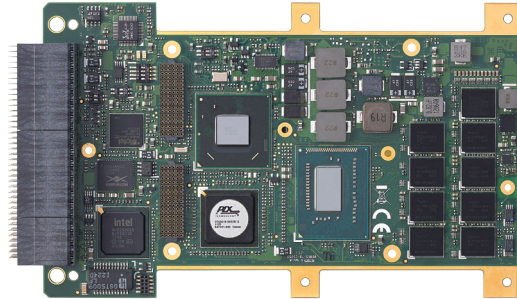


VPX3000 Series

Rugged 3U VPX 3rd Generation Intel® Core™ i7 Processor Blade for Military Storage and Data Processing

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 expansion slot, 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)

Specifications

- **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

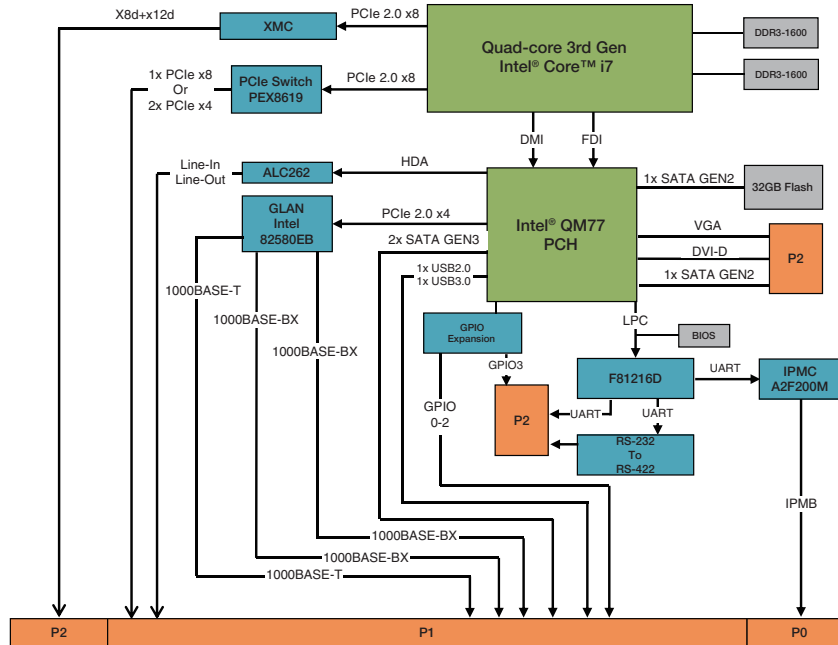
Weight

515g

EMI/EMC

CE, FCC Class A

VPX3000 Block Diagram



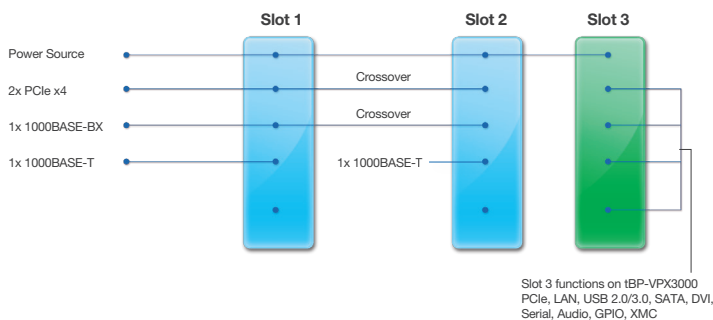
VPX-R300 RTM

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

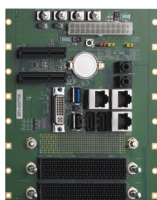
Model Name	Onboard Connectors	GbE	PCIe	Display	USB 3.0	USB 2.0	SATA	XMC	COM	Audio	Power
tBP-VPX3000	For Slot 3 only	1x 1000BASE-T	2x PCIe x4	1x DVI-I	1	1	2	1x XMC I/Ox8d + x12d	1x RS-232 1x RS-422	1x Line-In 1x Line-Out	1x 24 pin ATX 12V/5V/3.3V power terminals

Block Diagram of tBP-VPX3000



VPX3U Test Frame

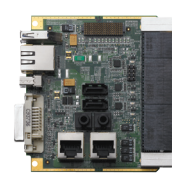
Product Type: Test Frame
 Form Factor: VPX 3U
 Dimensions: 142.6mm (H) x 209.9mm (W) x 276.28mm (D)
 Blade support: Conduction cooled
 Backplane support: Up to 9 slots with VPX 3U Blade
 RTM Support: Yes
 Cooling: Passive Fin
 Power: User define



tBP-VPX3000



VPX3U Test Frame



VPX-R300

Ordering Information

Processor Blades

- **VPX3000/3612/M8/S32-R1**
Quad-core i7-3612QE 35W with 8GB DDR3 ECC and 32GB SATA SSD soldered, card edge operating temp. -40°C to 75°C, conduction cooled
- **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**
3U VPX NVIDIA GT745M GPU card, conduction cooled
- **XMC-G745-R**
XMC NVIDIA GT745M GPGPU card, conduction cooled
- **VPX-TF3090**
3U VPX conduction cooled test frame with tBP-VPX3000

Mouser Electronics

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