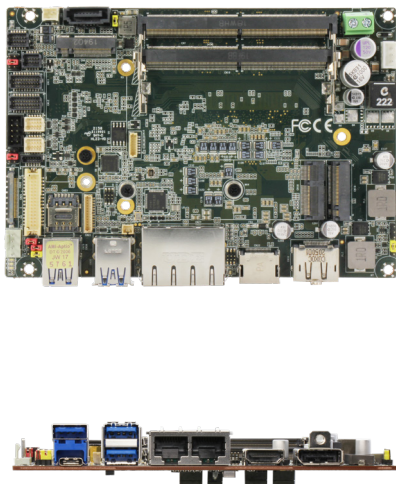


GENE-ADP6 PRELIMINARY

3.5" SubCompact Board with 12th Generation Intel® Core™ i7/i5/i3/Celeron® Processor SoC



Specifications

SYSTEM	
FORM FACTOR	3.5" SubCompact Board
CPU	Intel® 12th Generation Core™/Celeron CPU i7-1270PE (12C/16T, 3.30GHz, up to 4.50GHz) i7-1265UE (10C/12T, 3.50GHz, up to 4.70GHz) i5-1250PE (12C/16T, 3.20GHz, up to 4.40GHz) i3-1220PE (8C/12T, 3.10GHz, up to 4.20GHz) 7305E(5C/5T, 3.10GHz, up to 4.20GHz)
CPU TDP	28W, TDP-up 64W: i7-1270PE/ i5-1250PE/ i3-1220PE 15W, TDP-up 55W: i7-1265UE
CHIPSET	Integrated with Intel® SoC
MEMORY TYPE	DDR5 4800 MHz, Dual Channel SODIMM x 2, up to 64G
BIOS	UEFI
WAKE ON LAN	Yes
WATCHDOG TIMER	255 Levels
SECURITY	TPM2.0
RTC Battery	Lithium Battery 3V/240mAh
DIMENSION (L X W)	5.75" x 4" (146mm x 101.7mm)
POWER	
POWER REQUIREMENT	+9-36V or +12V
POWER SUPPLY TYPE	AT/ATX
CONNECTOR	Phoenix 2-pin Connector
POWER CONSUMPTION	TBD
DISPLAY	
CONTROLLER	Intel® Iris® Xe Graphics Intel® UHD Graphics
LVDS/eDP	LVDS Dual Channel 18/24bit x 1, up to 1920 x 1200 60Hz eDP1.4b HBR3, up to 5120 x 3200 120Hz 30bpp
Display Interface	HDMI 2.1 x 1, up to 8K x 4K 60Hz or 4K2K 120Hz DP1.4a x 1, up to 7680 x 4320 60Hz 30bpp DP1.4a x 1 (via USB Type C), PD 5V 3A
Multiple Display	4 Simultaneous Displays
AUDIO	
CODEC	Realtek ALC897
AUDIO INTERFACE	Line-in/Line-out/MIC
Speaker	—
EXTERNAL I/O	
ETHERNET	Intel® i219, 10/100/1000Base Intel® i225, 2.5G, 10/100/2500Base
USB	USB3.2 Gen 2 x 3 USB Type C x 1 (DP1.4a, PD 5V/3A)

Features

- Intel® Core i7/i5/i3/Celeron SoC
- DDR5 4800 MHz, Dual Channel SODIMM x 2, Up to 64GB
- LVDS Dual Channel 18/24 bit x 1, eDP 1.4b, DP1.4a x 1, HDMI 2.0b
- GbE x2, SATA III x 1, DIO x 8bit
- USB 3.2 Gen2 x 3 (Rear I/O), USB2.0 x 4 (Pin header), USB Type C x1
- RS-232/422/485 x 4
- M.2 M-key 2280 x 1 (PCIe x 4)
- M.2 E-Key 2230 x 1 (PCIe, USB2.0)
- M.2 B-Key 3052 x 1 (PCIe x2, USB3.2+SATA, USB2.0), default: USB3.2+SATA
- Wide DC Input 9-36V (Optional: 12V Only)



