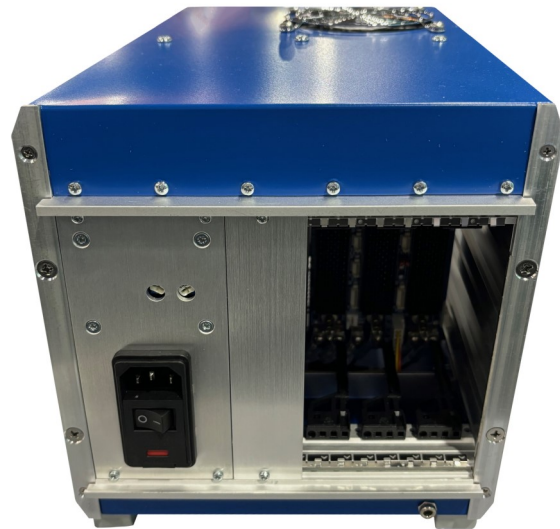# Compact Enclosure Cube for SOSA/OpenVPX Development

VPXDC2500

VPXDC2500 KEY FEATURES

- Small cube-sized, only 8.32" H x 7.79" W x 11.71" D
- Compact, aesthetic, and portable – ideal for customer demonstrations, tradeshows, & internal testing
- Supports up to 4x SOSA aligned/OpenVPX slots at 1.0" pitch, 5x slots if with a VITA 62 PSU
- Modular 600W max VOX PSU for up to 4x OpenVPX voltages
- Convenient carry handle, foldable
- Designed for higher power board options with 178 CFM of cooling
- Actuator dial for fan speed control
- Supports RTM boards, RF/Fiber cabling through the backplane and Meritec cabling options
- Configurable options for air-cooled, conduction-cooled, or specialty card guides on a slot-by-slot basis
- Various backplanes available to support multiple SOSA aligned slot profiles and VITA 65 profiles
- Front faceplate for PSU area included (option for customer logo)
- Version for 6U boards available upon request

Ideal for both internal prototyping/testing and as a show unit for customer demonstrations and events, the Pixus Cube chassis is compact, portable, robust, and aesthetic. The versatile unit supports up to 4x SOSA aligned/OpenVPX 3U boards along with a modular fixed PSU for up to 4x OpenVPX voltages. A pluggable VITA 62 power interface board can also be installed. This option can be installed with a foolproof switching mechanism to alternate between the modular fixed PSU and the VITA 62 PSU.

Backplanes are available in various SOSA/OpenVPX for 3U boards to 100GbE speeds and beyond. Consult Pixus for 6U board requirements. Other options include an interface to the Pixus SHM300 or other SOSA aligned Tier3+ chassis manager kit for test/development.

SPECIFICATIONS

Architecture		
Physical	Dimensions	Height: 8.32"
		Width: 7.79"
		Depth: ~11.71"
		Weight: ~13 lbs for VPXC2500
Type	OpenVPX Chassis	Up to four 3U OpenVPX slots (at 1.0" pitch) Consult factory for 6U options
Standards		
OpenVPX, SOSA	Type	VITA 65, VITA 46, SOSA
Configuration		
Power	VPXD0X00	Up to 600W supply AC (DC options available)
		110-240AC with frequency from 47-63Hz and DC –36V to -72V
Environmental	Temperature	Operating Temperature: 0° to 55°C
		Storage Temperature: -40° to +70°C
	Altitude	
		40,000ft. Non-operating
	Relative Humidity	5 to 95 percent, non-condensing
Conformal Coating		Humiseal 1A33 Polyurethane
		Humiseal 1B31 Acrylic
Other		
MTBF	MIL Handbook 217-F@ TBD Hrs.	
Certifications	Designed to meet FCC, CE and UL certifications where applicable	
Standards	ISO9001:2015 and AS9100B:2004 standards	
Compliance	RoHS and NEBS	
Warranty	Two years	
Trademarks and logos	The Pixus Logo is a registered trademark of Pixus Technologies Inc. other registered trademarks are the property of their respective owners. Specs. subject to change without notice.	

