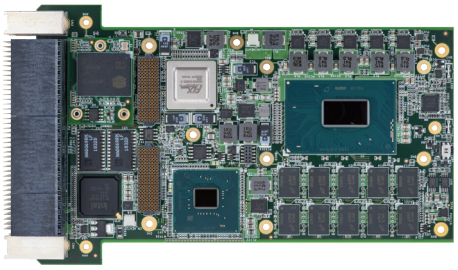
ADLINK
LEADING EDGE COMPUTING

Rugged 3U VPX Intel® Xeon® Processor Blade

VPX3020 Series

Datasheet

New



VPX VPX REDI OpenVPX CONDUCTION COOLED

Features

- Intel® Xeon® Processor E-2254ML (formerly "Coffee Lake")
- DDR4-2666 soldered ECC SDRAM up to 16GB
- 32GB SATA SLC SSD NAND flash
- Up to PCIe x16 Gen3 interface supporting non-transparent bridge
- One XMC expansion slot, PCIe x8 Gen3 with Rear I/O to P2

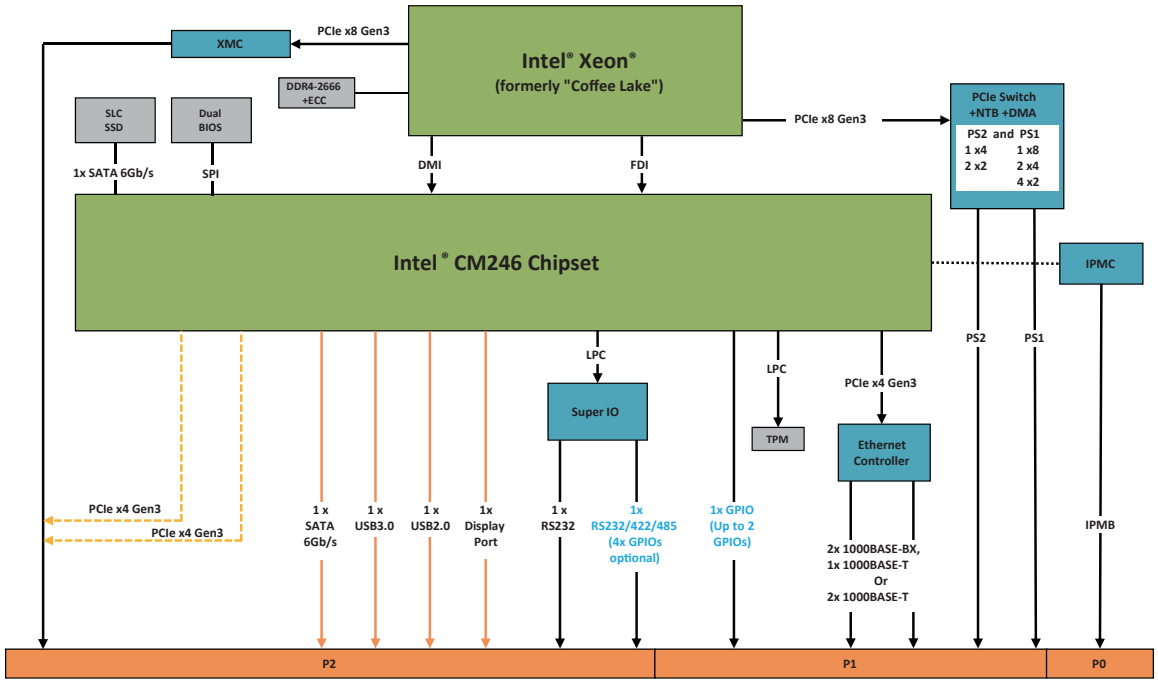
Specifications

Processor & System	CPU	Intel® Xeon® Processor E-2254ML, 4 cores, 25W TDP
	Chipset	Intel® CM246
	Memory	Dual channel DDR4-2666 ECC soldered SDRAM, up to 16GB
	BIOS VITA Standards	AMI EFI on 64Mbit SPI flash 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

Specifications

Storage	SBC	SLC NAND flash 32GB SATA 6Gb/s, via add-on card One SATA 6Gb/s to P2
Security Mechanism	TPM	Infineon 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
	Storage Temp.	-50°C to +105°C
	Operating Altitude	60,000 feet (VITA 47)
	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

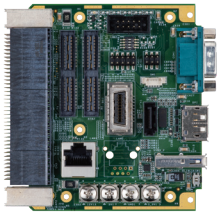
VPX3020 Block Diagram



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



VPX-R3020

Ordering Information

Processor Blades	
VPX3020/2254ML/M16/S32/XMC-R2,ETT,CC	3U VPX Processor Board with Intel® Xeon® E-2254ML, DDR4 16GB, SLC 32GB, XMC slot, conformal coating & ETT -40 to +85˚C, conduction cooled
VPX3020/2254ML/M16/S32/P8-R2,ETT,CC	3U VPX Processor Board with Intel® Xeon® E-2254ML, DDR4 16GB, SLC 32GB, conformal coating & ETT -40 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