

GENESYSM-TWL7

GENE System with Intel® Core™ Processor N-series, Intel® Processor N-series



Specifications

System	
Form Factor	3.5" SubCompact Board System
CPU	Intel® Processor N150 (4C/4T, up to 3.6 GHz, 6W)
Chipset	Integrated with Intel® SoC
Memory Type	DDR5 4800, SODIMM x 1, Max. 16GB, Non-ECC
BIOS	AMI UEFI 256Mbit
Wake on LAN	Yes
Watchdog Timer	255 Levels
Security	TPM 2.0
RTC Battery	Lithium Battery 3V/240mAH
Dimensions	7.00" x 5.28" x 1.73" (178mm x 134.1mm x 44mm), 1.77 lb. (0.8Kg)
OS Support	Windows® 11 (64-bit) Ubuntu 24.04.2 / Kernel 6.11.0-17-generic
Power	
Power Requirement	+12V, Support ERP
Power Supply Type	ATX
Connector	2-pin Phoenix Connector 4-pin ATX Connector (optional)
Power Consumption	TBD
Display	
Controller	Intel® UHD Graphics
LVDS/eDP	—
Display Interface	HDMI 1.4b x 1, up to 3840 x 2160 @144Hz DP 1.4a x 1, up to 3840 x 2160 @120Hz
Multiple Display	Up to 2 Simultaneous Displays
Audio	
Codec	C-Media CM9825
Audio Interface	Line-in/Line-out/MIC
Speaker	—
External I/O	
Ethernet	Intel® Ethernet Controller I226, 2.5GbE x 2
USB	USB 3.2 Gen 2 x 2
Serial Port	—
Video	HDMI 1.4b x 1 DP x 1
Internal I/O	
USB	USB 2.0 x 4
Serial Port	COM 1, COM 2 (RS-232/422/485, supports 5V/12V/RI)
Video	—

Features

- DDR5 4800 MHz, Dual Channel SODIMM x 1, Up to 16GB
- DP x 1, HDMI x 1
- 2.5GbE x 2, SATA 6Gb/s x 1
- USB 3.2 Gen 2 x 2 port, USB 2.0 x 4
- Full size mPCIe/mSATA
- M.2280 M-Key x 1, M.2 2230 E-Key x 1



SATA	SATA 6Gb/s x 1 +5V SATA Power Connector x 1
Audio	—
DIO/GPIO	—
SMBus/I2C	—
Touch	—
Fan	4-pin Smart Fan x 1 (Optional)
Sim	—
Front Panel	PWR LED, PWR button
Others	—
Expansion	
Mini PCIe/mSATA	Full-size Mini PCIe / mSATA x 1 (Default: PCIe [x1] x 1, USB 2.0, SATA select by BIOS)
M.2	M.2 2230 E-Key x 1 (PCIe [x1], USB 2.0) M.2 2280 M-Key x 1 (PCIe 3.0 [x2])
Others	—
Environment & Certification	
Operating Temp.	32°F ~ 122°F (0°C ~ 50°C) with 0.5 m/s air flow
Storage Temp.	-40°F ~ 185°F (-40°C ~ 85°C)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
MTBF (Hours)	957,274
EMC	CE/FCC Class A

Packing List

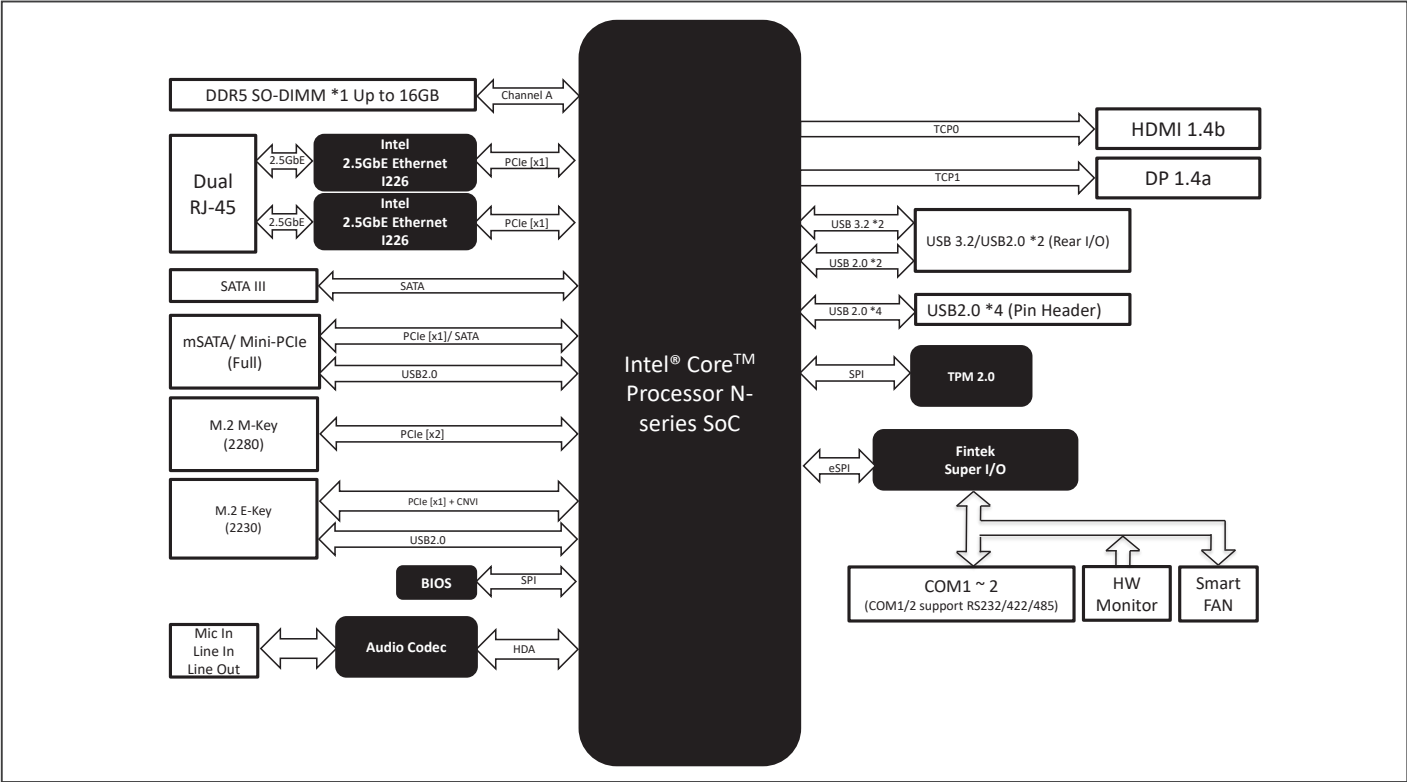
Part Number	Description	QTY
GENESYSM-TWL7	GENESYSM-TWL7 System	1

