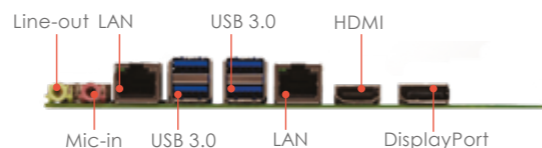
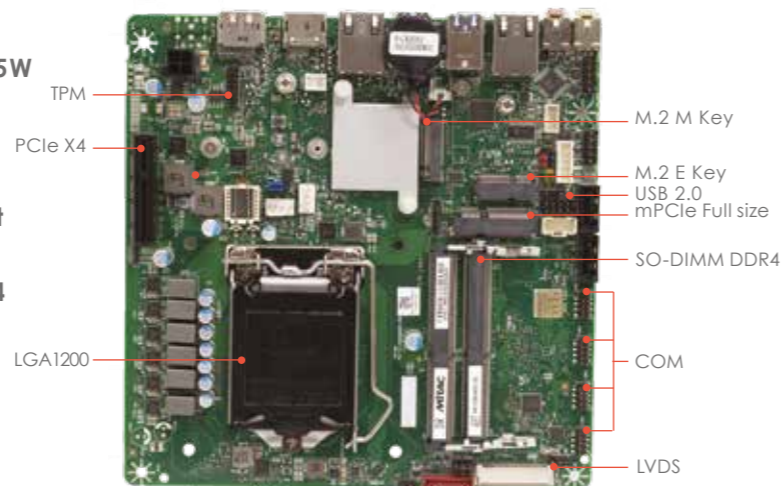
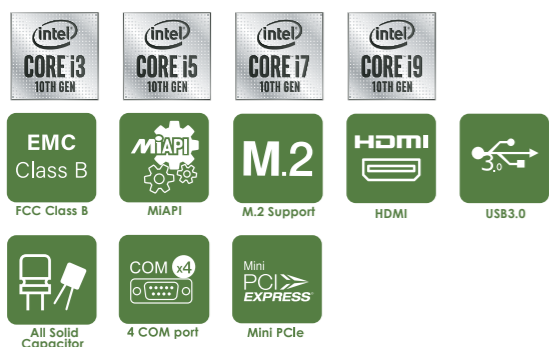


# PH11CMI

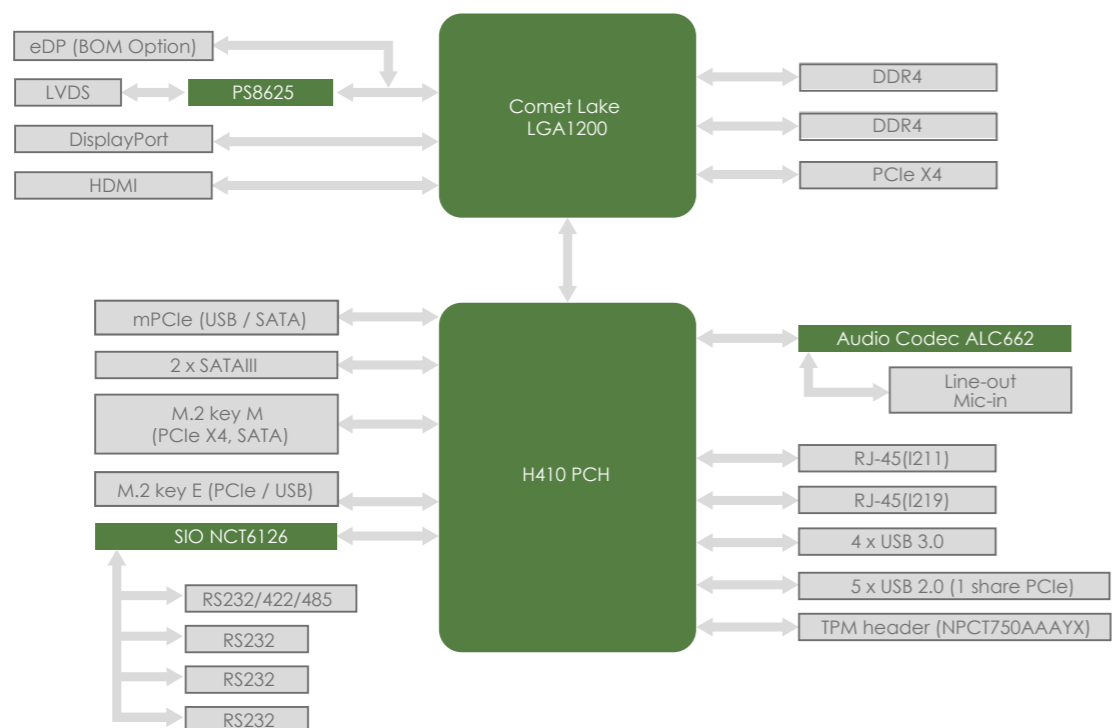
Thin Mini-ITX Form Factor  
Intel® Comet Lake 10th Processor with H410 Chipset

