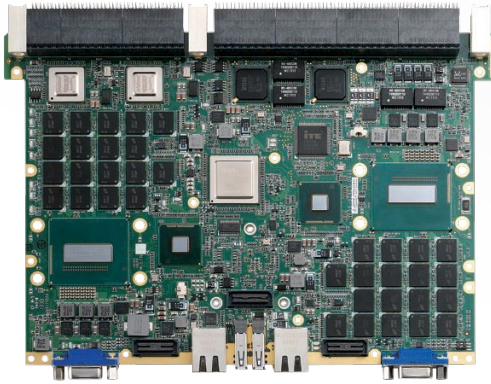


VPX6000 Series

Rugged 6U VPX 4th Generation Intel® Core™ i7 Processor Blade

NEW



Features

- Dual quad-core 4th Generation Intel® Core™ i7 processor with ECC
- Dual channel DDR3L ECC memory soldered, 16GB per CPU
- Supports PCIe non-transparent bridge (NTB) and 10GbE
- Supports storage upgrade via mezzanine card with scalable onboard SSD option
- Remote management with iAMT

VPX™ VPX^{REDI}™ OpenVPX™

CONDUCTION COOLED

Specifications

Processor & System

CPU	Single or dual µFC-BGA quad-core Intel® Core™ i7-4700EQ processors, 2.4/1.7GHz, 6MB L3 cache, 47/37W TDP
Chipset	Intel® QM87 Express Chipset
Memory	Dual channel DDR3L-1600 SDRAM with ECC, 16GB per CPU
BIOS	AMI® EFI BIOS, 16MB SPI flash memory
VITA Standards	VITA 46.0 VPX Base Standard VITA 46.4 PCI Express on VPX Fabric Connector VITA 46.6 Gigabit Ethernet Control Plane on VPX VITA 46.9 PMC/XMC/Ethernet Signal Mapping to 3U/6U VPX VITA 46.10 Rear Transition Module on VPX VITA 46.11 (draft) System Management on VPX VITA 48.0 Ruggedized Enhanced Design Implementation Mechanical Base Specification: VITA 65 OpenVPX Architecture Framework for VPX
Module Profile	MOD6-PAY-4F1Q2U2T-12.2.1-8
Slot Profile	SLT6-PAY-4F1Q2U2T-10.2.1

Connectivity

Ethernet	Four Fat Pipes 10GbE with RDMA to P1 for Data Plane by Mellanox ConnectX-3 Intel® 82580EB Quad GbE controller on PCIe 2.0 x4 Two 1000BASE-T to P4/P5 for CPU-A, two to P4/P6 for CPU-B Two 1000BASE-BX/KX to P4/P5 for CPU-A, two to P4/P6 for CPU-B for Control Plane Intel® I217-LM PHY controller, one GbE with iAMT to P4 per CPU
PCI Express	PCIe x8 or 2x PCIe 2.0 x4 (Gen2) with DMA to P2 data plane from IDT 32-lane Gen2 switch per CPU
Graphics	Integrated in Intel® processor with DX11.1 and OCL1.2 One VGA port on front panel (air cooled version only) Two DVI/HDMI routed to rear per CPU All graphics interfaces are independent channels Supports three independent displays
USB	One USB 3.0 port on front panel (air cooled version only) Two USB 3.0 and two USB 2.0 routed to rear per CPU
PS/2	PS/2 Keyboard Mouse to rear per CPU
Serial Port	One RJ-45 RS-232 port on front panel One RS-232/422 serial port routed to rear per CPU
Audio	High Definition Audio Line-in and Line-out signals routed to rear per CPU

Storage

SBC	One SATA 6 Gb/s 32GB SLC NAND flash (removable), 64GB optional Two SATA 6 Gb/s routed to rear per CPU
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Operating System

OS	Microsoft Windows 7 32/64-bit Red Hat Enterprise Linux 6.5 Wind River VxWorks 6.9.3 (Please contact ADLINK for other OS support)
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Miscellaneous

LEDs	CPU, PCH, RAM, Port 80, P12V, P5V power good
Watchdog Timer	System Reset and NMI, with programmable interval, 1-65535 seconds or minutes
Hardware Monitor	Monitors CPU temperature, system temperature, Vcore and DC voltages

Mechanical & Environmental

Form Factor	6U VPX, 0.85" 233.35mm x 160mm (L x W)
Operating Temperature	Conduction-cooled -40°C to +75°C (at wedge-lock) Air-cooled 0°C to +75°C (ambient temperature)
Storage Temperature	-50°C to +100°C
RH Humidity	95% non-condensing
Shock	Sawtooth 40G, 11ms, each axis, operating (conduction cooled) Sawtooth 20G, 11ms, each axis, operating (air cooled)
Vibration	15Hz-2KHz, 12Grms, random, each axis, operating (conduction cooled) 10Hz-2KHz, random, sine: 2G, 5 to 500Hz (air cooled)
Power Consumption	Max 158W
Weight	Conduction-cooled 1400g Air-cooled dual CPU 770g Air-cooled single CPU 620g

