GENESYSM-MTH6

GENE System with Intel® Core™ Ultra SoC

USB2.0 x 2

MIC/Line in/Line out   Power Button

HDMI x 1   DP x 1   RS-232/422/485 x 2

DC IN

USB2.0 x 2

LAN x 3   USB3.0 x 2
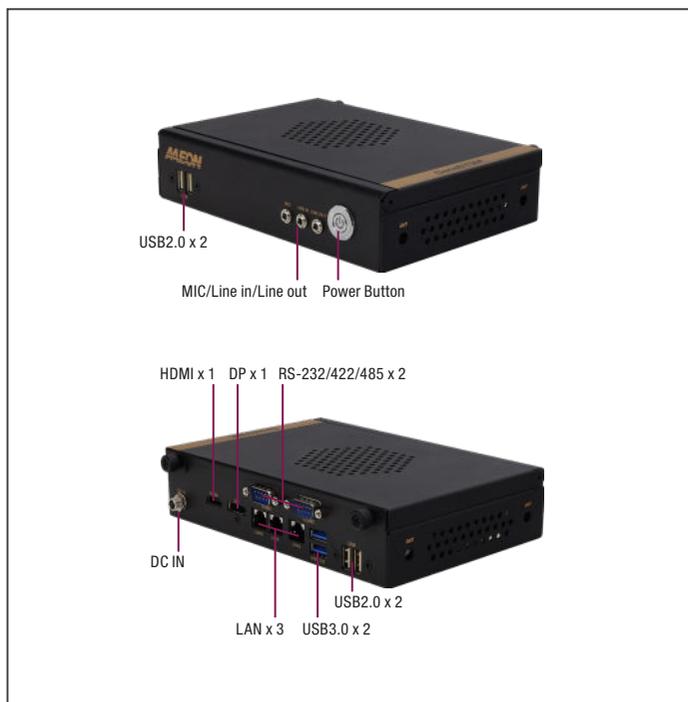
Features

- **Intel® Core™ Ultra processors (Series 1)**
- **DDR5 5600 MHz, Dual Channel SODIMM x 2, up to 96GB**
- **DP x 1, HDMI x 1**
- **LAN x 3, RS-232/422/485 x 2**
- **USB 3.2 Gen 2 x 2, USB 2.0 x 4**
- **M.2 2280 M-Key x 3, M.2 3052 B-Key x 1, M.2 2230 E-Key x 1**
- **TPM 2.0**
- **DC 9 ~ 36V input**

2500
2.5Giga LAN   DDR 5   Audio   LVDS   USB 3.2 Gen 2   HDMI   CE   FC

USB	USB 3.2 Gen 2 x 2 USB 2.0 x 4
Serial Port	COM 1, COM 2 (RS-232/422/485, supports 5V/12V/RI)
Video	HDMI 2.1 x 1, DP 2.0++ x 1
Internal I/O	
USB	—
Serial Port	—
Video	—
SATA	—
Audio	Audio Header x 1
DIO/GPIO	GPIO 8-bit
SMBus/I2C	SMBus/I2C x 1 (Default: SMBus)
Touch	—
Fan	4-pin Smart Fan x 1
Sim	Nano SIM x 1
Front Panel	HDD LED, PWR LED, Power Button, Buzzer, Reset
Others	—
Expansion	
Mini PCIe/mSATA	—
M.2	M.2 2280 M-Key x 3 (PCIe [x4], SATA) Select by BOM M.2 3052 B-Key x 1 (PCIe [x2]/[x1], USB 3.0), Default: PCIe 3.0 [x1] + USB 3.0 (selected by BOM) M.2 2230 E-Key x 1 (PCIe, USB 2.0), support Wi-Fi 6E CNVi (Storage using PCIe can support RAID 0, 1) M.2 2280 M-Key x 2 (PCIe [x4] via PER-SB2B (FPC2))
Others	—
Environment & Certification	
Operating Temp.	14°F ~ 122°F (-10°C ~ 50°C) 0.7 m/s air flow
Storage Temp.	-40°F ~ 185°F (-40°C ~ 85°C)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
MTBF (Hours)	753,493
EMC	CE/FCC Class A