## Features

- Up to Intel® Comet Lake 10th i7 35W & i5 65W LGA processor
- Intel® H410 Chipset
- 2 x DDR4 SO-DIMM up to 64GB
- Support Dual display for HDMI, DisplayPort and LVDS/eDP
- 1 x M.2 M 2280, 1 x M.2 E 2230, 1 x PCIe X4 and 1 x mPCIe Full size,
- 2 x Intel® Gigabit Ethernet
- DC-in 12V / 19V



## Block Diagram



# PH11CMI Thin Mini-ITX

MECHANICAL	
Form Factor	Mini-ITX: 6.7" x 6.7" (170mm x 170mm)
SYSTEM	
Processor	10th Gen Intel® Comet Lake LGA1200 Socket Processor / 10core TDP Max 35W / 8ccore TDP 65W
Chipset	Intel® H410
Memory	DDR4 2933/2666/2400MHz / 2 x 260-pin SO-DIMM / Max. 64GB (Non-ECC)
Graphics	Intel® HD Graphics
Ethernet	Intel® I219-LM Giga LAN + Intel® I210-AT Giga LAN
Audio	Realtek® ALC662 / ALC888
I/O Chipset	Nuvoton NCT6126D (eSPI)
TPM	TPM Header / (support TPM module board NPCT750)
Expansion Slot	PCIe 3.0 X4 slot / Mini PCIe Full size (SATA / USB) M.2 2242 / 2280 M key (PCIe, SATA) M.2 2230 E key (PCIe, USB 2.0)
BIOS	AMI BIOS, 128 Mbit SPI
H / W Monitor	Temperature Monitor, Voltage Monitor, Fan Monitor
Watchdog Timer	1 ~ 255 Steps by Software Program
Smart Fan Control	CPU Fan / System Fan
GRAPHICS	
VGA	—
DVI	—
HDMI	Up to 4K (4096 x 2160) @30 Hz
DisplayPort	Up to 4K (4096 x 2304) @60 Hz
LVDS	Up to 1920 x 1200 @60 Hz
eDP (Option)	Up to 4K (4096 x 2304) @60 Hz
REAR I/O	
USB	4 x USB 3.2 Gen 1
Display I/O	1 x HDMI 1.4, 1 x DisplayPort 1.2
Audio I/O	1 x Mic-in, 1 x Line-out
LAN I/O	2 x RJ-45
Serial Port	—
PS/2 Port	—
Others	DC-in 12V(DIN 4-pin power cable) / DC-in 19V (5.1 mm / ID, 7.4 mm / OD)
INTERNAL CONNECTORS	
Storage	2 x SATAIII / 1 x SATA power header
USB	5 x USB 2.0 (1 x USB share mPCIe)
Display I/O	1 x LVDS (Optional eDP SKU available) 1 x Backlight Connector
Audio I/O	1 x Stereo Speaker Header
Serial Port	4 x RS232 (One supports RS232 / 422 / 485)
PS/2 Port	—
Parallel Port	—
GPIO	1 x MiAPI Header (Programmable, Support 10-bit GPIO)
Fan	1 x 4-pin CPU Fan Connector / 1 x 4-pin System Fan Header
Power	1 x AT / ATX Mode Select Jumper, 1 x 4-pin ATX Power Connector
Others	1 x Front Audio Header (Mic/HP) x 1, CMOS Jumper
POWER REQUIREMENT	
Power Input	DC-in 19V (5.1 mm / ID, 7.4 mm / OD) / ATX 2-pin 19V DC-in 12V(DIN 4-pin power cable) / 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	
OS Support	Kaby Lake: Windows® 10 64bit, Linux (support by request) Skylake: Windows® 7 32/64bit, Windows® 10 64bit, Linux (support by request)

## Ordering Information

Model Number	Chipset	DisplayPort	HDMI	LVDS / eDP	USB 3.2 / 2.0	SATA	Mic-in/Line out	LAN	M.2 2230 E key / M.2 2280 M key	mini PCIe	PCIe X4	Power
PH11CMI-H410-12V	Intel® H410	1	1	1/0	4/5	2	1/1	2	1/1	1	1	DC-in 12V
PH11CMI-H410-19V	Intel® H410	1	1	1/0	4/5	2	1/1	2	1/1	1	1	DC-in 19V

## Packing List

Packing		
• 1 x Mainboard	• 1 x SATA & SATA Power Cable	• 1 x Quick Guide
• 2 x I/O Bracket (Half and Full Height)	• 1 x 1 x ATX 4-pin to DIN 4-pin Cable (12v SKU only)	