to +105°C

Humidity: <95% non-condensing

<sup>\* =</sup> Patent Applied For



### **Ordering Information** Order P/N 06-1117407

Note: P/N 06-1117407 ships with DEV-4407 Development Chassis and includes all RTM connectors and no FMM's (Contact Factory for details if you would like additional topology added to this backplane)

#### Backplane Topology – BKP6-DIS06-11.2.10-n SLOT S1 S2 **S**5 S<sub>6</sub> S<sub>3</sub> **S4** CONTROL PLANE SWITCH PROFILE SLT6-SWH-4F24T-10.4.4 VITA 65 SLOT PROFILE SLT6-PAY-4F2T-10.2.2 SLOT PROFILE SLT6-PAY-4F2T-10.2.2 SLOT PROFILE SLT6-PAY-4F2T-10.2.2 SLOT PROFILE SLT6-PAY-4F2T-10.2.2 SLOT PROFILE SLOT PROFILE SE SLOT SLOT NUMBER SLOT NUMBER SLOT NUMBER SLOT NUMBER SLOT NUMBER LINK LIST LINK LIST P0/J0 P0/J0 P0/J0 P0/J0 PO/JO PO/JO USER LINK Diff Diff Diff Diff Diff DEFINED P1/ P1/ P1/ P1/ P1/ J1 J1 **J1** J1 USER Diff Diff Diff Diff Diff DEFINED S P2/ P2/ P2/ P2/ P2/ E E E E E E JZ JZ JZ JZ JZ Diff Diff Diff Diff Diff S S P3/ P3/ P3/ P3/ P3/ E E E E E E J3S1 S2 S2 J3 J3 J3 J3 J3 Diff Diff Diff Diff Diff Diff P4/ P4/ P4/ P4/ P4/ S S S P4/ J4 J4 J4 **J4** J4 E S5 S6 S6 E E E E E Diff Diff Diff Diff Diff Diff S S S P5/ P5/ P5/ P5/ P5/ P5/ E E E F E E J5 J5 J5 **J**5 **J**5 J5 Diff Diff Diff Diff Diff Diff S S P6/ P6/ P6/ P6/ P6/ P6/ E E E E E E **J**6 **J6** 16 **J6** 16 **J6** CW-VPX6-684 CPU CARD CPU CARD CPU CARD **CPU CARD** CPU CARD ETHERNET SWITCH OR OTHER SLOT PROFILE COMPATIBLE CARD SYSTEM SLOT (1) JUMPER INSTALLED SYSTEM MASTER JUMPER SYSTEM MASTER JUMPER SYSTEM MASTER JUMPER Slot will be connected to Optional Maskable RESET signal only when MRx jumper is installed. MASKABLE RESET MASKABLE RESET MASKABLE RESET MASKABLE RESET MASKABLE RESET MASKABLE RESET (All Jumpers are 2mm CONNECTION

style)