Optional Accessories

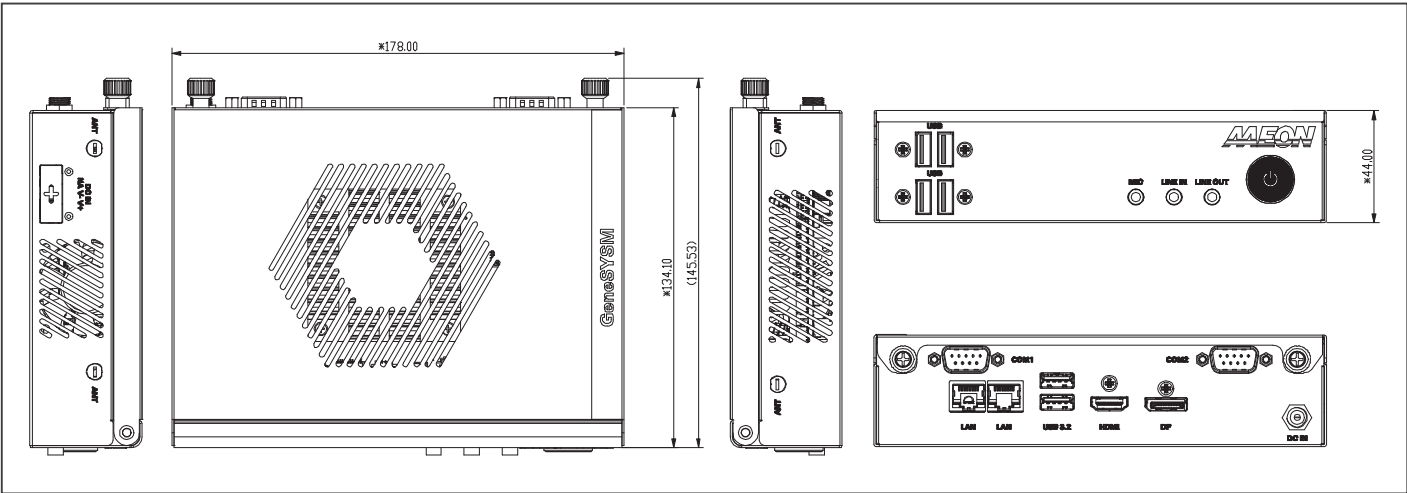
Part Number	Description	QTY
1702031802	Power Cord for US	1
1702031803	Power Cord for EU	1
1255X00063	AC/DC Adapter.150W.12V/12.5A.DC JACK W/Lock, Delta DPS-150AB-15J	4
GENESYSM-ALL-VESA1	VESA Mount Kit.For GENESYSM series	4
GENESYSM-ALL-WMT1	Wall Mount Kit.For GENESYSM series	1



Block Diagram



Dimension Unit: mm



Ordering Information

Part Number	CPU	Display	LAN	USB	AUDIO	COM	Storage	Expansion Slot	TPM	Power	Temp	Others
GENESYSM-TWL7-A10-P001	Intel® Processor N150	HDMI x1 DP x1	2.5GbE x 2	USB 3.2 Gen 2 x 2 USB 2.0 x 4	Line-in/Line-out/MIC	RS232/422/485 x 2	SATA x 1	M.2 2230 E-Key x 1 M.2 2280 M-Key x 1 Mini Card x 1	2.0	12V	0°C~50°C	—