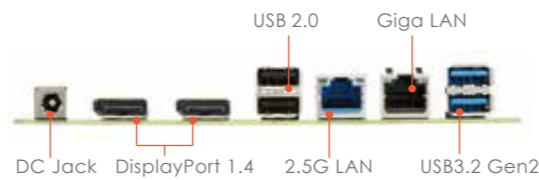
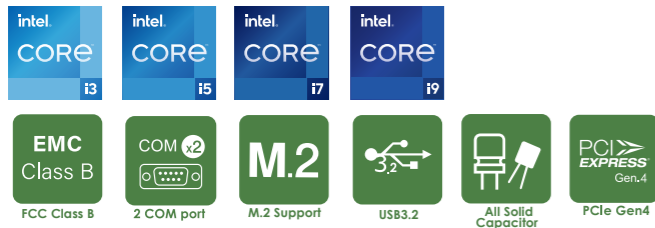
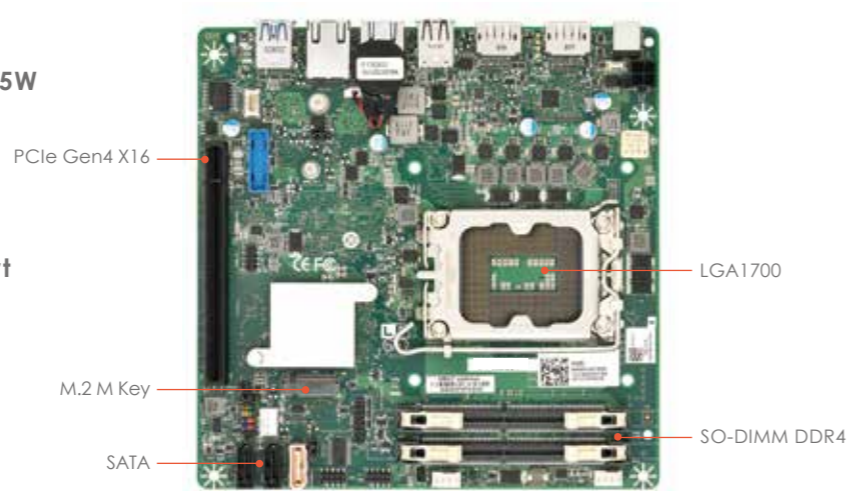


# PH14ADI

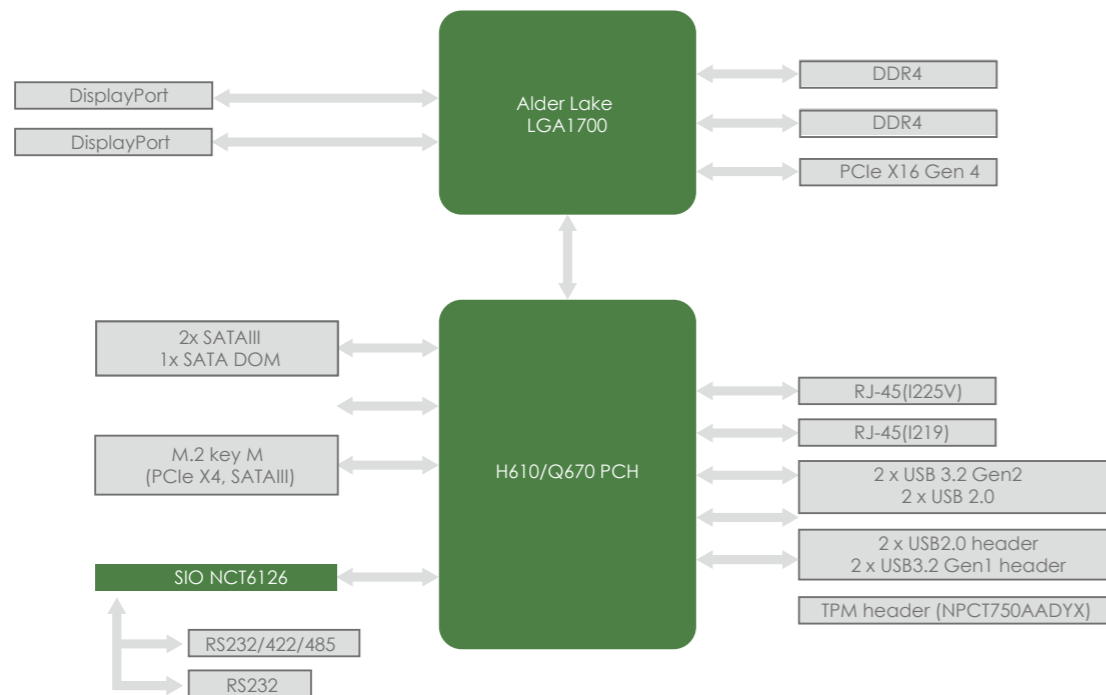
Thin Mini-ITX Form Factor  
Intel® Alder Lake 12th Processor with H610/Q670 Chipset

