

APPLIED INTELLIGENCE

APEX SERIES



APEX-X100

HIGHLIGHT FEATURES



Intel-Based AI System with NVIDIA RTX 6000 Ada Accelerator

- Supports 18,176 CUDA Cores, 568 Tensor Cores, and 142 RT Cores with 48GB GDDR6 memory for AI LLM/SLM applications.
- Intel 13th Gen Core i7/i9 CPU, with up to 128GB DDR5 DRAM and 1TB NVMe SSD pre-installed.

SPECIFICATIONS

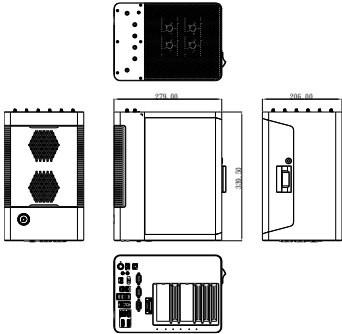
Platform	Intel CPU	Core i9-13900E	Core i7-13700E
	Cores (P+E+LPE)	24C (8P + 16E)	16C (8P + 8E)
	Threads	32	24
	Max. Frequency	5.2GHz	5.1GHz
	Cache	32MB	24MB
	CPU TDP	65W	65W
	BIOS	AMI UEFI 256Mbit	
AI Accelerator	AI Engine	NVIDIA RTX 6000 Ada	
	Form Factor (Interface)	11.2cm H x 26.7cm L, dual slot, full height (PCIe Gen 4 x16)	
	Cores	18,176 x NVIDIA Ada Lovelace architecture-based CUDA Cores 568 x NVIDIA fourth-generation Tensor Cores 142 x NVIDIA third-generation RT Cores	
	GPU memory	48GB GDDR6 (w/ECC)	
Memory	Technology / Socket	DDR5 4400MHz ^{*1} / 4 x 288pin DDR5 U-DIMM	
	Max. Capacity	up to 128GB (4 x 32GB, total 128GB pre-installed)	up to 128GB (2 x 32GB, total 64GB pre-installed)
Graphics	Controller	Intel UHD Graphics 770	
	Graphic Engine	Hardware encode: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2, JPEG/MJPEG and VP8 Hardware decode: H.265/HEVC, H.264/MPEG-4 AVC, MPEG-2, VC-1/WMV9, JPEG/MJPEG, VP8 and VP9	
Displays	HDMI 2.0 (4K@30Hz)	1	
	DP++ 1.4 (4K@60Hz)	2	
	VGA	1 (optional, share the same connector with GPIO/DIO)	
Ethernet	LAN (Marvell AQC113 10Gbps)	1	
	LAN (Intel I226 2.5Gbps)	3 x (LAN2/3 support 802.at with 30W PoE)	
Expansion Slots	M.2 2280 M Key	1 x (PCIe Gen 4 x4) ,1TB M.2 SSD pre-installed	1 x (PCIe Gen 4 x4), 512GB M.2 SSD pre-installed
	M.2 2230 E Key	1 x (PCIe Gen 3 x1/USB 2.0)	
	M.2 3052 B Key	1 x (USB 3.2), with Nano SIM socket	
	PCIe x16	1 x (Gen 4 ^{*2} x16 signal), RTX 6000 Ada pre-installed or 1 x (Gen4 ^{*2} x8 signal)	
	PCIe x16	1 x (Gen 4 x8 signal) *Optional	
	PCIe x16	1 x (Gen 3 x4 signal)	
	PCIe x4	1 x (Gen 3 x4 signal)	
	PCIe x1	1 x (Gen 3 x1 signal)	
External I/O	COM1	RS232/422/485	
	COM2	RS232/422/485	
	COM3	RS485 (RJ45)	
	USB 3.2 Gen 2x2 (20Gbps) Type C	1	
	USB 3.2 Gen 2x1 (10Gbps)	8	
	Buttons	1 x Power (with LED)	

^{*1} by Intel CPU limitation ^{*2} by Intel CPU limitation

External I/O	Audio (Realtek ALC888S)	Mic-in x 1, Line-out x 1
	GPIO/DIO	Default 8-bit (4 in/ 4 out)
Internal I/O	SATA	4 x 2.5" SATA III SSD/HDD (RAID 0/1/5/10)
Power	Power Input Voltage	DC 24~48V
	Power Consumption	24V@25A (with i9-13900E/ 1TB SSD/ 128GB DRAM/ NVIDIA RTX6000 Ada)
	Connector Type	4 pin terminal block
Environment	Operating Temperature	0°C~40°C (with NVIDIA RTX 6000 Ada)
	Storage Temperature	-40°C~85°C
	Operating Humidity	5~90% Relative humidity, non-condensing
	Operating Vibration	1Grms, IEC 60068-2-64, random, 5 ~ 500Hz, 1hr/axis, with SSD (operation, without AI accelerator)
	Operating Shock	10G, IEC 60068-2-27, half sine, 11ms duration, with SSD (operation, without AI accelerator)
Watchdog Timer	Interval	Programmable from 1 to 255 Seconds
Security	TPM 2.0	dTPM2.0 (Hardware, Infineon:SLM9670AQ2.0)
	Out-of-band (OOB)	1 x InnoAgent (RJ45)
Miscellaneous	LED Indicator	2 x Power LED, 2 x Fan LED, 2 x Temp LED
Physical Characteristics	Dimension L x W x H (mm)	340 x 279 x 215
	Net Weight / Gross Weight (KG)	11 / 17
	Mount	Wall Mount / Desk mount
	Antenna Holes	6
Operating System	Operating System	Linux Ubuntu 20.04/22.04/24.04 Microsoft Windows 10 IoT Enterprise 2021 LTSC Microsoft Windows 11
Regulation	Safety	CE / FCC / UKCA

ORDER INFORMATION

Part No.	Intel CPU	NVIDIA GPU	COM	LAN	USB	SATA	Display	Storage	Memory	M.2	Operating Temp.
APEX-X100-A00	Core i7-13700E	RTX 6000 Ada	3	4	9	4	3	512GB	64GB	4	0°C~40°C
APEX-X100-A01	Core i9-13900E							1TB	128GB	(2M+E+B)	



PACKING LIST

Part Number	Description	Q'ty
	APEX-X100 System	1
	600W -40~70°C Adapter	1
	(280 x 144 x 48.5mm) L x W x H	
	AC Power Cable, 300mm	1
APEX-X100-A00	DC Power Cable, 1000mm	1
APEX-X100-A01	Wall Mount Bracket	2
	Stopper Bracket PCIe Card	2
	GPU Holding Rubber	12
	Circle Key Lock	1
	2.5" SSD Screw	16

OPTIONAL ACCESSORIES

P/N	Description
7W8000000070	Power Cord, Standards (UK), 1.8m
7W8000000080	Power Cord, Standards (EU), 1.8m
7W8000000090	Power Cord, Standards (US), 1.8m

