



Features

- Intel® Alder Lake N Series & Amston Lake series Processors
- 1 x 260-Pin DDR4 3200MHz non-ECC SO-DIMM Socket Supports Up to 16GB
- Dual Display, HDMI 2.0b & DP++
- 4 x COM Port (4 x RS232)
- 2 x Intel® Ethernet Controller (1GbE)
- 3 x Expanslot Slot (M.2 2230 Key-E, 2242/3052 Key-M, 2280 Key-M)
- 6 x USB Port (4 x USB3.2 Gen1, 2 x USB2.0 for System, M/B, 4 x USB 3.2 Gen1, 5 x USB 2.0)
- 1 x DC jack; 1 x Lin out/ Audio jack



HDMI + DP++
4K@60Hz



Compact
Size
180x136x40



Onboard
TPM 2.0



High Speed
M.2 Key-M
NVMe



No Vents
-10°C~55°C

Specifications

System Information

Processor	Intel® Alder lake N97 Processor
System Memory	1 x SO-DIMM DDR4 3200MHz up to 16GB
I/O Chipset	Super IO-ITE: IT8786E-I
BIOS Information	AMI uEFI BIOS, 128Mbit SPI Flash ROM
Watchdog Timer	H/W Reset, 1sec. ~ 65535sec and 1sec. or 1min./step
H/W Status Monitor	CPU temperature monitoring Voltages monitoring CPU fan speed control
SBC	ACC-ACS-N97MB-01R

Expansion

M.2	1 x M.2 Key-E 2230 (PCIe+USB2.0) 1 x M.2 Key-B 2242/3052 (USB2.0+USB3.0) 1 x M.2 Key-M 2280 (PCIe+SATA)
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Storage

M.2	1 x M.2 Key-M 2280 (PCIe) slot for storage NVMe SSD
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Front I/O

Power Button	1 x PWR BTN with LED
COM Port	4 x RS232 (DB9)

Rear I/O

USB	4 x USB 3.2 Gen1x1 Type A 2 x USB 2.0 Type A
LAN Port	2 x RJ45
Audio	1 x Mic-in, Line-out, 2 in1 3.5mm Jack
DP	1 x DP++
HDMI	1 x HDMI 2.0b
Antenna	2 x Antenna Mounting

Right I/O

Antenna	2 x Covered antenna hole
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Left I/O

Antenna	2 x Covered antenna hole
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Display

Graphic Chipset	Intel® UHD Graphics for 13th Gen Intel® Processors or Intel® Iris® Xe Graphics eligible for 12th Gen Intel® Processors
Resolution	HDMI 2.0 2048 x 1080 @60Hz DP++: Max 4096 x 2340 @60Hz

Audio

Audio Codec	RealTek ALC897 audio codec
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Ethernet

LAN Chipset	1 x Intel® i226V 2.5 Gigabit Ethernet Controller 1 x Intel® WGI210AT Gigabit Ethernet Controller
Specification	10/100/1000 GbE (I210-AT) 10/100/1000 GbE (I226-V)
LED Indicator	1 x I210AT 1GbE 1 x I226V 1GbE

Power Requirement

Voltage Input Spec.	DC 12V
Voltage Input Connector	Lockable DC Jack
ACPI	Single power ATX support S0, S3, S4, S5
Power Mode	AT/ATX (ATX is default setting)
Adapter	AC to DC adapter

