



IB3-281

ALDER LAKE-N 3.5INCH SBC



Intel® Alder Lake-N
Atom / N-series processors



1 x DP, 1 x LVDS
Up to 3840 x 2160 @60 Hz



Support Wi-Fi/BT module



3.5inch form-factor
146 mm x 102 mm (5.75" x 4.02")

CPU

CPU	Intel® Atom® x7211E processor Intel® Processor N97
Chipset	SoC
Total Cores	2 Cores / 4 Cores
Total Threads	2 /4
TDP	6 W / 12 W

System

GPU	Intel® UHD Graphics
Graphic Engine	DirectX 12.1, OpenGL 4.6, OpenCL 3.0
System Memory	8 GB, Onboard LPDDR5-4800 MHz (Optional: 16GB)
Storage	1 x M-Key M.2 (2280) PCIe3.0 X4 for SSD
TPM	Optional: TPM2.0
Watchdog Timer	Yes
Auto Power On	Yes
RTC	Set up independently every day, a week as a cycle
Power Requirement	Lockable DC-IN, 12 V ~ 24 V, 45 W
Dimensions	146 mm x 102 mm (5.75" x 4.02")
Cooling System	Fanless, passive cooling
Operating System	Windows 10 (64bit) /Windows 11 (64bit) Linux Ubuntu (64bit)
Storage Temperature	-40°C ~ 80°C (-40°F ~ 176°F)
Operating Temperature	-20°C ~ 60°C (-4°F ~ 140°F) @0.7m/s Air Flow
Humidity	95% @ 60°C (non-condensing)

Network

Network Controller	1 x Intel Ethernet Controller i226-V 1 x Intel Ethernet Controller i210-AT
Wi-Fi/BT	1 x E-Key M.2 (2230) for Wi-Fi/BT, support Wi-Fi 5, Wi-Fi 6/6E (CNVi)
Mobile Network	NA

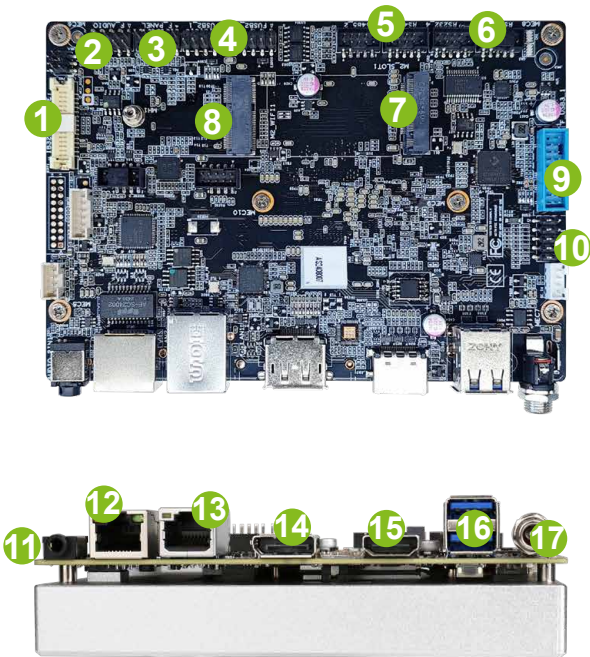
Rear I/O

USB	2 x USB3.2 Gen1
Display Interface	1 x HDMI (Max.4096 x 2160 @60 Hz) 1 x DP (Max.4096 x 2160 @60 Hz) colay VGA
Ethernet Interface	1 x 2.5 GbE RJ45, 1 x 1 GbE RJ45
Audio	1 x 2-in-1 Headset (MIC-IN & AUDIO-OUT)

Internal I/O

USB	1 x USB3.2 Gen1, signal by 2 x 10pin header 4 x USB2.0, signal by 2 x 2 x 5pin header
Display	2 x 15pin dual channel 24bit LVDS (Max. 1920 x 1200 @60 Hz), eDP colay with LVDS
Serial port	4 x RS232, signal by 4 x 5pin header 2 x RS485, signal by 2 x 5pin header
GPIO	4 x GPI, 4 x GPO
Audio	2 x 5pin F_Audio, 1 x 4pin SPEAKER
Others	1 x 6pin INVERTER, 1 x 4pin DC-IN

Dimensions and Drawing



No.	Dimensions
1	LVDS
2	F_AUDIO
3	F_PANEL
4	2*USB2.0
5	2*RS485
6	2*RS422
7	M-KEY M.2
8	E-KEY M.2
9	USB3.2 GEN1
10	GPIO
11	HEADSET
12	1 GbE RJ45
13	2.5 GbE RJ45
14	DP
15	HDMI
16	2*USB3.2 GEN1
17	DC-IN

Order information

IB2-281-x7211E	CPU: Intel® Atom® x7211E processor Memory: 8GB, Oboard LPDDR5-4800 MHz Storage: NA
IB2-281-N97	CPU: Intel® Processor N97 Memory: 8GB, Oboard LPDDR5-4800 MHz Storage: NA
Accessory	Part Number: 89R0230021P00, ROHS USB2.0 Cable, USB type-A receptacle to 2 x 5pin PH2.54, 250mm Part Number: 89R0190015P01, ROHS COM Cable, DB9 to 2 x 5pin PH2.0 jumper wire, 300mm

Optional

Operation System	Windows 11 (64bit)
------------------	--------------------