



### Dimensions

mm : 528.32 x 172.72

inches : 20.8 x 6.8

The Vela server board offers the latest Xeon® Scalable Processors technology solutions with compelling performance and provides premium power efficiency, which is optimized for efficient performance platforms (storage, security and communications infrastructure).

By implementing Intel® Xeon® Scalable Processors, fully integrated microarchitecture supports up to 72 lanes of PCIe Gen3, providing six channels per CPU with total sixteen DIMM slots deployment which can support up to DDR4 2933/2666/2400MHz, Vela server board can meet both cost efficiency and performance requirement for lots of applications.

Featured with ground breaking technologies including Intel® Next Generation Microarchitecture and Instruction Set (AVX-512, VMD, QAT - optional by PCH SKU), Speed Shift Technology, UPI link speeds up to 10.4GT/s, the Vela server board enable next generation server solutions with an incredible leap in performance.

### Features

- Supports Intel® Xeon® Scalable Processors for highest server performance and improved power efficiency
- Supports 16 DDR4 DIMM slots for maximum memory performance
- Supports up to 72 lanes of PCIe Gen3 extension  
(1) from CPU0: 1 x16 via OCP Mezzanine V2.0; 2 x16 via PCIe x16 slots;  
(2) from CPU1: the other 24 lanes via MAX I/O
- Onboard Baseboard Management Controller for system management and IPMI control
- Embedded components for 5+ year long life
- Rackmount Technology Extension (RTX) form factor utilizes full internal chassis volume for optimum I/O configurations

## SPECIFICATIONS

System	Processor Support	Intel® Xeon® Scalable Processors (Cascade Lake Refresh/Cascade Lake/Skylake)
	CPU TDP	205W (Option by SKU)
	UPI Speeds	10.4 GT/s, 9.6 GT/s
	Socket Type	Socket P0 (LGA-3647 Socket)
	System Memory	<ul style="list-style-type: none"> <li>• 6 x memory channels per CPU, 2 channels with 2DPC + 4 channels with 1DPC</li> <li>• 16 x DIMM slots support: DDR4 2933/2666/2400MHz RDIMM/LRDIMM</li> <li>- up to 256GB RDIMM SRx4</li> <li>- up to 512GB RDIMM DRx4</li> <li>- up to 2048GB RDIMM 3DS 8Rx4</li> <li>- up to 1024GB LRDIMM QRx4</li> <li>- up to 2048GB LRDIMM 3DS 8Rx4</li> <li>• Intel® Optane™ DC Persistent Memory (Apache Pass) support</li> </ul>
Expansion Slots	<ul style="list-style-type: none"> <li>• 2 x PCIe Gen3 slots</li> <li>• 1 x OCP Mezz. V2.0 supports PCIe Gen3 x16</li> <li>• 1 x high-density connector supports 16 + 8 lanes of PCIe Gen3</li> <li>• 2 x M.2(NGFF) / M-Key / 2280 / Support SATA or PCIe x2</li> </ul>	
System BIOS	BIOS Type	Insyde UEFI BIOS
	BIOS Features	<ul style="list-style-type: none"> <li>• ACPI</li> <li>• PXE</li> <li>• WOL</li> <li>• AC loss recovery</li> <li>• IPMI KCS interface</li> <li>• SMBIOS</li> <li>• Serial console redirection</li> <li>• BIOS Boot Specification</li> <li>• BIOS Recovery Mode</li> <li>• SRIOV</li> <li>• iSCSI</li> <li>• TPM</li> </ul>

On-board Devices	SATA	Intel ® Lewisburg PCH on-chip solution <ul style="list-style-type: none"> <li>• 2 x SATA 6.0 Gb/s (by 2 x SATA 7 pin)</li> <li>• 8 x SATA 6.0 Gb/s by edge slot for extension</li> <li>• RAID 0, 1, 5, 10 support by Intel RSTe</li> </ul>
	BMC	Aspeed AST2500 Advanced PCIe Graphics & Remote Management Processor <ul style="list-style-type: none"> <li>• Baseboard Management Controller</li> <li>• Intelligent Platform Interface 2.0 (IPMI 2.0)</li> <li>• iKVM, Media Redirection, IPMI over LAN, Serial over LAN</li> <li>• SMASH Support</li> <li>• HTML5</li> <li>• Redfish</li> </ul>
	Network Controller	<ul style="list-style-type: none"> <li>• Via OCP Mezzanine card/PCIe slots extension</li> <li>• Realtek RTL8211E GbE Ethernet for BMC dedicated management port</li> </ul>
	Graphics	Aspeed AST2500 Advanced PCIe Graphics & Remote Management Processor <ul style="list-style-type: none"> <li>• PCIe VGA/2D Controller</li> <li>• 1920x1200@60Hz 32bpp</li> </ul>
Input/Output	SATA	10 x SATA 6.0 Gb/s ports <ul style="list-style-type: none"> <li>• 2 x SATA 6.0 Gb/s (by 2 x SATA 7 pin) + 8 x SATA 6.0 Gb/s (by edge slot extension)</li> </ul>
	LAN	1 x GbE RJ45 dedicated to BMC management
	USB	<ul style="list-style-type: none"> <li>• 2 x USB 3.0 Type A connectors</li> <li>• 1 x USB internal pin-header to support 2 x USB3.0/USB2.0</li> <li>• 1 x USB internal pin-header to support 2 x USB 2.0</li> </ul>
	VGA	<ul style="list-style-type: none"> <li>• 1 x external VGA port</li> <li>• 1 x internal VGA pin-header (share with external VGA port)</li> </ul>
	Serial Port	<ul style="list-style-type: none"> <li>• 1 x external COM port by 3.5mm phone jack</li> <li>• 2 x internal COM pin-headers</li> </ul>
	Other	1 x TPM 2.0 onboard