## Features

- Intel® Alder Lake 12th i9/i7/i5/i3 LGA 65W processor
- Intel® H610 / Q670 Chipset
- Intel® vPro technology support (Q670)
- 2x DDR4 SO-DIMM up to 64GB
- Support dual display for 2x DisplayPort
- 1x M.2 2280M-key (NVME & SATA), 1 x PCIe X16 Gen 4
- 1 x Intel® 2.5Gigabit Ethernet, 1 x Intel® Gigabit Ethernet
- DC-in 12V



## Block Diagram



# PH14ADI Thin Mini-ITX

MECHANICAL	
Form Factor	Mini-ITX: 6.7" x 6.7" (170mm x 170mm)
SYSTEM	
Processor	12th Gen Intel® LGA1700 Socket Processor / Core i9/i7/i5/i3 Processor / TDP 65W
Chipset	Intel® H610 / Q670
Memory	DDR4 3200 MHz, 2 x 260-pin SO-DIMM, Max. 64GB (Non-ECC)
Graphics	Intel® UHD Graphics
Ethernet	Intel® I219-LM Giga LAN + Intel® I225V 2.5 Giga LAN
Audio	—
I/O Chipset	Nuvoton NCT6126D(eSPI)
TPM	Header (support optional TPM module board NPCT750)
Expansion Slot	1 x PCIe X16 slot Gen4 1x M.2 2280 M key (PCIe X4, SATAIII)
BIOS	Temperature Monitor, Voltage Monitor, Fan Monitor,
H / W Monitor	—
Watchdog Timer	1~255 steps by software program
Smart Fan Control	CPU Fan, System Fan
GRAPHICS	
2nd DisplayPort	Up to 4K (4096 x 2304) @60 Hz,
VGA	—
DVI	—
HDMI	—
DisplayPort	Up to 4K (4096 x 2304) @60 Hz
LVDS	—
eDP (Option)	—
REAR I/O	
USB	2 x USB2.0, 2 x USB3.2 Gen2
Display I/O	2 x DisplayPort 1.4
Audio I/O	—
LAN I/O	2 x RJ-45
Serial Port	—
PS/2 Port	—
Others	DC-in 12V (2.5 mm / ID, 5.5 mm / OD)
INTERNAL CONNECTORS	
Storage	2 x SATAIII, 1 x SATA DOM, 1x SATA Power header
USB	2 x USB 2.0, 2 x USB3.2 Gen1
Display I/O	—
Audio I/O	—
Serial Port	1 x RS232 , 1 x RS232 / 422 / 485
PS/2 Port	—
Parallel Port	—
GPIO	—
Fan	1 x 4-pin CPU Fan Connector / 1 x 4-pin System Fan Header
Power	1 x ATX-4pin Connector
Others	1 x intrusion switch header, 1 x CMOS Jumper, 1 x FIO header
POWER REQUIREMENT	
Power Input	DC-in 12V (2.5 mm / ID, 5.5 mm / OD) / ATX 4-pin 12V
ENVIRONMENTAL	
Operating Temperature	0 ~ 60°C (32 ~ 140°F)
Storage Temperature	-40 ~ 85°C (-40 ~ 185°F)
Operating Humidity	10% ~ 95% R/H, non-condensing
Certification	CE & FCC Class B
OS Support	Windows® 11 64bit, Windows® 10 IoT LTSC 64bit (LTSC 2021), Ubuntu 22.04, Linux (support by request)

## Ordering Information

Model Number	Chipset	DisplayPort	USB 3.2 / 2.0	COM	LAN	2280 M key	PCIe X16	Power
PH14ADI-H610-12V	Intel® H610	2	4 / 4	2	2	1	1	DC-in 12V
PH14ADI-Q670-12V	Intel® Q670	2	4 / 4	2	2	1	1	DC-in 12V

## Packing List

Packing		
• 1 x Motherboard	• 1 x 50 cm SATA Cable	• 2 x I/O Bracket (Half and Full Height)