VITA 62 Power Interface Board Option

- Single or dual VITA 62 PSU options
- 3U and 6U versions available
- Header for Sense, Share, and CMM signals

VOX POWER SUPPLIES FOR OPENVPX

INPUT ELECTRICAL					
Parameter	Details	Min	Typ	Max	Units
AC input voltage	Nominal range is 100Vrms to 240Vrms	85		264	Vrms
AC input frequency	Contact factory for 400Hz operation.	47	50/60	63	Hz
DC input voltage	Standard	120		370	Vdc
Power rating	See graphs for deratings			600	Watts
Input current	600 Watts output at 120Vrms input			6	Amps
Inrush current	265Vrms (cold start)			20	Amps
Fusing	5x20 Fast acting			8	Amps
Input current limit	Maintains power factor		8		Amps
Efficiency	See graphs		86	89	%
Idle power	All outputs fitted and enabled		28		Watts
Idle power	All outputs fitted and disabled		21		Watts
Power factor	Typical value for 300 Watts output at 240Vrms input		0.96	0.99	
Holdup	600Watts output at 120Vrms input	17	20	21	mS
UVLO	Turn on only	78		84	Vrms
Over temperature	Internally monitored. Latching	115		125	°C
Reliability	40°C 80% load			2	FPMH
Bias voltage		4.8	5	5.2	V
Bias current		0		200	mA
Power good voltage	PNP open collector with internal 10k pull down resistor	8	10	15	V
Power good current		0		20	mA
Inhibit voltage		2		15	V
Inhibit current	10k ohm input impedance	0.2		1.5	mA
Global inhibit voltage		3		15	V
Global inhibit current	5k ohm input impedance	0.6		3	mA
AC_OK voltage		1		4	V
AC_OK current		-10		20	mA
AC_OK warning	See user manual for exceptions			5	mS

(The last group of rows is labeled "Signals" in the left margin.)

Pixus typically uses the VOX power supplies in the development enclosures. However, VITA 62 or other PSUs are available upon request or as technical requirements specify.

Pixus will select the VOX sub-modules based on the power per rail that you require and ensure that we provide ample wattage with overhead. We install a separate small PSU for fans in the chassis to reduce noise. The noise level for all rails on the Ultramod PSUs is guaranteed to be no more than the greater of 1% or 100mv.
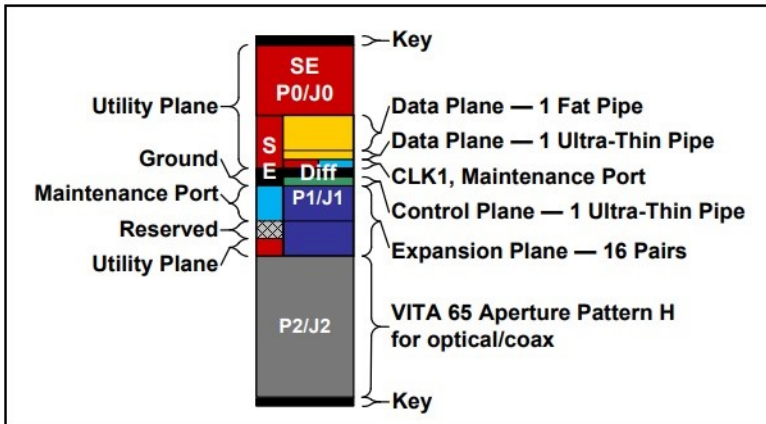
SOSA Aligned Slot Profiles