Specifications

| System	
Form Factor	3.5" SubCompact Board System
CPU	Intel® Core™ Ultra Processors: Intel® Core™ Ultra 7 Processor 155H (16C/22T, up to 4.8 GHz, 28W) Intel® Core™ Ultra 5 Processor 125H (14C/18T, up to 4.5 GHz, 28W) Intel® Core™ Ultra 7 Processor 155U (12C/14T, up to 4.8 GHz, 15W) Intel® Core™ Ultra 5 Processor 125U (12C/14T, up to 4.3 GHz, 15W)
Chipset	Integrated with Intel® SoC
Memory Type	DDR5 5600, Dual Channel SODIMM x 2 Max. 96GB, Non-ECC
BIOS	UEFI
Wake on LAN	Yes
Watchdog Timer	255 Levels
Security	TPM 2.0
RTC Battery	Lithium Battery 3V/240mAh
Dimensions	7.48" x 5.28" x 1.69" (190mm x 134.1mm x 43mm)
OS Support	Windows 10 IoT LTSC (21H2) Windows 11 IoT LTSC(24H2) Linux Ubuntu 22.04.3 (kernel 6.2.0-26-generic)
Power	
Power Requirement	+9-36V (Optional: +12V), support ERP
Power Supply Type	ATX
Connector	DC Jack Connector
Power Consumption	Intel® Core™ Ultra 7 Processor 155H, DDR5 32GB x 2, 5.78A @+12V (Typical) Intel® Core™ Ultra 7 Processor 155H, DDR5 32GB x 1, 8.42A @+12V (Max)
Display	
Controller	Intel® Arc™ Graphics Intel® Graphics
LVDS/eDP	—
Display Interface	HDMI 2.1 x 1, up to 8K x 4K@60Hz or 4K x 2K@120Hz DP 2.0 x 1, up to 7680 x 4320@60Hz 30bpp (support DP++)
Multiple Display	Up to 2 Simultaneous Displays
Audio	
Codec	Realtek ALC897
Audio Interface	Line-in/Line-out/MIC
Speaker	—
External I/O	
Ethernet	Intel® Ethernet Controller I226, 2.5GbE RJ-45 x 2 Intel® Ethernet Connection I219, 1GbE RJ-45 x 1 *Note: vPro only supported with Intel® Core™ Ultra 7 Processor 165U/165H, Intel® Core™ Ultra 5 Processor 135U/135H), LAN 2 & LAN 3 support PXE

Packing List

Part Number	Description	QTY
GENESYSM-MTH6	GENESYSM-MTH6 GENE System	1

Optional Accessories

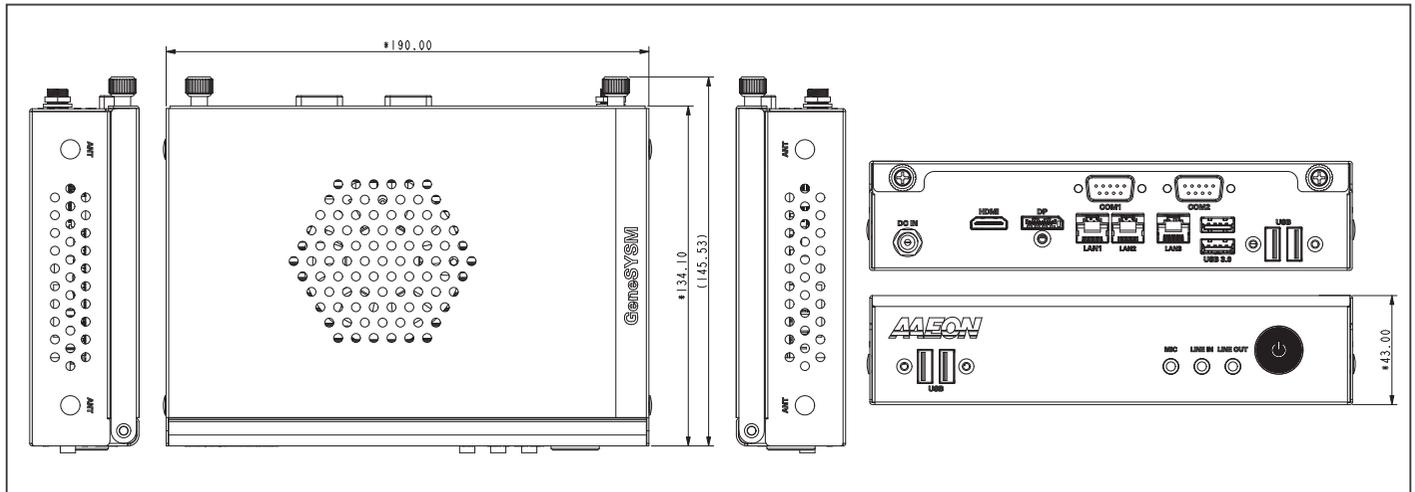| Part Number	Description	QTY
1702031802	Power Cord (US Type)	1
1702031803	Power Cord (Europe Type)	1
1255X00063	AC/DC Adapter.100-240V.150W.12V/12.5A.AC C14 DC JACK W/ Lock 180D.DELTA.DPS-150AB-15 J	1
GENESYSM-ALL-VESA1	VESA Mount Kit. For GENESYSM-ADP6	1
GENESYSM-ALL-WMT1	Wall Mount Kit. For GENESYSM-ADP6	1

