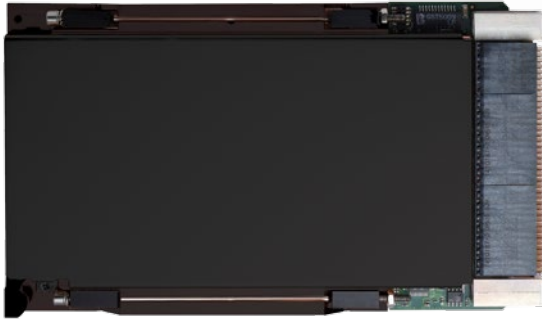


VPX3000 Series

Rugged 3U VPX 3rd Generation Intel® Core™ i7 Processor Blade



Features

- Quad-core 35w 3rd Generation Intel® Core™ i7 processor with QM77 Express chipset
- DDR3-1333 soldered ECC SDRAM
- Two PCIe x4 Gen2 data plane with NTB
- Two 1000BASE-BX and one 1000BASE-T
- One XMC.3 PCIe x8 Gen2 with Rear I/O



Specifications

Processor & System

CPU	Quad-core Intel® Core™i7-3612QE 2.1GHz, 6MB LLC cache, TDP=35w
Chipset	Mobile Intel® QM77 Express Chipset
Memory	Dual channel DDR3-1333 ECC soldered SDRAM, up to 8GB
BIOS	AMI EFI on 64Mbit SPI flash
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	MOD3-PAY-2F2U-16.2.3-3 MOD3-PAY-1F1F2U-16.2.4-4
Slot Profile	SLT3-PAY-2F2U-14.2.3 SLT3-PAY-1F1F2U-14.2.4

Connectivity

XMC	PCIe x8 Gen2 with RIO to P2-X8d+X12d
Ethernet	Two 1000BASE-BX to P1 One 10/100/1000BASE-T to P1
Graphics	Single channel DVI+RGB to P2
USB	One USB 3.0 and one USB 2.0 to P1
Serial Port	One RS-232 (RTS#,CTS#, SIN, SOUT) and one RS-422 to P2
Audio	Intel® HDA Line-in, Line-out to P2
PCI Express	2x PCIe x4 Gen2 to P1, configurable to 1x8 or 1x4+4x1 Supports DMA and Non Transparent Bridge for peer to peer communication

Storage

SBC	Soldered 32GB SATA 3Gb/s boot flash Two SATA 6Gb/s ports to P1 and one SATA 3Gb/s port to P2
-----	---

Operating System

OS	Red Hat Enterprise Linux 6.2 Wind River VxWorks 6.9 Microsoft Windows 7 32/64bit Microsoft Windows 7 Embedded (Please contact ADLINK for other OS support)
----	--

Miscellaneous

GPIO	Four PCH controlled GPIO to P1/P2
HW monitor	CPU temperature and Power rails
Watchdog Timer	System reset or NMI with programmable interval
LED	Power LED (green)
Reset Button	Board reset button on front panel

