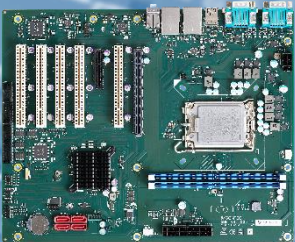
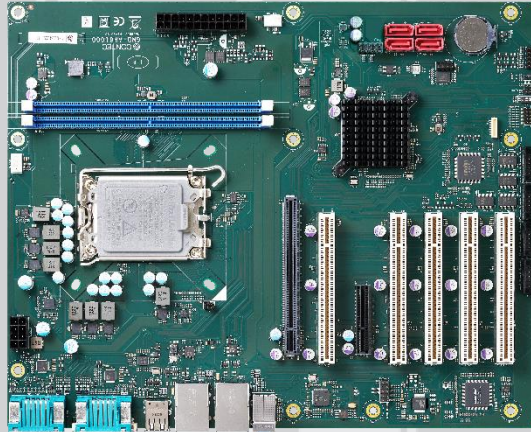


# GMB-AH61000

ATX Industrial Motherboard

12<sup>th</sup> Gen. Alder Lake-S / 13<sup>th</sup> Gen. Raptor Lake-S

Intel® Processors



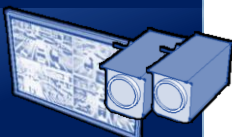
General  
Manufacturing



Semiconductor  
Industry



Production  
Monitoring



## Features

- Intel® 12<sup>th</sup> / 13<sup>th</sup> Gen. processor Alder Lake-S / Raptor Lake-S Platform
- 2x DDR5-4800 U-DIMM, up to 64GB (Non-ECC support)
- 1x HDMI and 1x DVI-I Port (Support DVI-D & VGA)
- 2 RJ-45 : 2x 1Gigabit Ethernet by intel controller
- 1x PCIe x16 (Gen5)slot,1x PCIe x4 (Gen3)slot, 5x PCI slots
- 4x SATA port ,6x Serial port and 4x USB3.2 + 4x USB2.0
- Extend Peripherals Freely Rich Interface

## CPU Selection Guide

Embedded Options / Non-ECC memory supported

No.	CPU Part No. ADL-S / RDL-S	Cores (P+E) ADL-S / RDL-S	Intel® UHD Graphics
1	Celeron G6900E	2 (2+0)	710
2	Celeron G6900TE	2 (2+0)	710
3	Pentium Gold G7400E	2 (2+0)	710
4	Pentium Gold G7400TE	2 (2+0)	710
5	Core i3-12100E/ Core i3-13100E	4 (4+0)	730
6	Core i3-12100TE/ Core i3-13100TE	4 (4+0)	730
7	Core i5-12500E/ Core i5-13500E	6 (6+0)/ 14 (6+8)	770
8	Core i5-12500TE/ Core i5-13500TE	6 (6+0)/ 14 (6+8)	770
9	Core i7-12700E/ Core i7-13700E	12 (8+4)/ 16 (8+8)	770
10	Core i7-12700TE/ Core i7-13700TE	12 (8+4)/ 16 (8+8)	770
11	Core i9-12900E/ Core i9-13900E	16 (8+8)/ 24 (8+16)	770
12	Core i9-12900TE/ Core i9-13900TE	16 (8+8)/ 24 (8+16)	770

