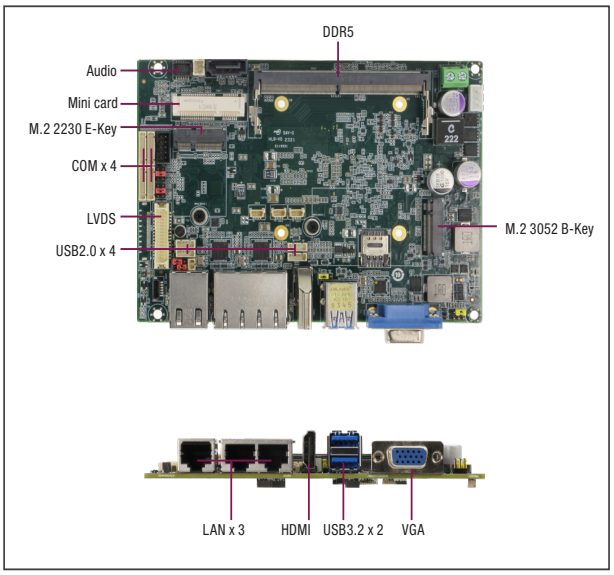
06 SubCompact Boards

GENE-ADN6

3.5" SubCompact Board with Intel Atom® x7000E Series, Intel® Processor N Series, Intel® Core™ i3-N305 Processors



Features

- Intel Atom® x7000E Series, Intel® N series, and Intel® CoreTM i3-N305 Processors
- DDR5 4800 MHz, SODIMM x 1, Up to 32GB
- HDMI 1.4, VGA, LVDS x 1
- Intel 2.5GbE x 3, SATA 6.0 Gb/s x 1, DIO x 8bit
- USB3.2 Gen2 x 2, USB2.0 x 4, RS-232/422/485 x 2, RS-232 x 2
- Mini PCIe card x 1, M.2 E-Key 2230 x 1, M.2 B-Key 3052 x 1
- Wide DC Input 9-36V

2.5Giga LAN · DDR 5 · Audio · LVDS · USB 3.2 Gen 2

Specifications

SYSTEM	
FORM FACTOR	3.5" SubCompact Board
CPU	Intel Atom® x7000E Series, Intel® Processor N Series, Intel® Core™ i3-N305 Processors: Intel® Core™ i3-N305 (8C/8T, up to 3.8 GHz, 15W) Intel Atom® x7425E (4C/4T, up to 3.4 GHz, 12W) Intel® Processor N97 (4C/4T, up to 3.6 GHz, 12W) Intel® Processor N50 (2C/2T, up to 3.4 GHz, 6W)
CHIPSET	Integrated with Intel® SoC
MEMORY TYPE	DDR5 4800, Single Channel SODIMM x 1, Max.32GB, Non-ECC
BIOS	UEFI
WAKE ON LAN	Yes
WATCHDOG TIMER	255 Levels
SECURITY	TPM 2.0 (Optional)
RTC BATTERY	Lithium Battery 3V/240mAH
DIMENSION	5.75" x 4" (146mm x 101.7mm), 0.94 lbs (0.43 kg)
OS SUPPORT	Windows 10 (64bit) Ubuntu 22.04 / Kernel 5.15.0-25-generic
POWER	
POWER REQUIREMENT	+9V~36V (Optional: +12V)
POWER SUPPLY TYPE	AT/ATX
CONNECTOR	Phoenix 2-pin Connector
POWER CONSUMPTION	Intel® Core™ i3-N305, DDR5 32GB x1, 3.4A@ +12V (TYPICAL) Intel® Core™ i3-N305, DDR5 32GB x1, 5.24A@ +12V (MAX)
DISPLAY	
CONTROLLER	Intel® UHD Graphics
LVDS/eDP	LVDS x 1, Dual Channel 18/24bit, up to 1920 x1080
DISPLAY INTERFACE	HDMI 1.4 x 1, up to 3840 x2160 @30Hz VGA x 1, up to 1920 x1080
MULTIPLE DISPLAY	Up to 3 Simultaneous Displays
AUDIO	
CODEC	Realtek ALC897
AUDIO INTERFACE	Line-In / Line-Out / Mic
SPEAKER	—
EXTERNAL I/O	
ETHERNET	Intel® i226 2.5G, RJ-45 x 3
USB	USB3.2 Gen 2 x 2
SERIAL PORT	—
VIDEO	HDMI 1.4 x 1, VGA x 1
INTERNAL I/O	
USB	USB2.0 x 4
SERIAL PORT	COM1 , COM2 (RS232/422/485,supports 5V/12V/RI) COM3 , COM4 (RS232)
VIDEO	LVDS x 1, Inverter x 1 (12V/2A)
SATA	SATA 6.0 Gb/s x 1 +5V SATA Power Connector x 1
AUDIO	Audio Header x 1 (Optional)
DIO/GPIO	GPIO 8-bit
SMBus/I2C	SMBus / I2C x 1 (Default: SMBus)
TOUCH	—
FAN	4pins Smart Fan x 1
SIM	Nano SIM x 1
FRONT PANEL	HDD LED, PWR LED, Power Button, Buzzer, Reset
OTHERS	—
EXPANSION	
Mini PCI-E/mSATA	Full-size mSATA / mPCIe x 1 (Default: mSATA, select by BIOS)
M.2	M.2 2230 E-Key x 1 (PCIe 3.0 [x1] + USB2.0) M.2 3052 B-Key x 1 (USB3.2 Gen2 + USB2.0)
OTHERS	—
ENVIRONMENT & CERTIFICATION	
OPERATING TEMP.	32°F ~ 140°F (0°C ~ 60°C) WiTAS 2: -40°F ~ 185°F (-40°C ~ 85°C) on selected CPU SKU
STORAGE TEMP.	-40°F ~ 185°F (-40°C ~ 85°C)
OPERATING HUMIDITY	0% ~ 90% relative humidity, non-condensing
MTBF (HOURS)	337,963
EMC	CE/FCC Class A