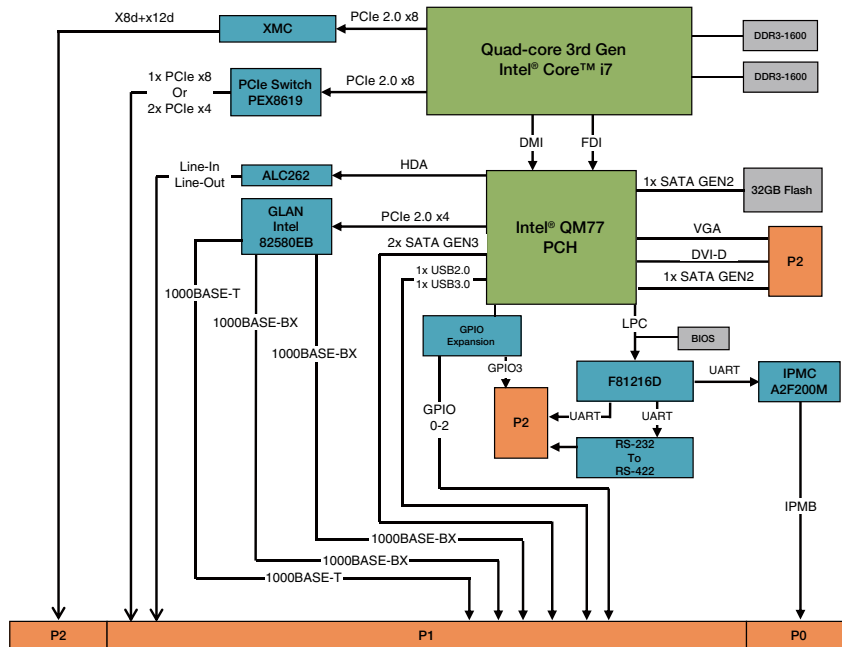
Mechanical & Environmental

Form Factor	3U VPX 0.8" 100mm x 160mm x 20.3mm
Operating Temperature	-40°C to +75°C (at wedge lock)
Vibration	5Hz-2KHz, 12Grms, random, each axis, operating
Shock	Sawtooth 40G, 11ms, each axis, operating
Altitude	60,000 feet, operating
Power Consumption	100% CPU, memory, VGA, SSD stress 3612QE/M8G 41.7W VS1 (12) 1.9A, VS2 (3.3): 0.8A, VS3 (5V): 3.2A
Weight	515g
EMI/EMC	CE, FCC Class A

Ordering Information

Model Number	Description/Configuration
Processor Blades	
VPX3000/3612/M8/S32-R1	Quad-core i7-3612QE 35W with 8GB DDR3 ECC and 16GB SATA SSD soldered, card edge operating temp. -40°C to 75°C
VPX-R300	RTM for VPX3000 with DVI-I, USB 2.0, USB 3.0, 1000BASE-T on front panel and Line-in, Line-out, RS-232, RS-422, 2x SATA 3.0, GPIO pin headers, XMC port onboard
tBP-VPX3000	3-slot testbed for VPX-3000; SLT1-2: VITA65 SLT3-PAY-2F2U-14.2.3, BKP3-DIS02-15.2.8-1 SLT3 I/O: 2x COM-RJ45, 1x GbE-RJ45, 1x DVI-I, 2x USB, 2x SATA 6G, 2x PCIe4, Line-in/out Jacks
VPX3G10-R	VPX3G10-R 3U VPX NVIDIA GT745M GPU card, conduction cooled
XMC-G745-R	XMC NVIDIA GT745M GPGPU card, conduction cooled
3U Test Frame	3U VPX test frame with tBP-VPX3000 backplane for users to validate VPX3000 functionality

VPX3000 Block Diagram



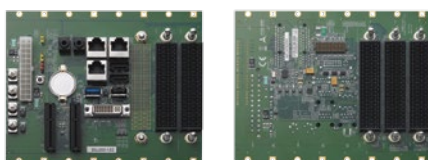
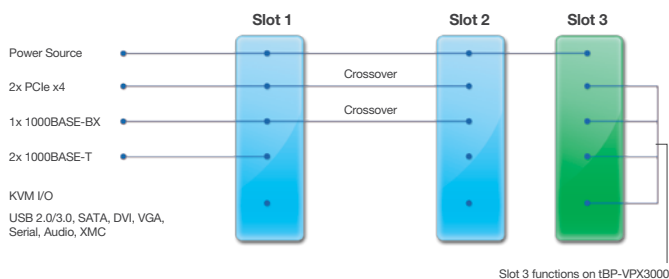
VPX-R300 RTM

Model Name	Location	GbE	Display	USB 3.0	USB 2.0	SATA	XMC	COM	GPIO	Audio
VPX-R300	Rear I/O	1x 1000BASE-T	DVI-I	1	1	-	-	-	-	-
	On Board	1x 1000BASE-T	-	-	-	2	1	1x RS-232 1x RS-422	4	Line-In/Out

tBP-VPX3000 3U Backplane

Model Name	Onboard Connectors	GbE	PCIe	Display	USB 3.0	USB 2.0	SATA	XMC	COM	Audio	Power
tBP-VPX3000	For Slot 3 only	1x 1000BASE-T	2x PCIe x4	1x DVI-I	1	1	2	1x XMC I/Ox8d + x12d	1x RS-232 1x RS-422	1x Line-In 1x Line-Out	1x 24 pin ATX 12V/5V/3.3V power terminals

Block Diagram of tBP-VPX3000



tBP-VPX3000

3U VPX Test Frame

Product Type	Test Frame
Form Factor	VPX 3U
Dimensions	142.6mm (H) x 209.9mm (W) x 276.28mm (D)
Blade support	Conduction cooled
Backplane support	Up to 9 slots with VPX 3U Blade
RTM Support	Yes
Cooling	Passive Fin
Power	User define



3U VPX Test Frame



VPX-R300