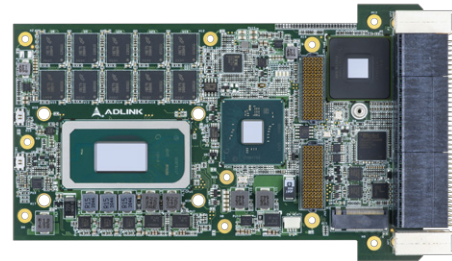**ADLINK**
® LEADING EDGE COMPUTING

RUGGED 3U VPX PROCESSOR BLADE WITH
INTEL® XEON® W11000-E SERIES PROCESSOR
VPX3-TL Series

Datasheet

Preliminary

Features

- Intel® Xeon® W-11000E Series processor (formerly Tiger Lake-H); up to 8 cores with 45 watt TDP
- SOSA-aligned and VITA 46/47/48/65 compliant for quick deployment
- DDR4-2666 soldered ECC SDRAM, up to 64GB
- Up to 1TB M.2 SSD optional
- One XMC expansion slot with PCIe x8 Gen3
- Ethernet connectivity: 1x 2.5GBASE-T to P2; 2x 10GBASE-KR to P1; optional 2x 1GBASE-KX to P1
- 1x DisplayPort to P2, supports DP++ with resolution up to 8K/60Hz
- Supports VxWorks 7, Linux (kernel 5.4 and higher)

Specifications

Processor & System	CPU	Intel® Xeon® W-11865MRE processor (formerly Tiger Lake-H) Up to 8 cores (TDP 45W) Note: For other processor SKUs, please contact your ADLINK representative.
	Chipset	Intel® RM590E Chipset
	Memory	32GB DDR4 soldered with ECC (up to 64GB)
	BIOS	Dual 256Mbit SPI flash
	VITA Standards	VITA 46/48/65 compliant SOSA aligned
	Module Profile	MOD3-PAY-1F1F2U1TU1T1U1T-16.2.15-2
	Slot Profile	SLT3-PAY-1F1F2U1TU1T1U1T- 14.2.16
Connectivity	XMC	1x PCIe x8 Gen3 to J15 Rear I/O (X16s+X8d) to P2 and X12d to P1 from J16 Supports +5V or +12V PWR by BOM option (default is +5V) Supports XMC 1.0 & 2.0 connector by BOM option
	Dataplane	1x PCIe x4 to P1 (Lane 0-3) 1x PCIe x8 to P1 (Lane 0-7)
	Expansion Plane	1x PCIe x4 to P1 (Lane 4-7)
	Control Plane	2x 10GBASE-KR to P1 (default) 2x 1GBASE-KX to P1 (optional) Supports IOL/SOL

Specifications

	Ethernet	1x 2.5GBASE-T to P2 Supports PXE Supports Wake-On-LAN (WOL)
	Video	1x DisplayPort to P2 Supports DP++ Resolution up to 8K @60Hz Display mode selection via BIOS
	USB	2x USB 2.0 to P2 1x USB 3.2 Gen1 to P2 Supports USB 3.0 power to P1/G7 (supply 0.9A) with overcurrent protection Supports USB 2.0 power to P2/G9 (supply 0.5A) with overcurrent protection
	Serial Ports	COM2: RS-232/422/485 to P2 (RS-232 is 2-wire) Max. data rate for RS-232/422/485 is 115200bps RS-485 supports auto flow control RS-232/422/485 mode configuration via BIOS
	Maintenance Console Port	COM1: 2-wire TX/RX on P1 Supports TIA-232 & LVCOMS (3.3V), mode configuration via BIOS
	PCIe	2x PCIe x4 co-layout with XMC x8d+X16s (on P2) PCIe NT function not supported
	GPIO	1x GPIO to P1, 3x GPIO to P2 Supports +3.3V (default) or +5V GPIO by BOM option GPI with edge trigger or level trigger interrupt
Storage	SATA	1x SATA 6Gb/s to P2
	M.2	1x M.2 2242 on top side (M-key) Supported M.2 devices: S1, S2, S3, D1, D2, D3, D4 M.2 capacity up to 1TB
Security	TPM	Discrete TPM 2.0 chip Supports Intel Secure Boot (UEFI)
	BIOS	Dual BIOS support
Operating System	OS	Windows 10 VxWorks 7 Linux (kernel 5.4 and higher)
Miscellaneous	LEDs	Blade status LEDs on front and rear
	Reset Button	Reset Button on front panel Maskrest button reserved on RTM
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
	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

VPX3-TL Block Diagram

Ordering Information

Processor Blades

VPX3-TL/W-11865MRE/M32/XMC1.0-R2	3U VPX Processor Blade with Intel® Xeon® W-11000E Series CPU, DDR4 32GB, XMC 1.0 slot, conformal coating, ETT (-40˚C to +85˚C), conduction cooled
VPX3-TL/W-11865MRE/M32/XMC 2.0-R2	3U VPX Processor Blade with Intel® Xeon® W-11000E Series CPU, DDR4 32GB, XMC 2.0 slot, conformal coating, ETT (-40˚C to +85˚C), conduction cooled
VPX3-TL/W-11865MRE/M32/P16-R2	3U VPX Processor Blade with Intel® Xeon® W-11000E Series CPU, DDR4 32GB, PCIe x16, conformal coating, ETT (-40˚C to +85˚C), conduction cooled
VPX3-TL/W-11865MRE/M32/P16-A1(70)	3U VPX Processor Blade with Intel® Xeon® W-11000E Series CPU, DDR4 32GB, PCIe x16, conformal coating, ETT (-40˚C to +70˚C), air cooled

Backplane

tBP-VPX3-TL/XMC	Backplane for VPX3-TL with XMC, conformal coating, ETT (-40˚C to +85˚C)
tBP-VPX3-TL/2xP4	Backplane for VPX3-TL with 2x PCIe x4, conformal coating, ETT (-40˚C to +85˚C)

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