Packing List

Description	QTY
GENE-ADN6 MB	1

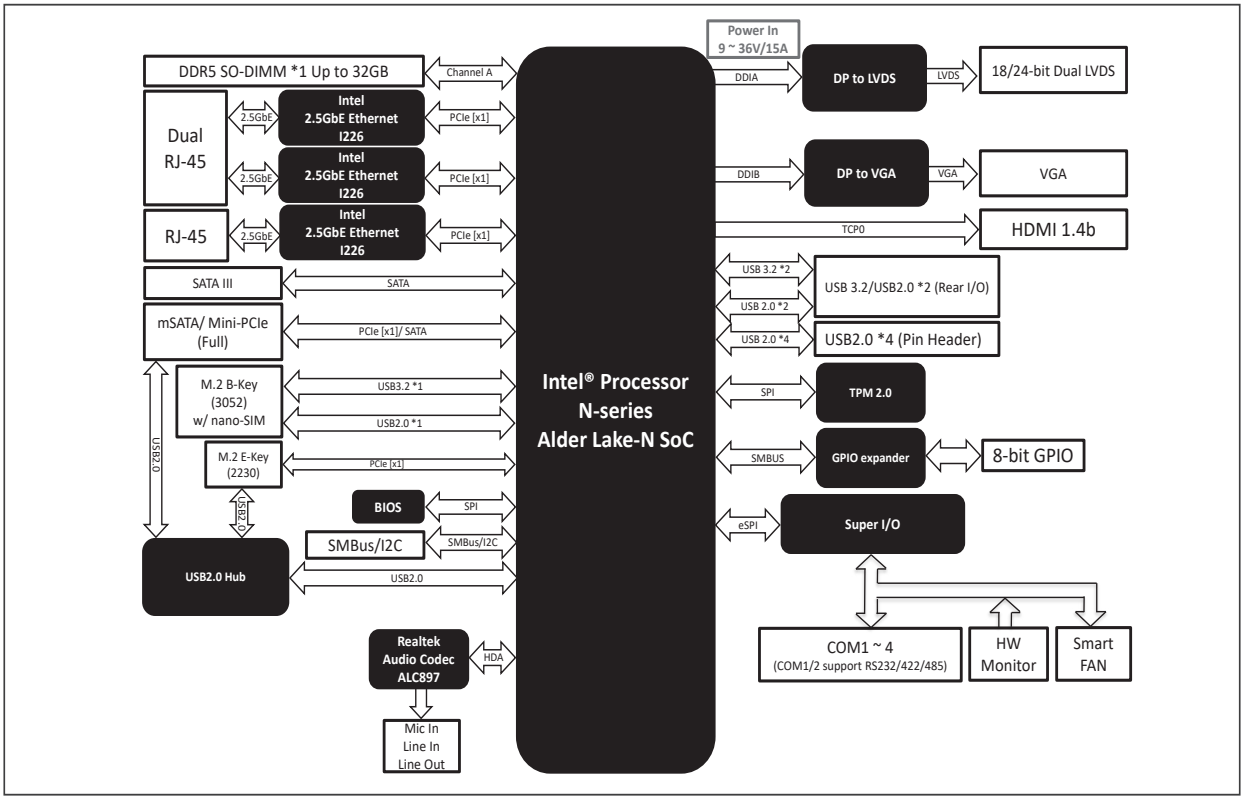
Optional Accessories

Part Number	Description	QTY
GENE-ADN6-HSP01	Heat Spreader.100*72*8mm	1
GENE-ADN6-HSK01	Heat Sink.100*72*15.5mm.used with HSP	1
GENE-ADN6-HSK02	Heat Sink.146*78.6*18mm	1
1702150155	SATA HDD Power Cable, 15cm	1
170X000398	Power Cable, DC JACK, 30cm	1
170204010R	Power Cable, Double 4P, 10cm	1
170X000156	Audio Cable, 25cm	1
170X000287	Front Panel Cable, 10cm	1
1701090150	COM Port Cable, 15cm	4
1700050207	USB 2.0 Cable, 20cm	4

Note: All specifications are subject to change without notice.

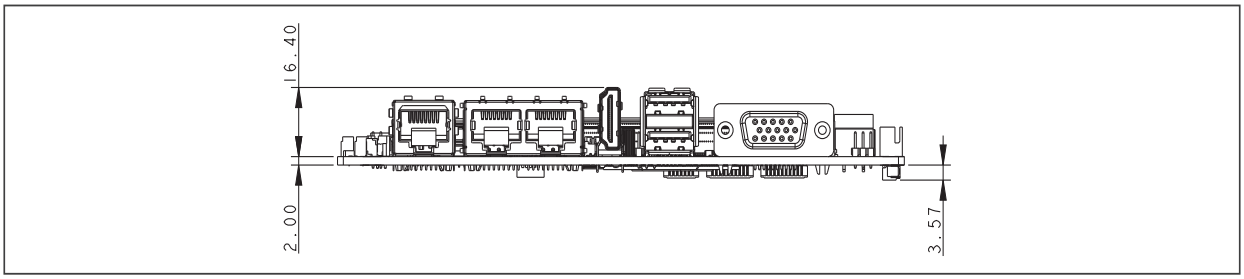
GENE-ADN6

Block Diagram



Dimension

Unit: mm



Ordering Information

Part Number	CPU	Display	LAN	USB	RS-232	RS-232/422/485	Storage	Expansion Slot	TPM	Power	Temp	Others
GENE-ADN6-A10-0001	N50	HDMI x1 VGA x1 LVDS x1	2.5GbE x 3	USB 3.2 Gen 2 x 2 USB 2.0 x 4	2	2	SATA x 1	M.2 3052 B-Key x 1 M.2 2230 E-Key x 1 MiniCard x 1	2.0	9~36V	0°C ~ 60°C	Audio, Nano SIM, DIO x 8, SMBUS
