VPX3000

3 Slot chassis for conduction cooled 3U VPX payloads

■ **Embedded Computing for Business-Critical Continuity**™

Small form factor 3U 3 slot OpenVPX chassis

- 3 Slot VITA 65 compliant backplane with full mesh data plane
- 1000BaseX control plane
- Supports conduction cooled 3U VPX modules
- Natural convection cooled enclosure
- Customizable Interface Adapter Board (IAB)
- Optional SATA SSD mounted on IAB
- Built in DC power supply

VPX3000 is a convection cooled, fanless enclosure that accepts up to three 3U conduction cooled VPX modules. It includes a configurable I/O Adapter Board (IAB) that is designed to mate with Emerson's iVPX7225 processor blade, itself based on the Intel (R) 3rd generation Core mobile chipset. The IAB routes I/O from the payloads to the front of the enclosure and is designed to be customizable. VPX3000 includes a VITA-62 compliant power supply slot fitted with a DC power supply with a MIL-38999 power input connector and a front panel switch.

Two Data Plane Fat Pipes from each slot are connected in a full mesh configuration. Two Control Plane Ultra Thin Pipes from each slot are routed to the IAB as 1000Base-T interfaces. USB 2.0 and a Display Port interface is also routed to the IAB in all variants.

VPX3000 has been designed to minimise Size, Weight and Power (SWaP) and yet provide an intensely powerful system level solution including power, storage and processor elements. A rugged variant, targeted at Mil/Aero/Government applications includes three MIL-38999 connectors for I/O from each slot. An alternative variant includes commercial connectors on the IAB and is intended for development use.

(intel) **Intelligent Systems Alliance**

OpenVPX™

VPX REDI

EMERSON™
Network Power

POWER SUPPLY

- Power supplies in Rugged variants designed to MIL-STD 461F for susceptibility and emissions
- Power supplies in all variants compliant to Class A susceptibility and emissions for the locale (FCC, VCCI, CE, KC, AS/NZ) [EN55022 or equivalent]
- DC supply compliant to MIL-STD 1275D
  - 19-36VDC, 400W
- Outputs following subset of VITA 62 defined power rails:
  - +5V (VS3) output @200W
  - +12V (VS1) output @ 200W
  - +3V (VBAT)

BACKPLANE

- 1" slot pitch
- Compliant to following VITA 65 Payload/Peripheral Slot Profiles
  - SLT3-PAY-2F2U-14.2.3
  - SLT3-PAY-1F1F2U-14.2.4
  - SLT3-PAY-2F-14.2.7
  - SLT3-PER-2F-14.3.1
  - SLT3-PER-1F-14.3.2
  - SLT3-PER-1U-14.3.3
- Full mesh connectivity between 2F Data Plane ports
- 2U (1000Base-X) Control Plane routed to IAB
- Supports 3 SBC's in peer-peer configuration
- Supports 1 SBC and up to 2 Peripheral Modules
- Supports 1 VITA 62-compliant power supply slot

OTHER BACKPLANE CONNECTIVITY

- SM0, SM1 bussed between Payload and PSU slots
- +3VBAT, +5V, +12V routed from PSU slot to all Payload slots
- All other signals on each Payload slot routed to IAB

INTERFACE ADAPTER BOARD (IAB) DETAILS

- 6x 1000BASE-X to 1000Base-T PHY's (2 from each Payload slot)
- 3x DisplayPort re-drivers
- 3x SATA ports terminated on-board for optional SSD (1x from each slot)
- All other signals routed to front panel connectors

STORAGE

- Option for up to 3 SATA SSD drives, one to each payload slot
- Minimum/maximum 48GB/96GB per slot

RUGGED IAB FRONT PANEL CONNECTIONS

- 3 Meritec Hercules MIL-38999 with 44 10Gb differential pairs. One per slot, aligned with iVPX7225 I/O:
  - 2x 1000BaseT
  - 2x RS-232/422/485 (4-wire)
  - 3x USB 2.0
  - 1x DisplayPort
  - 2x SATA
  - 24x (12 diff pairs) XMC I/O
  - 7x GPIO
- 1x MIL-38999 for DC power input
- On/Off switch with finger guard

COMMERCIAL IAB FRONT PANEL CONNECTIONS

- 6x RJ45 1000BASE-T – 2x per slot
- 3x USB 2.0 Type A – 1x per slot
- 3x Mini DisplayPort – 1x per slot
- 4x RJ45 RS-232/422/485
  - 2x from Slot 1 (COM0/1)
  - 1x from each of Slot2/3
- 1x MIL-38999 for DC Power
- On/Off switch with finger guard

MECHANICAL

- Blade insertion vertical from top of enclosure
- 4x baseplate holes support vertical mounting

EMC COMPLIANCE

- Rugged variants:
  - MIL-STD-461F
  - CE102
  - CS101, CS114, CS115, CS116
  - RE102
  - RS101, RS103

- Commercial variants:
  - Class A (FCC, VCCI, CE, KC, AS/NZ) [EN55022 or equivalent]

SAFETY STANDARDS

- UL/CSA EN60950
- CE product safety marking

ROHS COMPLIANCE

- All variants designed to be RoHS 2 compliant with exclusion for out-of-scope applications
- All variants are RoHS 5/6 (leaded solder) and may employ non-RoHS VPX backplane connectors and/or 38999 connectors
- Commercial variants are designed to be RoHS 6/6. (MOQ and extended lead times apply for RoHS compliance)

COMMERCIAL AND RUGGED VARIANTS ARE AVAILABLE FOR THIS PRODUCT LINE.

