

SPARKLE®

intel ARC

PRO

Multi-GPU Server, 768GB VRAM Solutions

Maximum VRAM capacity available in a single server. With the SPARKLE PCIe 5.0 extension board, it supports up to 16x SPARKLE Intel® Arc™ Pro B60 Duo 48GB graphics cards.



SPARKLE Intel® Arc™ Pro B60

Available with **24GB** or **48GB** GDDR6 VRAM, featuring blower, passive, or even customized water-cooling solutions.

AI Solutions



Intel® Arc™ Pro B60

From a single 24GB GPU to a massive 768GB multi-GPU server, SPARKLE provides end-to-end AI fine-tuning and inferencing solutions.

With customized hardware designed to fit your workloads, SPARKLE empowers you to unlock the full potential of AI.

SPARKLE®

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Multi-GPU Solutions

From GPUs to full systems, SPARKLE provides not only the hardware but also comprehensive barebone server and workstation solutions.

Cost-Efficient, with Larger VRAM and Higher Tokens/s.



C741-6U-Dual 16P

- Up to **768GB** VRAM, 16x SPARKLE Intel® Arc™ Pro B60 Duo 48GB
- Dual Intel® Xeon® Scalable processors in a 6U Rack.
- Inserting SPARKLE PCIe 5.0 extension board.



C741-6U-16P

- Up to **384GB** VRAM, 16x SPARKLE Intel® Arc™ Pro B60 24GB
- Dual Intel® Xeon® Scalable processors in a 6U Rack.



W790-4U-10P

- Up to **240GB** VRAM, 10x SPARKLE Intel® Arc™ Pro B60 24GB
- Intel® Xeon® W-3400 processors in a 4U Rack Workstation.



W790-52L-6P/ W790-52L-8P

- Up to **144GB** VRAM, 3x SPARKLE Intel® Arc™ Pro B60 Duo 48GB
- Up to **192GB** VRAM, 4x SPARKLE Intel® Arc™ Pro B60 Duo 48GB
- Intel® Xeon® W-3400 processors in a full tower workstation.

VRAM Support	48GB	144GB	192GB	240GB	384GB	768GB
Product Category	2x GPU	6x GPU	8x GPU	10x GPU	16x GPU	32x GPU
System	Desktop, PC	Workstation			Server	
Platform	Core, Ultra	Xeon-W			4th / 5th Xeon SP	
IPEX - LLM	70+ models have been optimized/verified on ipex-llm e.g., Llama, Gemma3...					
Scenarios	<ul style="list-style-type: none"> ▪ Content Creation and Communication ▪ Text Generation ▪ Chatbots and Conversational AI ▪ Text Summarization ▪ Image Data Extraction 	<ul style="list-style-type: none"> ▪ AI Agent 24 hours hotline ▪ Enterprise-grade AI coding 	<ul style="list-style-type: none"> ▪ Knowledge Management System and Retrieval ▪ Multimodal RAG Application ▪ Intelligent Video Analysis 24-7-365 			

SPARKLE Intel® Arc™ Pro B60 Graphics Card

For Inference Workstation

Powerful Local Inferencing 24 GB / 48 GB Memory

Large Model Ready

- 24 GB of VRAM runs AI models with higher precision and accuracy
- Dedicated Intel XMX AI engines (Xe Matrix eXtensions)

With 24 GB of graphics memory, unlock the ability to run larger parameter AI models with higher precision, improving accuracy and versatility without compromising performance. Larger memory also allows content creators to tackle projects with greater detail and complexity.

Scalable AI Performance

Multi-GPU Ready Management Features

- Multiple GPU LLM Linux Support
- Scale up with 2/4/8 GPUs in a server configuration

Scale up with Linux multi-GPU compatibility, supporting OneAPI for faster AI processing with greater throughput and capacity for massive models.

