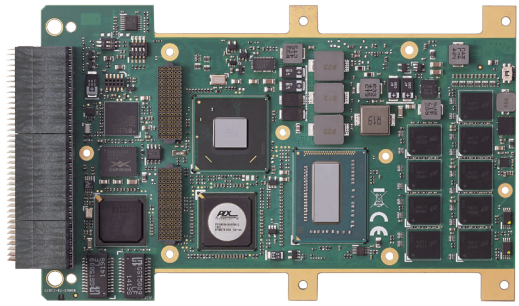
VPX3001 Series

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

Features

- Quad-core 3rd Generation Intel® Core™ i7 processor with QM77 Express chipset
- DDR3-1333 soldered ECC SDRAM
- Two PCIe x4 Gen2 data plane to P1 with NTB
- Two 1000BASE-T or two 1000BASE-BX to P1
- One XMC.3 PCIe x8 Gen2 with Rear I/O to P2



Specifications

Processor & System

CPU
Quad-core Intel® Core™-i7-3612QE 2.1GHz, 6MB LLC cache, 35W TDP

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/Rear IO Fabric Signal Mapping to 3U/6U VPX
VITA 48.0 Ruggedized Enhanced Design Implementation Mechanical Base Specification
VITA 65 OpenVPX Architecture Framework for VPX

Module Profile
MOD3-PAY-2F2T-16.2.5-3
MOD3-PAY-2F2U-16.2.3-3 (BOM Option)

Slot Profile
SLT3-PAY-2F2T-14.2.5
SLT3-PAY-2F2U-14.2.3 (BOM Option)

Connectivity

XMC
PCIe x8 Gen2 with RIO to P2w1-X24s+X8d+X12d

Ethernet
Two 1000BASE-T to P1
Two 1000BASE-BX to P1 (BOM Option)

Graphics
Intel® HD Graphics 4000
One VGA to P2

USB
Two USB 2.0 to P1

Serial Port
Two RS-232/422 to P1
One RS-232/422 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
One SATA 6Gb/s ports to P1

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
Six 5V tolerance 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

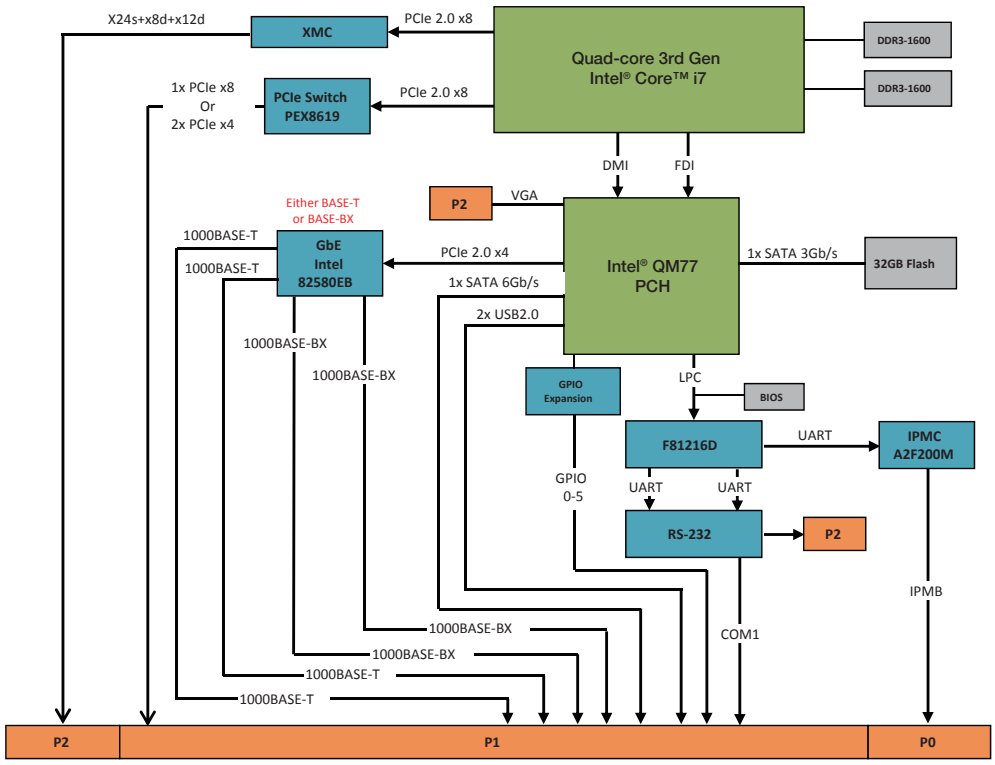
Altitude
60,000 feet, operating

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

VPX3001 Block Diagram



VPX-R3001 3U RTM

Model Name	Location	GbE	Display	USB 2.0	SATA	XMC	COM	GPIO	Others
VPX-R3001	Rear I/O	2x 1000BASE-BX	VGA	-	-	-	-	-	-
	On Board	2x 1000BASE-T	-	2	1	1	2x RS-232	6	1x SMBUS 1x JTAG

Companion Production Information

VPX 3U Graphics Card

VPX3G10

- NVIDIA GeForce GT 745M GPU (Kepler refresh)
- 384 CUDA cores for maximum processing power
- Dual channel GDDR5 soldered memory, 2GB
- 16-lanes PCIe Gen3 (x16/x8/x4/x1) to P1
- Four single link DVI and One VGA to P2
- Support OpenVPX Profile:
- MOD3-PER-2F-16.3.1-3 and MOD3-PER-1F-16.3.2-2

XMC Graphics Module

XMC-G745-R1

- NVIDIA GeForce GT 745M GPU (Kepler refresh)
- 384 CUDA cores for maximum processing power
- Dual channel GDDR5 soldered memory, 2GB
- 16-lanes PCIe Gen3 (x16/x8/x4/x1) on P15
- Four single link DVI and One VGA ON p16

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

3U VPX Test Frame

VPX-R3001

Ordering Information

Processor Blades

- **VPX3001/3612/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-R3001**
  RTM for VPX3001 with 2x 1000BASE-BX and VGA on front panel; 2x 1000BASE-T, 2x USB 2.0, SATA, 2x RS-232, GPIO pin headers, SMBus, JTAG XMC onboard
- **VPX3G10-R**
  XMC 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