Technical Specifications for Computational GPU System

Processor(s)	1 x Latest Generation Intel Xeon W-1270 Processor with Minimum 8 Cores, 3.40 GHz Base, 16MB Cache
Chipset	Intel® W480 Chipset
RAM	Minimum 128 GB or higher DDR4-3200/2933 ECC Registered DIMMs Populated
RAM Expandability	RAM Expandable up to 64GB or higher, At least 2 or more DIMM Slots will be free for future expandable
GPU Card	1 x Nvidia Quadro series professional Graphics with dedicated 16GB or higher GPU Memory installed from day one. GPU should be compatible with Gromacs.
SSD	Minimum 512GB M.2 NVME SSD for OS Boot Load
HDD	Minimum 2TB or more Raw Data Storage by using SAS/SATA 7.2K RPM HDD
NVMe	Support for PCIe/M.2 NVMe drives (capable to populate Two or Nvme drives from day one)
HDD Bays	Minimum 8 or more Hybrid Drive bays supporting HDD and SSDs, out of them at least 4 Hot-Swap bays must be available from day one.
RAID	SAS/ SATA RAID Controller, Support RAID Level at least 0, 1, & 10
Network	Dual Gigabit Ethernet ports or higher thru onboard controller
Exp Slots(s)	2 x PCI-E 3.0 x16 slots, 1 x PCI-E 3.0 x4 Expansion slots,
	There should be enough space available in PCIe slots for install Two or more Single width GPGPU from Day one.
Ports	At least 4x USB Ports (at least 2 in front)
Monitoring	Out of band system health monitoring thru Dedicated/Shared Port by integrated IPMI controller
ODD	Internal SATA DVD RW
Cooling	The system with proper Cooling arrangements with optimized acoustics and auto controlled heat emission.
P. Supply	Minimum 1200W or higher, 80 plus Redundant Platinum level or better-certified power supply with the capability to support at least Two more double widths GPU
OS	Ubuntu 64bitPreloaded
Compilers	GNU Toolchain Preloaded
AI Frameworks Preloaded	1.CPU Optimised Tensor Flow 2..CPU Optimised Pytorch 3..CPU Optimised Theano 4..CPU Optimised Caffe 5.CPU Optimised Text2speech 6.CPU Optimised Mxnet 7.CPU Optimised CuDNN 8.Accelerator Optimised Tensor Flow 9.Accelerator Optimised Pytorch 10.Accelerator Optimised Theano 11.Accelerator Optimised Caffe 12.Accelerator Optimised Text2speech 13. Accelerator Optimised Mxnet

	14. Accelerator Optimised CuDNN 15. Clara Deploy SDK 16.Deep vision AI 17. BIGDFT 18. Parabricks 19. R 20. Microsoft CNTK 21.Keras 22. Accord.NET 23.Spark Mlib 24. MLPack 25.Paddle Paddle 26. MKL 27. DNN
Conainerization Support	Containerizing Different Framework Testing of Algorithms with container Building Customer Containers
Management	Out of band Management Capabilities, Centralized Management Console License for the purpose of health monitoring, power management and firmware /S/W upgrades & updates. RestFul API to support and integrate server management into existing management infrastructure.Advanced Power Management capabilities to manage power on heterogeneous server products. Remote S/W installation Support. Remote debug assistance directly from OEM product engineers.
Inference Deployment & Performance Tools	1. TensorRT 2. OpenVX 3. OpenCV 4. Kaldi 5. Kinetica
Job Scheduling Utility License	Unified system management/monitoring toolset for configuration, diagnosis, and management of the system. Toolset/Manager must be capable of supporting package and image-based provisioning, intuitive web interface for managing and customizing the node, And toolset with provisioning, monitoring, and reporting capabilities. With JOB scheduling capabilities on a single node for CLI and GUI based end-user applications.
	S/W utility must be from the H/W OEM and not from a third-party vendor. Product datasheet with demonstration details must be shared
Certification	RHEL/Windows/SUSE (Cent OS/Fedora/Debian) Certified System,
Monitor (optional)	24" or higher LED height adjsutable Monitor IPS (1920x1080) resolution
KBD+Mouse	Standard Keyboard + Optical Mouse (Wired +USB)
UPS	1500VA online UPS with battery with 15min. Backup and 2 Years warranty
Cloud Access License	A system with Cloud Access License for Precompiled ML/DL frameworks must be provided for unlimited users. Detailed datasheet must be attached
Diagnostics	CPU and chassis environment, Thermal Control provision
	Thru LEDs for power on/off, HDD activity, Network activity, System Overheat
Regulatory Compliance	OEM must be BIS, ISO 9001,14001,27001 and EPR Certified and Complied. Certificates must be submitted with the bid
Form Factor	5U or lesser Rack convertible Tower system
Warranty	One Year Onsite Comprehensive Warranty