Workstation Software

Pro & Consumer Drivers Management Features

- Pro drivers with ISV software certifications
- Windows & Linux OS support

Versatile performance across AI, design, architectural software and more with a robust, validated workstation pro driver. Switch gears and enable day-0 game drivers and gameplay enhancing software features such as XeSS by installing consumer drivers



SPARKLE Intel® Arc™ Pro B60 24GB Blower

- 289 x 120 x 42mm
- 1056g
- 2-slot



SPARKLE Intel® Arc™ Pro B60 24GB Passive

- 289 x 120 x 42mm
- 1048g
- 2-slot



SPARKLE Intel® Arc™ Pro B60 48GB Dual-GPU

2-slot width comes with both Passive and Blower solutions.

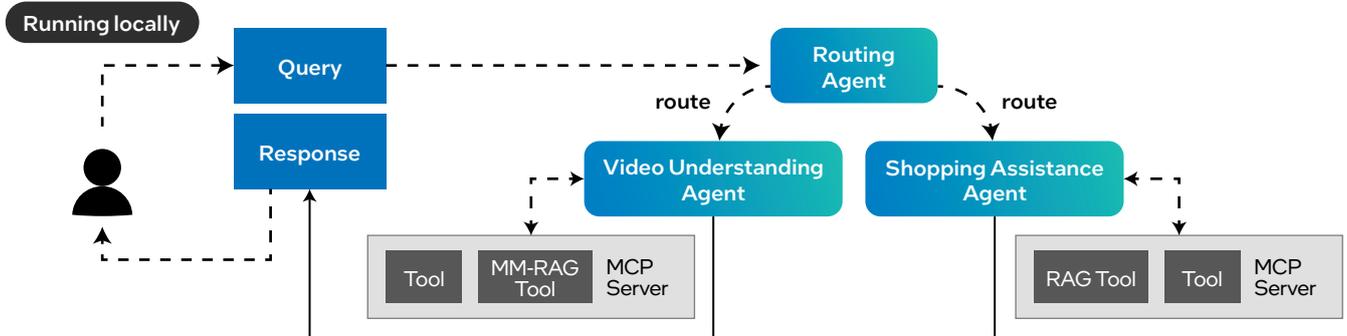
	Singel-GPU	Dual-GPU
GPU Clock	2400 MHz	TBD
Xe-Core	20	20 x 2
Ray Tracing Units	20	20 x 2
Intel® XMX Engines	160	160 x 2
GPU Peak Tops (Int8)	197	197 x 2
Memory Size	24GB GDDR6	48GB GDDR6
Graphics Memory Interface	192-bit	192-bit per GPU
Graphics Memory Bandwidth	456 GB/s	456 GB/s x 2
PCI Express Configurations	PCI Express 5.0 x 8	PCI Express 5.0 x 16
TBP	200W	400W
Power	1 x PCIe 8-pin	1 x 12V-2x6
Video Output	4 x DisplayPort 2.1	2 x HDMI 2.1

Features

Build a Multimodal RAG Application Locally

Adapting RAG models for video content introduces. Video processing requires handling multiple modalities — visual, auditory, and textual — which demand more computational resources and a robust processing pipeline.

Multi-agent workflows using multimodal RAG and OpenVINO



Powerful Cooling

Equipped to cool with powerful air coolers, the streamlined design of Sparkle GPU Servers maximizes efficient heat dissipation to provide greater cooling to enable 24/7/365.



PCIe Direct Drive

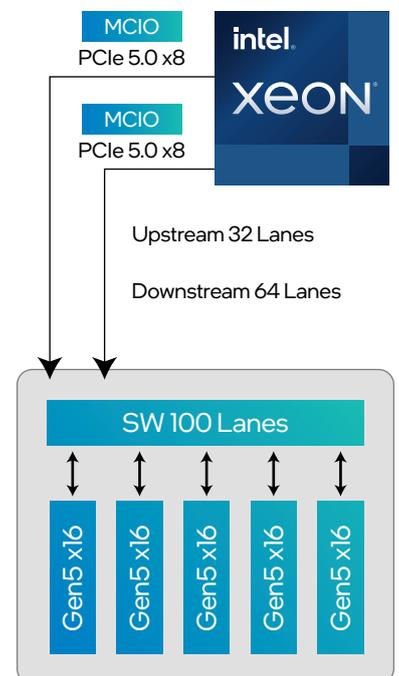
With a non-switched direct attach GPU topology supporting B60 GPU 16 pcs with dual Intel Xeon SP.

