

VPX6020 Series

Rugged 6U VPX 7th Gen Intel® Core™ i7 Processor Blade

Features

- Quad-core 7th Gen Intel® Core™ i7 processor (formerly "Kaby Lake") with Mobile Intel® cypress chipset
- 16GB DDR4-2400 soldered ECC SDRAM
- 4x SRIO 2.1 by 4
- Configurable PCIe x16 Gen3 supporting NTB
- 2x 1000BASE-T and 2x 1000BASE-BX



Specifications

Processor & System

CPU

Quad-core Intel® Core™-i7-7820EQ 2.1GHz, 6MB LLC cache, 35W TDP

Chipset

Mobile Intel® QM175 Chipset

Memory

Dual channel DDR4-2400 ECC soldered SDRAM, up to 16GB

BIOS

AMI EFI on 128Mbit 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 48.0 Ruggedized Enhanced Design Implementation Mechanical Base Specification

VITA 65 OpenVPX Architecture Framework for VPX

Connectivity

SRIO

4x SRIO 2.1 x4 to P1

Ethernet

2x 1000BASE-T & 2x 1000BASE-BX to P4

1x 1000BASE-T to front

Graphics

1x VGA to P6 or 1x VGA to front (one only)

1x DVI-D to P5

USB

2x USB 2.0 to P6

2x USB 3.0 to front

Serial Port

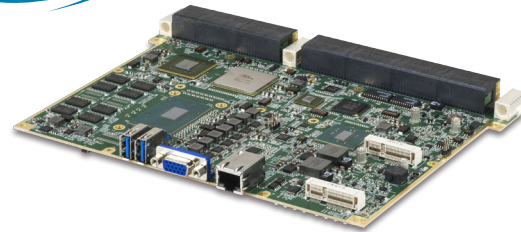
3x RS-232 to P6

PCI Express

PCIe x16 Gen3 (configurable to 1 x16, 2 x8, or 4 x4)

Supports Non Transparent Bridge for peer to peer communication

Preliminary



Storage

SBC

Soldered MLC up to 64GB SATA 6Gb/s

Two mSATA slots for storage expansion

OS Support

Windows 10

Linux & RTOS by request

Miscellaneous

GPIO

8x GPIO to P4

HW Monitor

CPU temperature and power rails

Watchdog Timer: System reset or NMI with programmable interval

LED

Power LED

Onboard SATA LED

Port 80 LED

Reset Button

System reset button on front panel

Mechanical & Environmental

Form Factor

6U VPX 1" conduction cooled, supports secondary side retainer

100mm x 160mm

Operating Temperature

-40°C to +75°C (at wedge lock)