Environmental Specifications		
Ruggedization Level	**Commercial Variant (With IAB2)**	**Rugged Variant (With IAB1)**
Cooling Method	Natural Convection	Natural Convection
Operating Temperature	-0°C to +26°C ambient (at 117W)[1] -0°C to +48°C ambient (at 48W)[2]	-40°C to +26°C ambient (at 117W)[1] -40°C to +48°C ambient (at 48W)[2]
Storage Temperature	-40°C to +85°C	-50°C to +100°C
Vibration Sine (10 min/Axis)	5G, 15 to 2000Hz	5G, 15 to 2000Hz
Vibration Random (1 Hr/Axis)	$0.02g^2$/Hz, 15 to 2000Hz (2GRMS)	$0.04g^2$/Hz, 15 to 2000Hz (8GRMS)
Shock	30g/11ms in each of 3 axes	40g/11ms in each of 3 axes
Humidity	to 95% RH non-condensing	to 95% RH non-condensing

Note 1: Tested with three iVPX7225 boards, average processor frequency of 2.0GHz (80% utilization)
Note 2: Tested with one iVPX7225 board, average processor frequency of 2.0GHz (80% utilization)

Ordering Information

Part Number	Description
VPX3000-DC-IAB1	3 Slot Rugged Chassis for conduction cooled 3U VPX Payloads, DC power
VPX3000-DC-IAB2	3 Slot Commercial Chassis for conduction cooled 3U VPX Payloads, DC power
VPX3000-CBL-IO-S	MIL-38999 to I/O breakout cable assembly, shielded 0.6m
VPX3000-CBL-DC	MIL-38999, DC keying to pigtail leads (1m)
IVPX7225-02250813	3U VPX, Conduction, cooled processor payload based on Dual-Core 2.5GHz 3555LE, 8GB DDR3L, .85" PITCH, ENP3

SOLUTION SERVICES

Emerson Network Power provides a portfolio of solution services optimized to meet your needs throughout the product lifecycle. Design services help speed time-to-market. Deployment services include global 24x7 technical support. Renewal services enable product longevity and technology refresh.

PowerPC is a trademark of IBM Corp. and used under license. All other product or service names are the property of their respective owners.

Emerson Network Power.
The global leader in enabling *Business-Critical Continuity™*.

- AC Power
- Connectivity
- DC Power
- **Embedded Computing**
- Embedded Power
- Infrastructure Management & Monitoring
- Outside Plant
- Power Switching & Controls
- Precision Cooling
- Racks & Integrated Cabinets
- Services
- Surge Protection

Emerson Network Power
Offices: Tempe, AZ U.S.A. 1 800 759 1107 or +1 602 438 5720
Paris, France +33 1 60 92 31 20 • Munich, Germany +49 8996 082564 • Tel Aviv, Israel +972 9 9560361
Hong Kong +852 2176 3540 • Shanghai, China +86 21 3395 0289 • Tokyo, Japan +81 3 5403 2730 • Seoul, Korea +82 2 3483 1500

EmersonNetworkPower.com/EmbeddedComputing

VPX3000   11/25/13

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Switching Power Supplies *category:*

Click to view products by Artesyn Embedded Technologies *manufacturer:*

Other Similar products are found below :

70841011 73-551-0005 AAD600S-4-OP R22095 KD0204 9021 S-15F-12 LDIN100150 LPM000-BBAR-01 LPX17S-C EVS57-10R6/R FDC40-24S12 FP80 FRV7000G 22929 40370121900 VI-PU22-EXX 40370121910 LDIN5075 432703037161 WRB01X-U LPX140-C 08-30466-1040G 09-160CFG 70841004 70841025 VPX3000-CBL-DC LPM000-BBAR-05 LPM000-BBAR-08 LPM124-OUTA1-48 LPM000-BBAR-07 LPM109-OUTA1-10 LPM616-CHAS 08-30466-1055G 08-30466-2175G DMB-EWG TVQF-1219-18S 6504-226-2101 XPFM201A+ MAP80-4000G LFP300F-24-TY SMP21-L20-DC24V-5A VI-MUL-ES 08-30466-0065G CME240P-24 VI-RU031-EWWX 08-30466-0028G S82Y-TS01 LFP300F-24-SNTY BWB24SX-U