Block Diagram
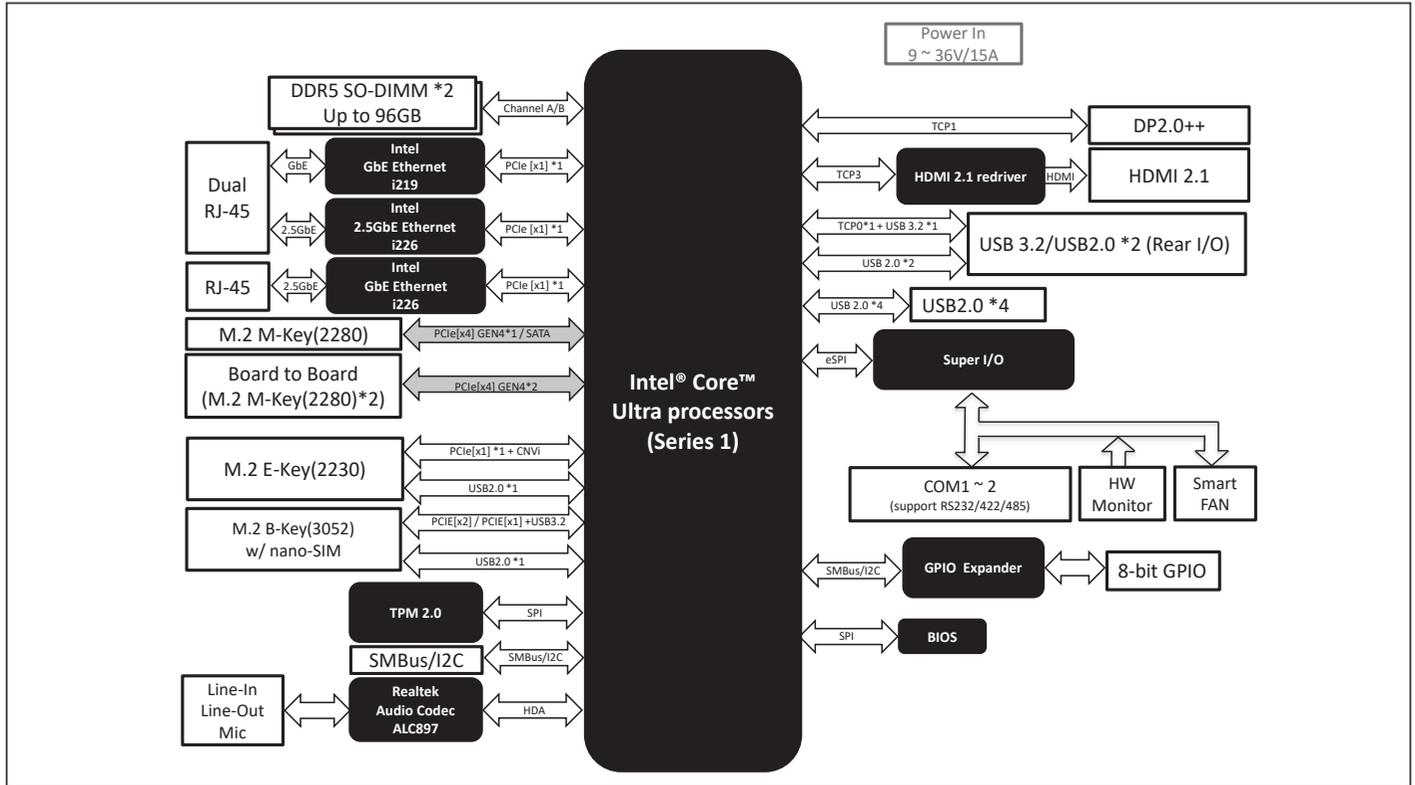
Dimension

Unit: mm

Ordering Information

Part number	CPU	Fan/Fanless	Display	Storage	LAN	USB	RS-232/422/485	Expansion slot	TPM	Power	Operating Temp	Others
GENESYSM-MTH6-A10-A001	Intel® Core™ Ultra 7 Processor 155H	Cooler	HDMI x 1 DP x 1	—	GbE x 1 2.5GbE x 2	USB 3.2 Gen 2 x 2 USB 2.0 x 4	2	M.2 2280 M-Key x 3 M.2 3052 B-Key x 1 M.2 2230 E-Key x 1	2.0	+9V~36V ATX	-10°C ~ 50°C	—
GENESYSM-MTH6-A10-A002	Intel® Core™ Ultra 5 Processor 125H	Cooler	HDMI x 1 DP x 1	—	GbE x 1 2.5GbE x 2	USB 3.2 Gen 2 x 2 USB 2.0 x 4	2	M.2 2280 M-Key x 3 M.2 3052 B-Key x 1 M.2 2230 E-Key x 1	2.0	+9V~36V ATX	-10°C ~ 50°C	—