GENE-ADN6-A10-0002	N97	HDMI x1 VGA x1 LVDS x1	2.5GbE x 3	USB 3.2 Gen 2 x 2 USB 2.0 x 4	2	2	SATA x 1	M.2 3052 B-Key x 1 M.2 2230 E-Key x 1 MiniCard x 1	2.0	9~36V	0°C ~ 60°C	Audio, Nano SIM, DIO x 8, SMBUS
GENE-ADN6-A10-0003	N97	HDMI x1 VGA x1 LVDS x1	2.5GbE x 2	USB 3.2 Gen 2 x 2 USB 2.0 x 4	2	2	SATA x 1	M.2 3052 B-Key x 1 M.2 2230 E-Key x 1 MiniCard x 1	—	12V	0°C ~ 60°C	Audio, Nano SIM, DIO x 8, SMBUS
GENE-ADN6-A10-0004	i3-N305	HDMI x1 VGA x1 LVDS x1	2.5GbE x 3	USB 3.2 Gen 2 x 2 USB 2.0 x 4	2	2	SATA x 1	M.2 3052 B-Key x 1 M.2 2230 E-Key x 1 MiniCard x 1	2.0	9~36V	0°C ~ 60°C	Audio, Nano SIM, DIO x 8, SMBUS
GENE-ADN6W2-A10-0002	N97	HDMI x1 VGA x1 LVDS x1	2.5GbE x 3	USB 3.2 Gen 2 x 2 USB 2.0 x 4	2	2	SATA x 1	M.2 3052 B-Key x 1 M.2 2230 E-Key x 1 MiniCard x 1	—	12V	-40°C ~ 85°C	DIO x 8, SMBUS

Assured Systems

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