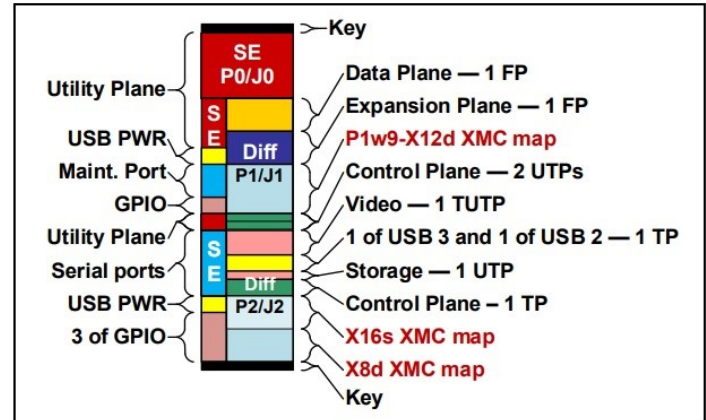Figure 14.6.11-1 SLT3-PAY-1F1U1S1S1U1U2F1H-14.6.11-n

Figure 14.2.16-1 SLT3-PAY-1F1F2U1TU1T1U1T-14.2.16

Pixus has multiple backplane options that support the various SOSA slot profiles. SOSA aligned systems utilize just the 12V (VS1) rail along with some 3.3 AUX. The IPMB is routed across the backplane to support the use of a SOSA aligned chassis manager and VITA 46.11 compliant versions. Visit https://pixustechnologies.com/products/enclosure-system-solutions/vpx-vme64x-chassis-2/openvpx-3u-6u-sosa/ to see Pixus' offering of SlotSaver™ mezzanine-based and pluggable SOSA aligned/VITA 46.11 chassis manager options.

Two examples of the wide variety of options are shown above. Several of the Pixus power and ground and routed back-planes have cutouts for Aperture H (VITA 67.3c) or other RF/Fiber sizes (Aperture J—VITA 67.3d, etc)

CONDUCTION COOLED CARD GUIDES

The conduction-cooled card guides allow modules with wedge locks to be plugged into the enclosure.

ORDERING OPTIONS

(6U Boards): Consult Factory

(3U Boards):   VPXDC2500-ABC-DEF-G-XX

A = Backplane

0 = 3U SOSA/OpenVPX

1 = reserved

2 = Other

B = Backplane Data Rate (highest speed)

0 = 100GbE (25GBASE-KR4)

1 = 40GbE (10GBASE-KR4)

2 = PCIe Gen4

3 = PCIe Gen3

4 = Power and ground only, Multigig RT2 version connectors

5 = Power and ground only, Multigig RT3 version connectors

6 = Other

C = Payload Slots (Not including PSUs)

0 = No backplane installed

1 = 1 slot	2 = 2 slots
3 = 3 slots	4 = 4 slots
5 = 5 slots	6 = Other

7 = Connectors not populated in all backplane slots

D = Card Guides

0 = Air cooled all slots

1 = Conduction cooled all slots

2 = Mix of air and conduction-cooled card guides

3 = Other

E = Meritec Rear Shrouds/Cabling & RTMs

0 = Meritec rear shrouds NOT installed, RTM (rear) VPX connectors NOT installed

1 = Meritec rear shrouds installed in all populated slots, RTM (rear) VPX connectors installed

2 = Meritec rear shrouds installed in all populated slots and Meritec cables included (customer defined, consult factory), RTM (rear) VPX connectors installed

3 = Meritec rear shrouds NOT installed, RTM (rear) VPX connectors installed

4 = Other

ORDERING OPTIONS

(6U Boards): Consult Factory

(3U Boards): VPXDC2500-ABC-DEF-G-XX

F = PSU

0 = No PSU installed

1 = Modular VOX PSU installed for up to 4x OpenVPX voltages

2 = VITA 62 PSU slot included (empty slot, no PSU included), no fixed PSU included

3 = VITA 62 PSU slot included (empty slot, no PSU included), fixed PSU included with switch between the two fixed PSU included with switch between the two

4 = VITA 62 PSU slot included (populated with VITA 62 PSU, consult factory for configuration), fixed PSU included with switch between the two

5 = VITA 62 PSU slot included (populated with VITA 62 PSU, consult factory for configuration), no fixed PSU included

6 = Other

G = Painting/Finish

0 = Painted blue on top and bottom, clear chromate on sides (standard option)

1 = Custom Painting (consult Sales)

2 = Customer logo on PSU faceplate

3 = Other

2 digit customization code

Blank = standard, no customization