

APPLIED INTELLIGENCE

APEX SERIES



APEX-X100-Q

HIGHLIGHT FEATURES

Intel-Based AI System with Qualcomm Cloud AI 100 Ultra Accelerator

- Supports 870TOPS with 128GB LPDDR4x memory for SLM, LLM, and generative AI applications.
- Intel 13th Gen Core i7 CPU, 192GB DDR5 DRAM and 2TB NVMe SSD pre-installed.



SPECIFICATIONS

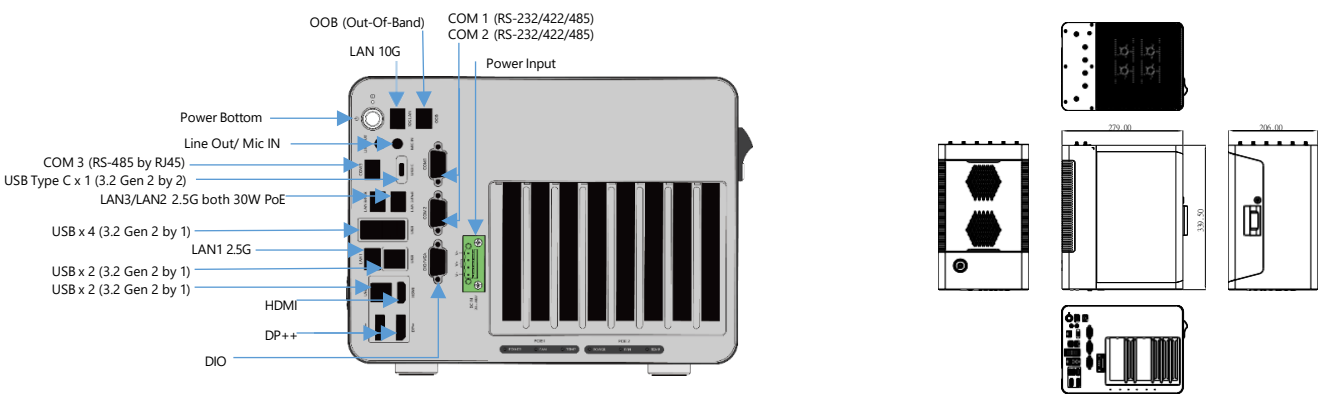
Platform	Intel CPU	Core i7-13700E
	Cores (P+E+LPE)	16C (8P + 8E)
	Threads	24
	Max. Frequency	5.1GHz
	Cache	24MB
	CPU TDP	65W
	BIOS	AMI UEFI 256Mbit
AI Accelerator	AI Engine	Qualcomm Cloud AI 100 Ultra
	Form Factor (Interface)	11.1cm H x 23.8cm L, single slot, full height (PCIe Gen 4 x16)
	Computing Power	870 TOPS (INT8) 288 TFLOPS (FP16)
	GPU memory	128GB LPDDR4x (w/ECC)
Memory	Technology / Socket	DDR5 4400 MT/s*1 · 4 x 288-pin DDR5 UDIMM
	Max. Capacity	up to 192GB (4 x 48GB, total 192GB 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) ,2TB 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 x16 signal), Cloud AI 100 Ultra pre-installed or 1 x (Gen4 x8 signal)
	PCIe x16	1 x (Gen 4 x8 signal) *2
	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 When enabled, will downclock speed from Gen 4 x16 to Gen 4 x8.

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 Input Voltage	DC 24V ~ 48V (±5%)
Power	Power Consumption (Max.)	24V@14A (with i7-13700E/ 2TB SSD/ 192GB DRAM/ Qualcomm Cloud AI 100 Ultra)
	Connector Type	4 pin terminal block
Environment	Operating Temperature	0°C ~ 40°C (with Qualcomm Cloud AI 100 Ultra)
	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
	Dimension L x W x H (mm)	340 x 279 x 215
Physical Characteristics	Net Weight / Gross Weight (KG)	10 / 16
	Mount	Wall Mount / Desk mount
	Antenna Holes	6
Operating System	Operating System	Linux Ubuntu 22.04
Regulation	Safety	CE / FCC / UKCA

ORDER INFORMATION

Part No.	Intel CPU	Accelerator	COM	LAN	USB	SATA	Display	Storage	Memory	M.2	Operating Temp.
APEX-X100-Q00	Core i7-13700E	Qualcomm Cloud AI 100 Ultra	3	4	9	4	3	2TB	192GB	4 (2M+E+B)	0°C ~ 40°C



PACKING LIST

Part Number	Description	Q'ty
APEX-X100-Q00	APEX-X100-Q00 System	1
	600W -40°C ~ 70°C Adapter (280 x 144 x 48.5mm) L x W x H	1
	AC Power Cable, 300mm	1
	DC Power Cable, 1000mm	1
	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

