

APPLIED INTELLIGENCE

APEX SERIES



APEX-E100

HIGHLIGHT FEATURES



Intel-Based AI System with Integrated NPU

- Equipped with Intel CPU, GPU and built-in NPU delivering up to 36 TOPS for AMR/AGV, AI surveillance, and visual inspection.
- Intel Core Ultra CPU, 16GB DDR5 DRAM, and 512GB NVMe SSD are pre-installed.
- Supports Innodisk dual MIPI over Type-C cameras.

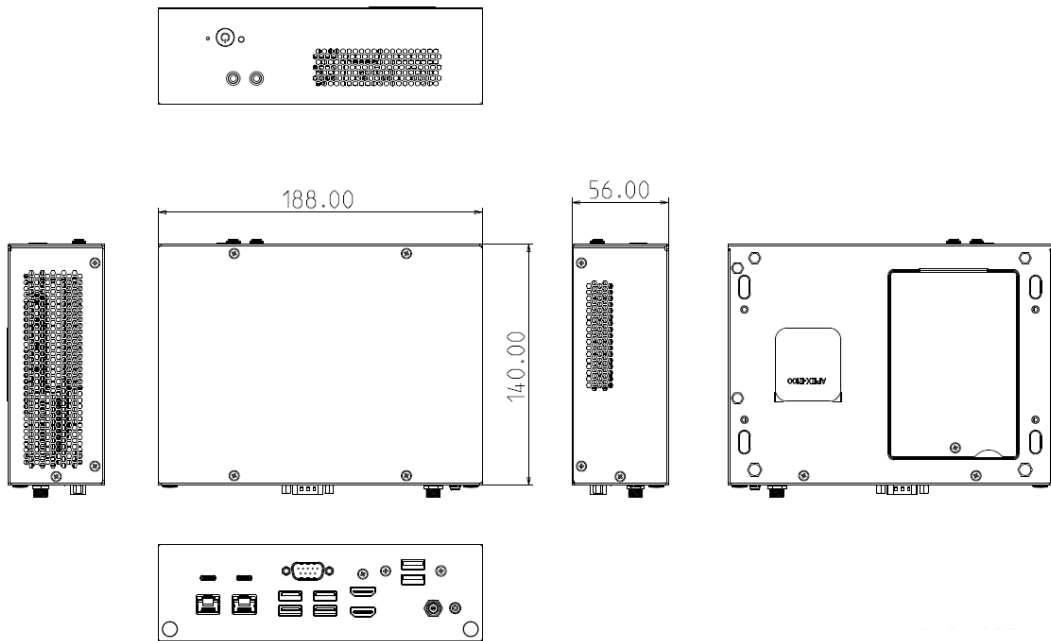
SPECIFICATIONS

Platform	Intel CPU	Core Ultra 7 165HL	Core Ultra 5 135HL	Core Ultra 3 105UL
	Cores (P+E+LPE)	16C (6P + 8E + 2LPE)	14C (4P + 8E + 2LPE)	8C (2P + 4E + 2LPE)
	Threads	22	18	10
	Max. Frequency	5.0GHz	4.6GHz	4.2GHz
	Cache	24MB	18MB	10MB
	CPU TDP	45W	45W	15W
	BIOS	Insyde SPI 256Mbit		
AI Accelerator	AI Engine	Intel AI Boost up to 36 TOPS via (CPU+GPU+NPU)		
Memory	Technology / Socket	DDR5 5600MHz / 2 x 262pin DDR5 SO-DIMM		
	Max. Capacity	up to 96GB (1 x 16GB, total 16GB pre-installed)		
Graphics	Controller	Intel Arc Graphics (Available only for MTL-HL 45W Intel Core Ultra 5/7) Intel Graphics (Available only for MTL-UL 15W)		
	Graphic Engine	Hardware decode: AV1 8K30 10-bit 420, AVC 4K60 8-bit 420, HEVC/VP9 8K60 12-bit 420/422/444 Hardware encode: AV1 8K30 10-bit 420, AVC 4K60 8-bit 420, HEVC/VP9 8K30 10-bit 420/10b 444		
Displays	HDMI 2.1 (8K@30Hz)	2		
Ethernet	LAN (Intel I226 2.5Gbps)	2		
Expansion Slots	M.2 2230 E Key	1 x (PCIe Gen 3 x1 / USB 2.0)		
	M.2 2280 M Key	1 x (PCIe Gen 4 x4 / SATAIII); 512GB M.2 SSD pre-installed		
External I/O	COM1	RS232/422/485		
	USB 3.2 Gen 2x1 (10Gbps)	2		
	USB 3.2 Gen 1x1 (5Gbps)	2		
	USB 2.0	2		
	Buttons	1 x Power		
	Audio (Realtek ALC888S)	Mic-in x 1, Line-out x 1		
	MIPI over Type-C	2		
Power	Power Input Voltage	DC 12V		
	Power Consumption	12V@12.5A (with Ultra 7 165HL / 1T SSD / 32GB DRAM)		
	Power Connector Type	Lockable DC Jack Φ2.5/Φ5.5		
Environment	Operating Temperature	-20°C~60°C		
	Storage Temperature	-20°C~70°C		
	Operating Humidity	5~95% Relative humidity, non-condensing		
	Operating Vibration	With SSD: 3 Grms, IEC 60068-2-64, random, 5 ~ 500Hz, 1hr/axis		
	Operating Shock	With SSD: 30 Grms, IEC 60068-2-27, half sine, 11ms duration		
Watchdog Timer	Interval	Programmable from 1 to 255 Seconds		
Security	TPM 2.0	fTPM2.0 (Firmware)		

Miscellaneous	LED Indicator	1 x Power LED
Physical Characteristics	Dimension L x W x H (mm)	188 x 140 x 56
	Net Weight / Gross Weight (KG)	1.6 / 2.1
	Mount	Wall Mount
	Antenna Holes	2
Operating System	Linux Ubuntu 22.04 Microsoft Windows 10 IoT Enterprise	2021 LTSC
Regulation	Safety	CE / FCC

ORDER INFORMATION

Part No.	Intel CPU	COM	LAN	USB	Display	Storage	Memory	M.2	Operating Temp.
APEX-E100-A00	Core Ultra 7 165HL								
APEX-E100-A01	Core Ultra 5 135HL	1	2	6	2	512GB	16GB	2 (E+M)	-20°C~60°C
APEX-E100-A02	Core Ultra 3 105UL								



PACKING LIST

Part Number	Description	Q'ty
APEX-E100-AXX	APEX-E100 System	1
7SW1-M2003511SN	Mounting screws for M.2 module	2
7AOSIXR112B1	Rubber foot	4
7ANA13000L111S02	Wall mount brackets	2

OPTIONAL ACCESSORIES

P/N	Description
TZ-000-39-19	Wi-Fi 7 module (Intel BE200)
7W5000000330	IPX Cable (Recommend 2 for Wi-Fi Module)
9Z5000000270	Wi-Fi Antenna (Recommend 2 for Wi-Fi Module)
9Z9000000040	Adapter, 150W/12V DC Jack
7W8000000070	Power Cord, Standards (UK), 1.8m
7W8000000080	Power Cord, Standards (EU), 1.8m
7W8000000090	Power Cord, Standards (US), 1.8m

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