SERIAL PORT	—
VIDEO	HDMI 2.0b x , DP1.4a x 1
INTERNAL I/O	
USB	USB2.0 x 4
SERIAL PORT	COM1, COM2 (RS232/422/485, supports 5V/12V/RI) COM3, COM4 (RS232/422/485)
VIDEO	LVDS/eDP x 1 Inverter x 1 (12V/2A)
SATA	SATA3.0 x 1 +5V SATA Power Connector x 1
AUDIO	Audio Header x 1
DIO/GPIO	8-Bit
SMBus/I2C	SMBus/I2C x 1 (Default: I2C)
Touch	—
FAN	Smart Fan x 1
SIM	Nano SIM x 1
Front Panel	PWR LED, HDD LED, PWR button, HW Reset
Others	—
EXPANSION	
Mini PCI-E/mSATA	—
M.2	M-Key 2280 x 1 (PCIe x 4) B-Key 3052/2242 x 1 (PCIe x 2, USB3.2+SATA, USB2.0), default: USB3.2+SATA E-Key 2230 x 1 (PCIe, USB2.0)
Others	FPC x 1 (PCI x 4 Gen4, Only support Graphic or NVME)
ENVIRONMENT & CERTIFICATION	
OPERATING TEMP	32°F ~ 140°F (0°C ~ 60°C) or -40°F ~ 185°F (-40°C ~ 85°C)
STORAGE TEMP	-40°F ~ 185°F (-40°C ~ 85°C)
OPERATING HUMIDITY	0% ~ 90% relative humidity, non-condensing
MTBF (HOURS)	TBD
EMC	CE/FCC Class A

