VPX3020 Series

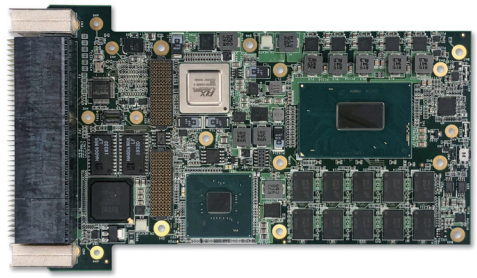
Rugged 3U VPX Intel® Xeon® and Core™ i3 Processor Blade

Features

- Intel® Xeon® Processor E-2254ML and 9th Gen Intel® Core™ i3 (formerly "Coffee Lake-H Refresh")
- DDR4-2666 soldered ECC SDRAM up to 16GB
- Up to 64GB SATA SLC SSD option
- Up to PCIe x16 Gen3 interface supporting non-transparent bridge
- One XMC expansion slot, PCIe x8 Gen3 with Rear I/O to P2

VPX VPX REDI OpenVPX CONDUCTION COOLED

Preliminary



Specifications

Processor & System

CPU

Intel® Xeon® Processor E-2254ML, 4 cores, 25W TDP
Intel® Core™ i3-9100HL, 4 cores, 25W TDP (optional 6-core by request)

Chipset

Intel® CM246

Memory

Dual channel DDR4-2666 ECC soldered SDRAM, up to 16GB

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 System Management on VPX
VITA 48.0 Ruggedized Enhanced Design Implementation Mechanical Base Specification
VITA 65 OpenVPX Architecture Framework for VPX

Connectivity

XMC

PCIe x8 Gen3 with Rear I/O (X8d+X12d) to P2 (or Two PCIe x4 Gen3 optional to P2)

Ethernet

1000BASE-T x1 & 1000BASE-BX x2 (or 1000BASE-T x2 optional)

Graphics

Intel® integrated GPU engine
One DisplayPort to P2

USB

USB 3.0 Full x1 (can be separated to 1x USB 3.0 & 1x USB 2.0)

Serial Ports

RS-232 x1 to P2
RS-232/422/485 x1 (or 4x GPIOs) to P2

GPIO

One GPIO to P1 (BOM option up to x6)

PCI Express

PCIe x8 Gen3, configurable to 1 x8 or 2 x4 to P1, supports DMA and non-transparent bridge for peer-to-peer communication

Storage

SBC

SLC NAND flash up to 64GB SATA 6Gb/s option, via add-on card
One SATA 6Gb/s to P2

Specifications

Security Mechanism

TPM
Atmel TPM version 2.0

IPMC
Smart Fusion A2F200 with VPX code base

OS Support

Wind River VxWorks 7.0
Microsoft Windows 10
Linux
(Please contact ADLINK for other OS support)

Miscellaneous

LEDs
System status LEDs on front and rear

Watchdog Timer
System reset or NMI with programmable interval

Reset Button
Reset button on front panel

Mechanical & Environmental

Form Factor
Conduction cooled 3U VPX

Operating Temp.
Conduction cooled: -40°C to +85°C at wedge locks
Air cooled: -40°C to +75°C at wedge locks

Storage Temp.
-50°C to +100°C

Relative Humidity
95% non-condensing

Shock
Sawtooth 40G, 11ms, each axis, operating

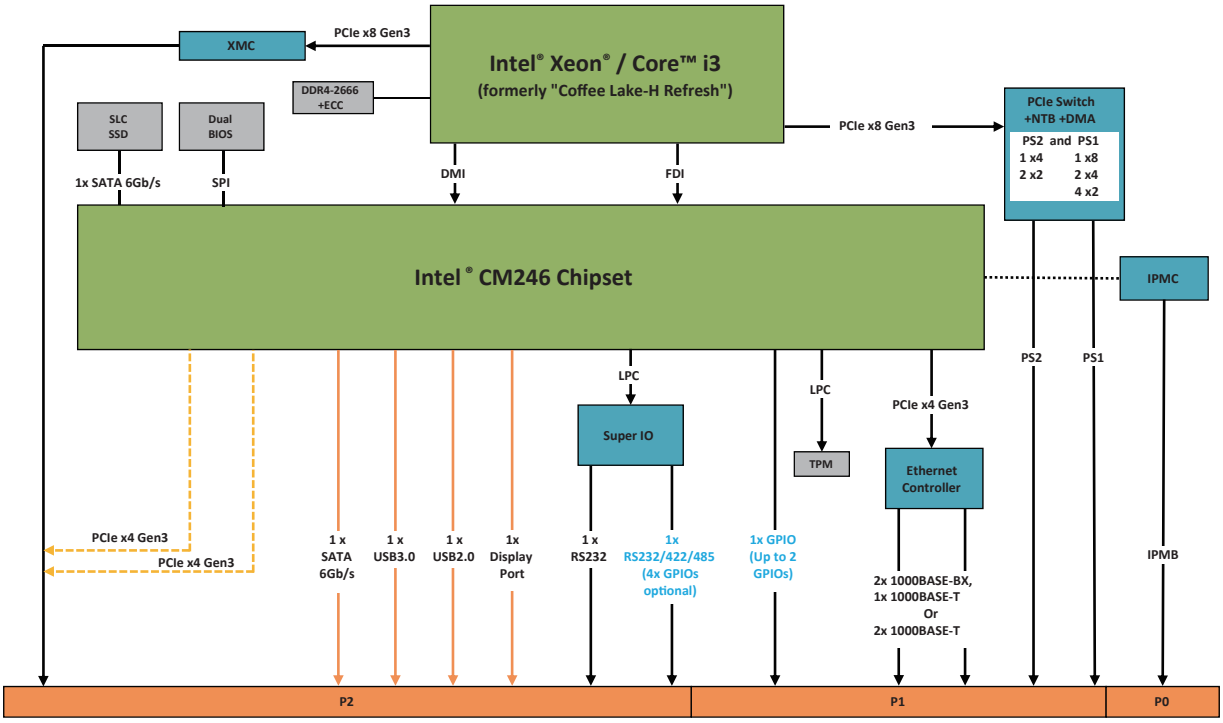
Vibration
5Hz-2KHz, 12Grms, random, each axis, operating

Thermal Dissipation
Convection and conduction

Safety & EMI

Certifications
CE, FCC Class A

VPX3020 Block Diagram



3U VPX Test Frame

Product Type	9-slot Test Frame
Form Factor	VPX 3U
Dimensions	142.6mm (H) x 209.9mm (W) x 276.28mm (D)
Blade Support	Conduction cooled VPX 3U blades
Backplane Support	3-slot
RTM Support	Yes
Cooling	Passive fins
Power	User define

3U VPX Test Frame

Ordering Information

Processor Blades

- **VPX3020/E2254/M16/S64/XMC-R1**
  3U VPX processor board with Intel® Xeon® E2254ML, DDR4 16GB, SLC 64GB, dual 1000BASE-T, DisplayPort, USB3.0/2.0, XMC slot with conformal coating & ETT -40°C to +85°C, conduction cooled

Rear Transition Modules

- **VPX-R3020**
  RTM for VPX3020

Accessories

- **VPX-TF3090**
  3U VPX conduction cooled test frame with tBP-VPX3000