Each GPU has a full PCIe 5.0 x8 link directly to CPU without going through a PCIe switch, granting maximum CPU<->GPU bandwidth.



PCIe 5.0 Extension Board

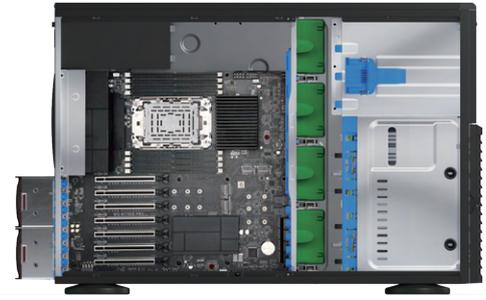
- Support PCIE Slot x 4
- Each GPU has a full PCIe 5.0 x16 link, granting maximum CPU <-> GPU bandwidth by Microchip Switch IC.
- Support PCIE Slot x 1
- Direct mode link to CPU, has a full PCIe 5.0 x16 link.





	Up to 768GB VRAM	Up to 384 GB VRAM
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Model name	C741-6U-Dual 16P	C741-6U-16P
Form factor	6U Rack	
Chipset	Intel C741 PCH	
CPU	Dual 4th / 5th Gen Intel® Xeon® Scalable processors	
Memory	(32) DDR5 DIMM Slots, 2DPC, RDIMM/3DS - Max. Frequency 5th Gen Intel® Xeon® : 5600 MT/s (1DPC), 4400 MT/s (2DPC) 4th Gen Intel® Xeon® : 4800 MT/s (1DPC), 4400 MT/s (2DPC) - Max Capacity per DIMM: 256G	
BMC	ASPEED AST2600: IPMI2.0 with iKVM and vMedia support	ASPEED AST2600 with IPMI & DMTF Redfish Support
BIOS	AMI UEFI BIOS; 512Mb SPI Flash ROM	Dual AMI BIOS
Storage	(5) 2.5" drive bays, option (12) SATA , (4) PCIe 5.0 x4 U.2 NVMe (2) M.2 2280/ 22110 PCIe 3.0 x2 NVMe ports (From PCH root ports)	
LAN	2 RJ45 (1GbE) by Intel® i350	(1) 1000Base-T Ethernet Port (Intel i210)
IPMI	1 RJ45 Dedicated IPMI LAN port by Realtek RTL8211F	(1) 1000Base-T dedicated out of band management port (connected to AST2600)
Expansion Slots	<ul style="list-style-type: none"> 16*PCIe5.0 x16 slots, support FHFL double-wide GPU cards 2*PCIe4.0 x16 slots, connect directly to CPU, support High speed NIC 	<ul style="list-style-type: none"> 16*PCIe5.0 x16 slots, support FHFL double-wide GPU cards 2*PCIe5.0 x8 slots, connect directly to CPU, support High speed NIC 2*PCIe4.0 x8 slots, connect directly to CPU
Front I/O	Front I/O 1 UID button w/ LED 1 PWR button, 1 RST button, 1 NMI button, 1 HDD LED, 1 SYS LED	1 x UID LED button 1 x PWR button 4 x Status LEDs (M.2/ Alarm/ 2 x LANs)
Rear I/O	1 DB15 (VGA) 4 Type-A (USB3.2 Gen1) 2 RJ45(1GbE), 1 dedicated IPMI	2 RJ45(1GbE), 1 dedicated IPMI 2 x USB 3.2 Gen 1 Type-A ports (5 Gbps) 1 x VGA D-sub port 1 x UID LED button
Power supply	(5) 2,700W 80+ Titanium PSU (10,800W 4+1 Redundancy)	(4) 2,400W 80+ Titanium PSU (7,200W 3+1 Redundancy)
Cooling	(15) 8038 Fans	(12) 6056 Fans, option add (8) or (10) 8038 Fans
Dimensions	Width: 17.66" / Height: 10.43" / Depth: 32.12"	
Operating Properties	Operating temperature: 10° C to 35° C, Operating humidity: 8%-80% (non-condensing)	
Contents	1 x full barebone unit* *CPU, CPU cooler, Memory, SSD are not included in the barebone system	