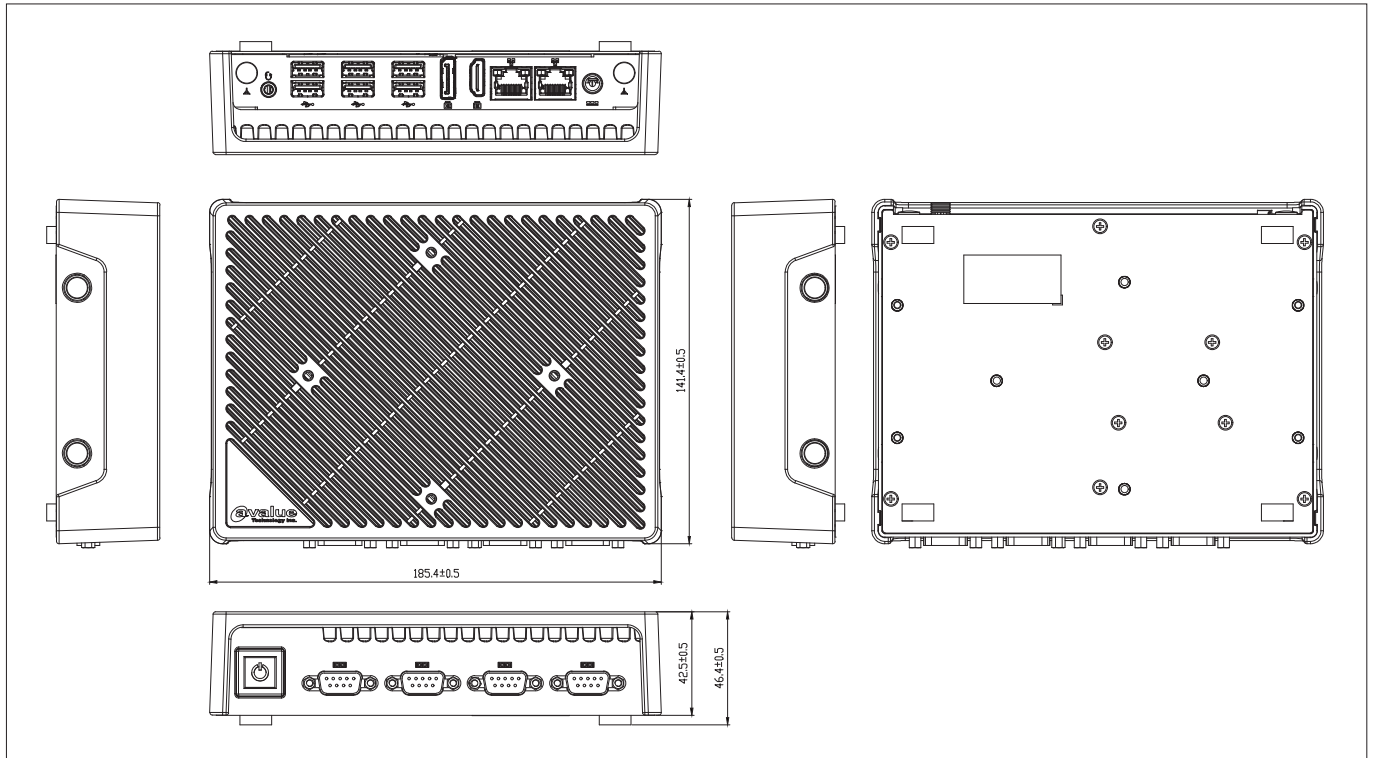
Software Support

OS	Win10, Win11, Linux
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Mechanical & Environmental

Operating Temp.	-10°C ~ 55°C (32°F ~ 104°F) with 0.5m/s air flow
Storage Temp.	-30°C ~ 70°C (-22°F ~ 158°F)
Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
Dimension (W x L x H)	180mm x 136mm x 40mm
Vibration Test	with SSD: 1.5Grms, IEC 60068-2-64, Random, 5 ~ 500Hz, 30min/axis
Shock Test	IEC 60068-2-27, Half Sine, 11ms
Drop Test	ISTA 2A, IEC-60068-2-32 Test : Ed, 1 Corner, 3 Edges, 6 Faces
Mounting Kit	Table Stand/Din Rail/VESA
Kensington Lock	Kensington Lock

Mechanical Drawing



Ordering Information

P/N	Processor	TDP	Memory	Storage	I/O Ports (COM/USB/LAN)	Display Output	Audio Port	Adapter/ PSU	Power Input	Temp.	OS Support
ACS-ADNC-A1-1R	N97	12W	N/A	N/A	4COM/6USB/2LAN	HDMI/DP++	Mic-in/Line-out combo	60W	+12V DC in	-10°C ~ 55°C	Windows 10/11/Linux
ACS-ADNC-A1-2R	N97	12W	8GB DDR4	128GB	4COM/6USB/2LAN	HDMI/DP++	Mic-in/Line-out combo	60W	+12V DC in	-10°C ~ 55°C	Windows 10/11/Linux

Packing List

Item	Quantity
ACS-ADNC	1
Adapter	1
Component kit (bracket & screws for M.2)	1
Peripherals vary by finished product part number (DRAM & M.2)	1

I/O Overview

