



CB4-208-U1

TWIN LAKE/ALDER LAKE-N MINI-ITX MOTHERBOARD



Intel® Twin Lake/Alder Lake-N processors



1 x VGA/COM, 1 x HDMI, 1 x LVDS/eDP
(Max. 4096 x 2160 @60 Hz)



Support Wi-Fi/BT module



Mini-ITX form-factor
170 mm x 170 mm (6.69" x 6.69")

CPU

CPU	Intel® Processor N150/N100/N97
Chipset	SoC
Total Cores	4 Cores
Total Threads	4
TDP	6W/12W

System

GPU	Intel® UHD Graphics
Graphic Engine	DirectX 12.1, OpenGL 4.5, OpenCL 3.0
System Memory	Up to 16 GB, 1 x SO-DIMM DDR4-3200MHz
Storage	1 x M-Key M.2 (2280) PCIe3.0 X1 & SATA for SSD
Wake On LAN	Support (Enable by default)
Gyro Sensor	Optional
Fan RPM control	Yes
Power Requirement	1 x 12V DC IN, 2.5/5.5mm DC Jack power input 1 x ATX 4-pin power connector
Dimensions	170 mm x 170 mm (6.69" x 6.69")
Operating system	Windows 11 (64bit) Linux Ubuntu (64bit)
Operating Temperature	0°C ~ 60°C (32°F ~ 140°F) @0.7m/s Air Flow
Storage Temperature	-20°C ~ 75°C (-4°F ~ 167°F)
Humidity	5% ~ 95% @ 45°C (non-condensing)

Network

Network Controller	1 x RTL8111H Gigabit Ethernet
Wi-Fi/BT	1 x E-Key M.2 (2230) for Wi-Fi/BT
Mobile Network	NA

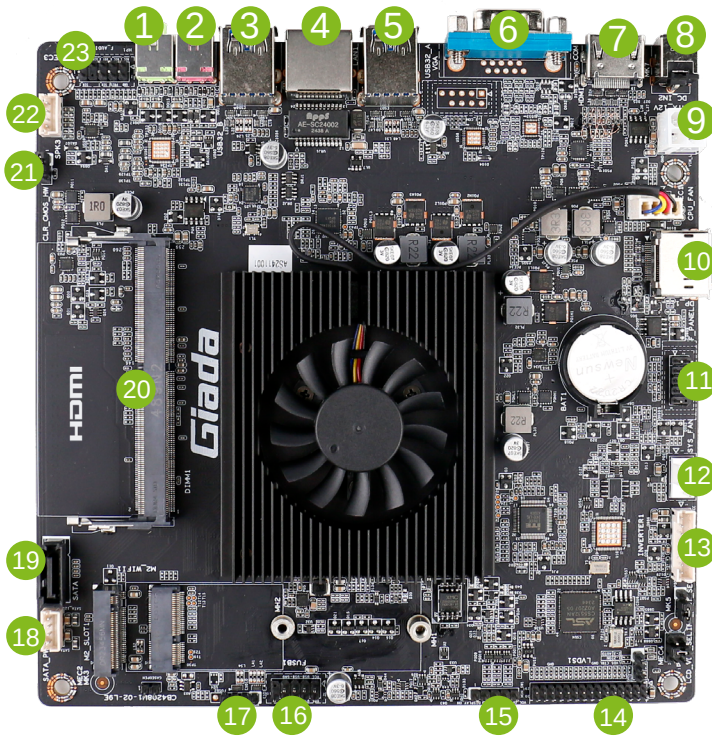
Rear I/O

USB	4 x USB3.2 Gen2
Display Interface	1 x VGA (Max. 2048 x 1536 @60Hz) colay COM 1 x HDMI2.0 (Max. 4096 x 2160 @60Hz) 1 x DP (side, eDP signal, 4096 x 2160 @60Hz), shared with LVDS (LVDS disables eDP by default). eDP: no audio, no hot-plug, supports gravity sensor
Audio	1 x Audio out, 1 x MIC in
Ethernet Interface	1 x 1 GbE RJ45

Internal I/O

USB	1 x 9pin 2.45mm header (2 x USB2.0) 1 x 4pin 2.45mm header (1 x USB2.0)
COM	1 x COM 9pin
Power	1, ATX (2 x 2pin 12V only)
LVDS	1 x LVDS 30pin, 1 x INVENTER 8pin, 1 x BL_PWM 3pin, 1 x LCD_VDD_SEL 6pin, 1 x INV_VOT_SEL 4pin, 1 x LVDS_CTRL 3pin, 1 x BKL-CON 4pin
Audio port	1 x Speaker 4pin, 1 x F_Audio 9pin
F_PANEL	1, (2 x 5pin)
SATA	1 x SATA for HDD/SSD, 1 x HDD_PWR 4pin
Physical control switch	1 x MON_SW 5pin (Volume & Brightness)
Clear_CMOS	1, (1 x 3pin)
Fan	1 x SYS_FAN 4pin 1 x CPU_FAN 4pin

Dimensions and Drawing



No.	Dimensions	No.	Dimensions
1	AUDIO OUT	20	DDR4
2	MIC IN	21	CMOS
3	2*USB 3.2 Gen2	22	SPK
4	LAN	23	F_AUDIO
5	2*USB 3.2 Gen2		
6	COM/VGA		
7	HDMI		
8	DC-IN		
9	ATX		
10	DP (eDP Signal)		
11	F_PANEL		
12	SYS		
13	INVERTER		
14	LVDS		
15	MON_SW		
16	F_USB2.0		
17	F_USB2.0		
18	SATA_PWM		
19	SATA		

Order information

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Intel® Processor N150/N100/N97

RAM: NA

Storage: NA

HDMI[®]
HIGH-DEFINITION MULTIMEDIA INTERFACE

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