	Up to 240GB VRAM	Up to 144GB VRAM
Model name	W790-4U-10P	W790-52L-6P
CPU	Socket E LGA-4677 / Intel® Xeon® W-3400 Processor (Sapphire Rapids-I12L)	
Chipset	Intel® W790	
BIOS	AMI UEFI BIOS	
BMC	ASPEED AST2500 BMC	N/A
Memory	(16) DDR5 DIMM Slots, 2DPC, RDIMM/3DS Support 4800/4400MHz	8 x DDR5 RDIMM : 64L DIMMA1/DIMMB1/DIMME1/DIMMF1 Support 4800/4400MHz
	W2400/ 2500 Processor 64L support 2TB 3DS RDIMM W3400/ 3500 Processor I12L support 4TB 3DS RDIMM	W2400/ 2500 Processor 64L support 1TB 3DS RDIMM W3400/ 3500 Processor I12L support 2TB 3DS RDIMM
Capacity per DIMM: 16G , 32G, 64GB, 128GB, 256GB		
WIFI	--	1 x M.2 (Key E) The motherboard is only equipped with a vertical M.2 slot, Wifi modules shall be purchased separately
Networking	(2) RJ-45 1GbE LAN, 10/100/1000MbpsMbps, (1) OCP 3.0 (PCIE 5.0x8)	2 x RJ-45 support 100/1000/2500/5000/10000Mbps
	(1) RJ45, 10/100/1000Mbps for IPMI	1 x RJ-45 support 2.5Gbps
SATA	(8)SATA3.0 (4x7PIN SATA/1xMiniSASHD)	8 SATA 6Gb/s hard disk interfaces 2 Mini SAS hard disk interfaces are supported
M.2	(3) M.2 PCI-E 4.0 X4(2280/22110)	*4 (Key M) support 2242/2260/2280 s (PCIe 5.0 x4, PCH channel)
PCIe Lane	(1) PCI-E 5.0 x16 (1) PCI-E 5.0 x8(in x16 slot) (10) MCIO PCI-E 5.0 x8 (1) OCP3.0 PCI-E 5.0 x8 (w/o NC-SI)	4x PCIe 5.0 x16, slot (1, 2, 3, 4) 1xPCIe 4.0 x16 slot 1xPCIe 3.0 x16 slot 1xPCIe x16 slot (supporting PCIe 3.0 x4 specification)
Rear I/O	--	4 x USB 2.0 4 x USB 3.2 Gen 2 Type-A 1 x USB 3.2 Gen 2 Type-C 1 x USB 3.2 Gen 2x2 Type-C 1 x S/PDIF 5 X Audio (Line in/ Line out/ MIC in)
MB	305.05mmx359.92mm	E-ATX
Compatibility	CPU Heatsink 2U, GPU FHFL	CPU Heatsink H: 155mm, GPU FHFL
Drive bays	(12) 3.5"	3.5" x8
Front I/O	(1) VGA , (1) COM , (1) IPMI, (2) RJ-45 1GbE LAN , (1) UID Button (LED), (4) USB 3.0	2 x USB 1 x Power Button 1 x Reset Button 1 x Power LED 1 x HDD Activity LED 2 x Network LEDs 1 x Overheat LED 1 x System Fail LED
Dimensions	Depth 850mm / Height 175mm / Width 436 mm	178 x 647 x 452 mm (7.0" x 25.5" x 17.8")
System Fan	(3) I2038 Fans, (4) 8038 Fans	Middle : 2 X 80mm Rear : 1 X 92mm, 2 X 80mm
Power Supply	(4) 1,300W 80+ Titanium PSU (3,900W 3+1 Redundancy)	2,500W 80+ or 3,000W 80+