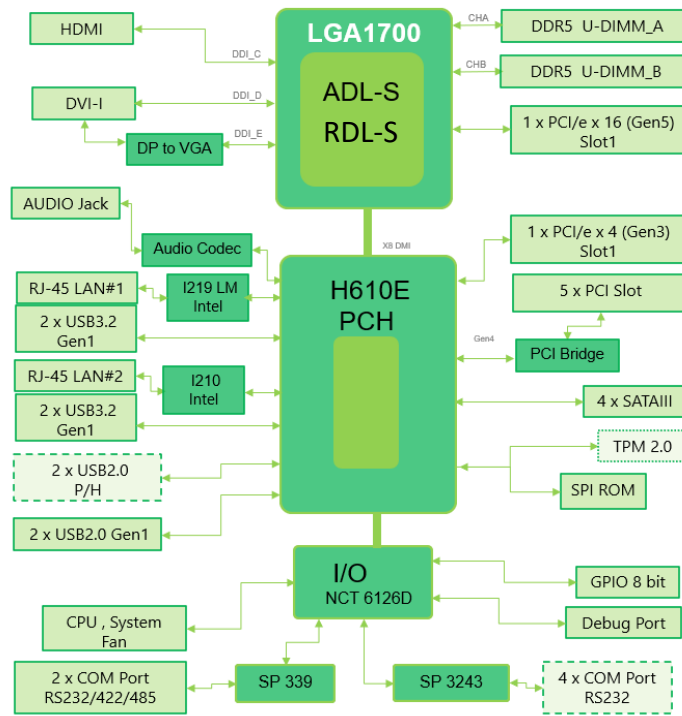
Non-Embedded Options / Non-ECC memory supported

No.	CPU Part No. ADL-S / RDL-S	Cores (P+E) ADL-S / RDL-S	Intel® UHD Graphics
1	Core i5-12600K/ Core i5-13600K	10 (6+4)/ 14 (6+8)	770
2	Core i7-12700K/ Core i7-13700K	12 (8+4)/ 16 (8+8)	770
3	Core i9-12900K/ Core i9-13900K	12 (8+8)/ 24 (8+16)	770

## Packing List

- 1x Motherboard 、 1x I/O Shield Panel 、 1x Installation CD

## Block Diagram



## Specifications

<b>PROCESSOR</b>	Intel® 12 <sup>th</sup> / 13 <sup>th</sup> Gen Core™ Processors CPU in LGA1700 socket up to 125W TDP
<b>CHIPSET</b>	Intel® H610E Express Chipset
<b>BIOS</b>	AMI UEFI BIOS
<b>MEMORY</b>	Support DDR5-4800MHz (Non-ECC) Up to 64GB in two long-DIMM sockets
<b>STORAGE I/F</b>	4x SATA 3.0 ports
<b>WATCHDOG TIMER</b>	By Software Programmable
<b>HARDWARE MONITORING</b>	System monitor (Voltage, Fan Speed and Temperature)
<b>EXPANSION INTERFACE</b>	1x PCIe x16 (Gen 5)slot 1x PCIe x4 (Gen3)slot 5x PCI slots
<b>AUDIO</b>	Audio Interface: Line-in / Line-Out / Mic-In (Rear I/O) on 2.54mm pin header
<b>ETHERNET</b>	Intel® I219LM and Intel® I210 Ethernet controller Supports 2x 10/100/1000 Mbps Ethernet ports
<b>SERIAL PORT</b>	2 x RS232/422/485: DB9P connector on rear I/O 4 x RS232 by 2.54 mm pin header on board
<b>USB PORT</b>	4x USB3.2 (Gen1) on rear I/O 2x USB2.0 on rear I/O 2x USB2.0 by Internal pin header
<b>GPIO</b>	1x Pin Header (8bit GPIO)
<b>GRAPHIC CONTROLLER</b>	Intel® graphic UHD 710 /UHD 730 or UHD 770 (By CPU SKU)
<b>DISPLAY INTERFACE</b>	HDMI: One HDMI connector on rear I/O, resolution up to 4096 x 2160 DVI-I: One DVI-I port on rear I/O, support DVI-D & VGA signal
<b>TPM</b>	TPM 2.0
<b>DIMENSIONS (L X W)</b>	304.8(12.0") x 243.84(9.6") mm
<b>POWER SUPPLY</b>	ATX 24pin power connector , 12V 8pin power connector
<b>ENVIRONMENT</b>	Operation Temperature: 0 to 60°C Storage Temperature: -40 to 80°C Relative Humidity: 5% to 95%, non condensing
<b>OS DRIVER SUPPORT</b>	Windows 10 IoT Enterprise 2021 LTSC
<b>CERTIFICATE</b>	CE / FCC / UKCA / VCCI (class B) , RoHS2.0

## Ordering Guide

● GMB-AH61000

ATX IMB 12<sup>th</sup> / 13<sup>th</sup> Gen Intel Core Processor, Intel H610E Chipset (without TPM)