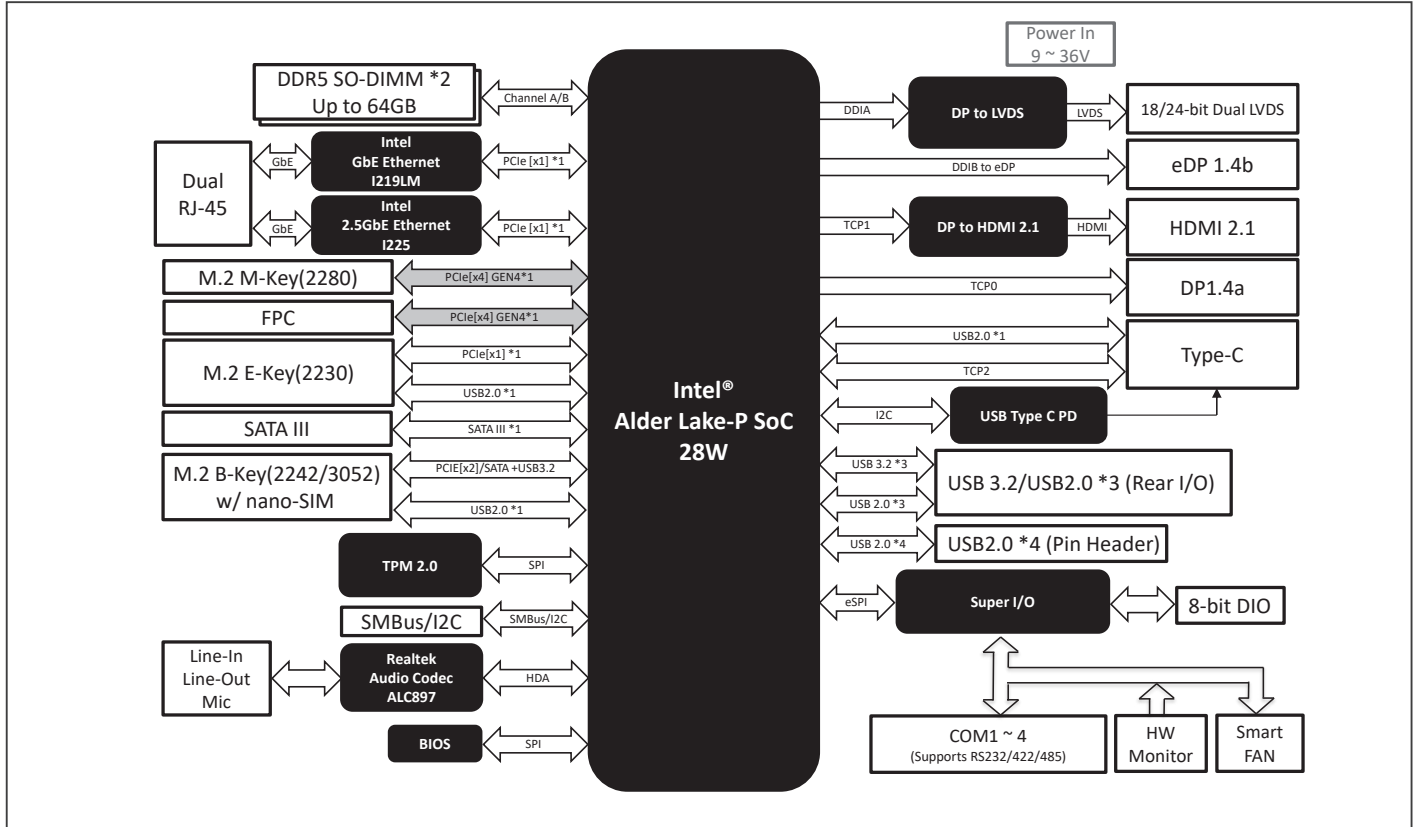
Optional Accessories

- TBD

Packing List

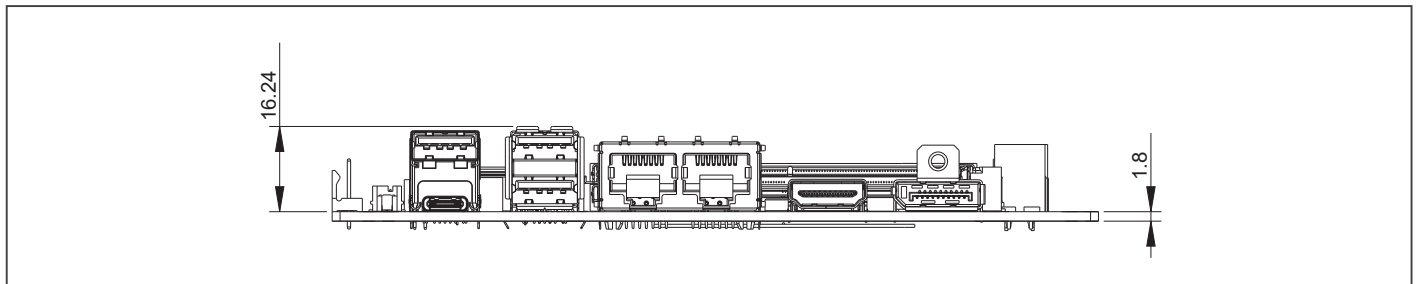
- TBD

Block Diagram



Dimension

Unit: mm



Ordering Information

Part Number	CPU	Display	LAN	USB	RS-232/422/485	Storage	Expansion Slot	TPM	Power	Temp	Others
GENE-ADP6-A10-0001(TBD)	i7-1270PE	HDMI x1 DP2.0++ x1 LVDS x1 eDP x1 Type-c DP x1	GbE x1 2.5GbE x1	USB 3.2 Gen 2 x3, USB Type C x1 USB 2.0 x4	4	SATA x1	M-Key 2280 x1 (PCIex4) B-Key 3052 x1 (USB3.2 Gen2+SATA) E-Key 2230 x1 (PCIe, USB2.0)	2.0	9~36V	0°C ~ 60°C	Audio, Nano SIM, DIO x 8, SMBUS
GENE-ADP6-A10-0002(TBD)	i7-1265UE	HDMIx1 DP2.0++ x1 LVDS x1 Type-c DP x1	GbE x1 2.5GbE x1	USB 3.2 Gen 2 x3, USB Type C x1 USB 2.0 x4	4	SATA x1	M-Key 2280 x1 (PCIex4) B-Key 3052 x1 (USB3.2 Gen2+SATA) E-Key 2230 x1 (PCIe, USB2.0)	—	12V	0°C ~ 60°C	Audio, Nano SIM, DIO x 8, SMBUS
GENE-ADP6-A10-0003(TBD)	i5-1250PE	HDMIx1 DP2.0++ x1 LVDS x1 eDP x1 Type-c DP x1	GbE x1 2.5GbE x1	USB 3.2 Gen 2 x3, USB Type C x1 USB 2.0 x4	4	SATA x1	M-Key 2280 x1 (PCIex4) B-Key 3052 x1 (USB3.2 Gen2+SATA) E-Key 2230 x1 (PCIe, USB2.0)	2.0	9~36V	0°C ~ 60°C	Audio, Nano SIM, DIO x 8, SMBUS
GENE-ADP6-A10-0004(TBD)	i3-1220PE	HDMIx1 DP2.0++ x1 LVDS x1 eDP x1 Type-c DP x1	GbE x1 2.5GbE x1	USB 3.2 Gen 2 x3, USB Type C x1 USB 2.0 x4	4	SATA x1	M-Key 2280 x1 (PCIex4) B-Key 3052 x1 (USB3.2 Gen2+SATA) E-Key 2230 x1 (PCIe, USB2.0)	2.0	9~36V	0°C ~ 60°C	Audio, Nano SIM, DIO x 8, SMBUS
GENE-ADP6-A10-0005(TBD)	7305E	HDMIx1 DP2.0++ x1 LVDS x1 Type-c DP x1	GbE x1 2.5GbE x1	USB 3.2 Gen 2 x3, USB Type C x1 USB 2.0 x4	4	SATA x1	M-Key 2280 x1 (PCIex4) B-Key 3052 x1 (USB3.2 Gen2+SATA) E-Key 2230 x1 (PCIe, USB2.0)	—	12V	0°C ~ 60°C	Audio, Nano SIM, DIO x 8, SMBUS