Safety & EMI

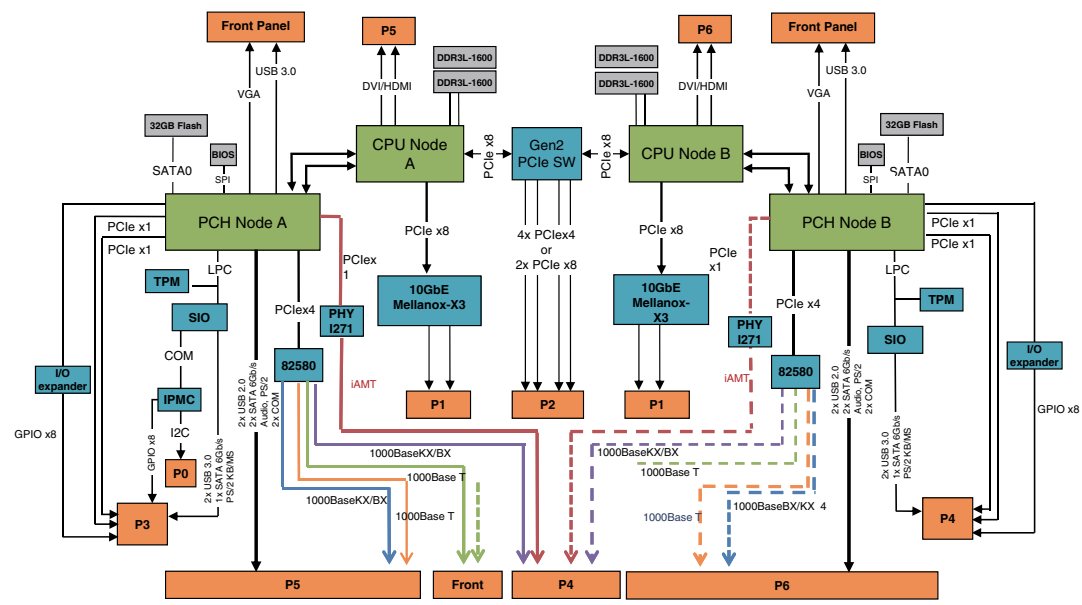
Certification	CE/ FCC Class A
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VPX6000 conduction cooled

VPX6000 air cooled

Block Diagram of VPX6000



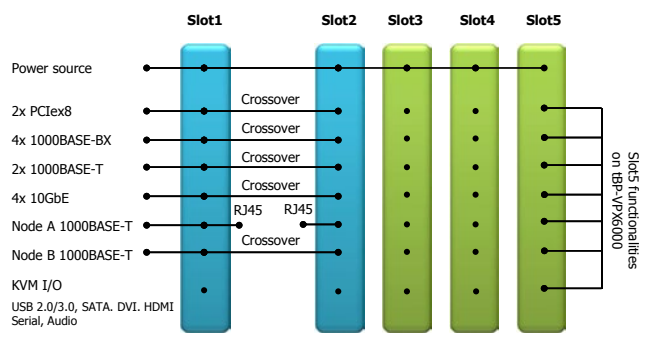
tBP-VPX6000

Model	1000 BASE-BX/KX	1000 BASE-T	10G	DVI	HDMI	SATA	USB	RS-232/422	Audio (Line IN/OUT)	BIOS	Battery	GPIO (LED)	PCIe x1	ATX connector	Power terminal
tBP-VPX6000	4	6	4	2	2	6	3.0x 4 2.0x 4	4	2	2	1	16	2	Yes	Yes

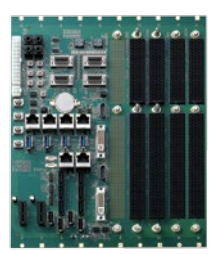
VPX-R6000

Model	Faceplate	10G	1000 BASE-BX	1000 BASE-T	HDMI	USB	Mini UART	SATA	RS-232/422	Audio	KB/MS	GPIO	BIOS	JTAG
VPX-R6000	Faceplate	2	2	2	2	3.0x 2	1							
	Onboard	2				2.0x 4		6	2	2	2	1	2	1

Block Diagram of tBP-VPX6000



tBP-VPX6000 Top



tBP-VPX6000 Bottom

Ordering Information

Model Number	Description/Configuration
Processor Blades	
VPX6000/D4700/M32/S64-R1	Dual Intel® Core™ i7-4700EQ processor and 32GB DDR3L-1600 ECC soldered memory and 64GB SSD with card edge operating temp. -40°C to +75°C, conduction cooled
VPX6000/S4700/M16/S32-A1	Single Intel® Core™ i7-4700EQ processor and 16GB DDR3L-1600 ECC soldered memory and 32GB SSD, air cooled, 0°C to +75°C ambient temp.
VPX6000/D4700/M32/S64-A1	Dual Intel® Core™ i7-4700EQ processor and 32GB DDR3L-1600 ECC soldered memory and 64GB SSD, air cooled, 0°C to +75°C ambient temp.
tBP-VPX6000	4x 1000BASE-BX/KX, each self loopback 6x RJ45 jack 1000BASE-T 6x SATA 4x USB 2.0; 4x USB 3.0 2x DVI; 2x HDMI 2x Audio jack (LI/LO) 4x RS-232/422 (PIN header) 16x GPIO status LED 4x 10G (infiniband connector) 2x PCIe x1 slot
VPX-R6000	VPX RTM for VPX6000 with 2x 10G (infiniband connectors), 2x USB 3.0, 2x 1000BASE-T, 2x 1000Base-BX, 2x micro HDMI, mini UART on front panel; and Line-in, Line-out, RS-232, 6x SATA 3.0

Note: All specifications are subject to change without further notice.