Storage Temperature

-50°C to +100°C

Relative Humidity

95% non-condensing

Vibration

5Hz-2KHz, 12Grms, random, each axis, operating

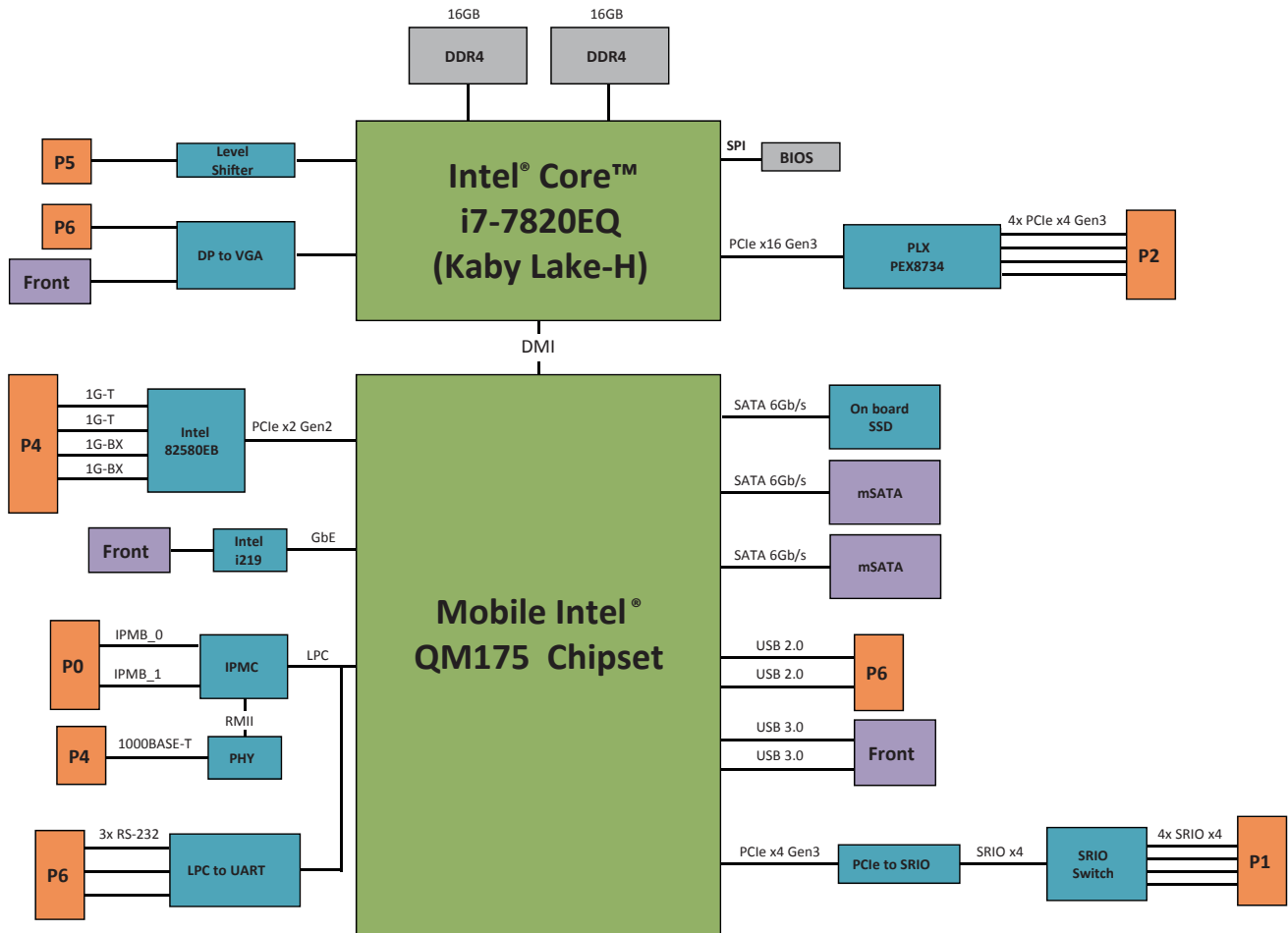
Shock

Sawtooth 40G, 11ms, each axis, operating

EMI/EMC

CE, FCC Class A

VPX6020 Block Diagram



Ordering Information

Processor Blades

- VPX6020/7820EQ/M16/MLC64/PCIE/SRIO-R1**
 6U VPX CPU Blade, Intel® Core™ i7-7820EQ, DDR4 16GB, MLC 64GB, 2x mSATA, 4x PCIe x4, 4x SRIO x4, 2x 1000BASE-T + 2x 1000BASE-BX, USB, RS-232 conduction cooled, ETT -40°C to +75°C
- VPX6020/7820EQ/M16/MLC64/PCIE/SRIO-A1**
 6U VPX CPU Blade, Intel® Core™ i-7820EQ, DDR4 16GB, MLC 64GB, 2x mSATA, 4x PCIe x4, 4x SRIO x4, 2x 1000BASE-T + 2x 1000BASE-BX, USB, RS-232 air cooled, ETT -40°C to +75°C

Accessories

- VPX-R6020**
 RTM for VPX6020 with 2x 1000BASE-T, 2x 1000BASE-BX, VGA, DVI-D, 2x USB 2.0, SATA, 2x RS-232, GPIO pin headers, SMBus, JTAG