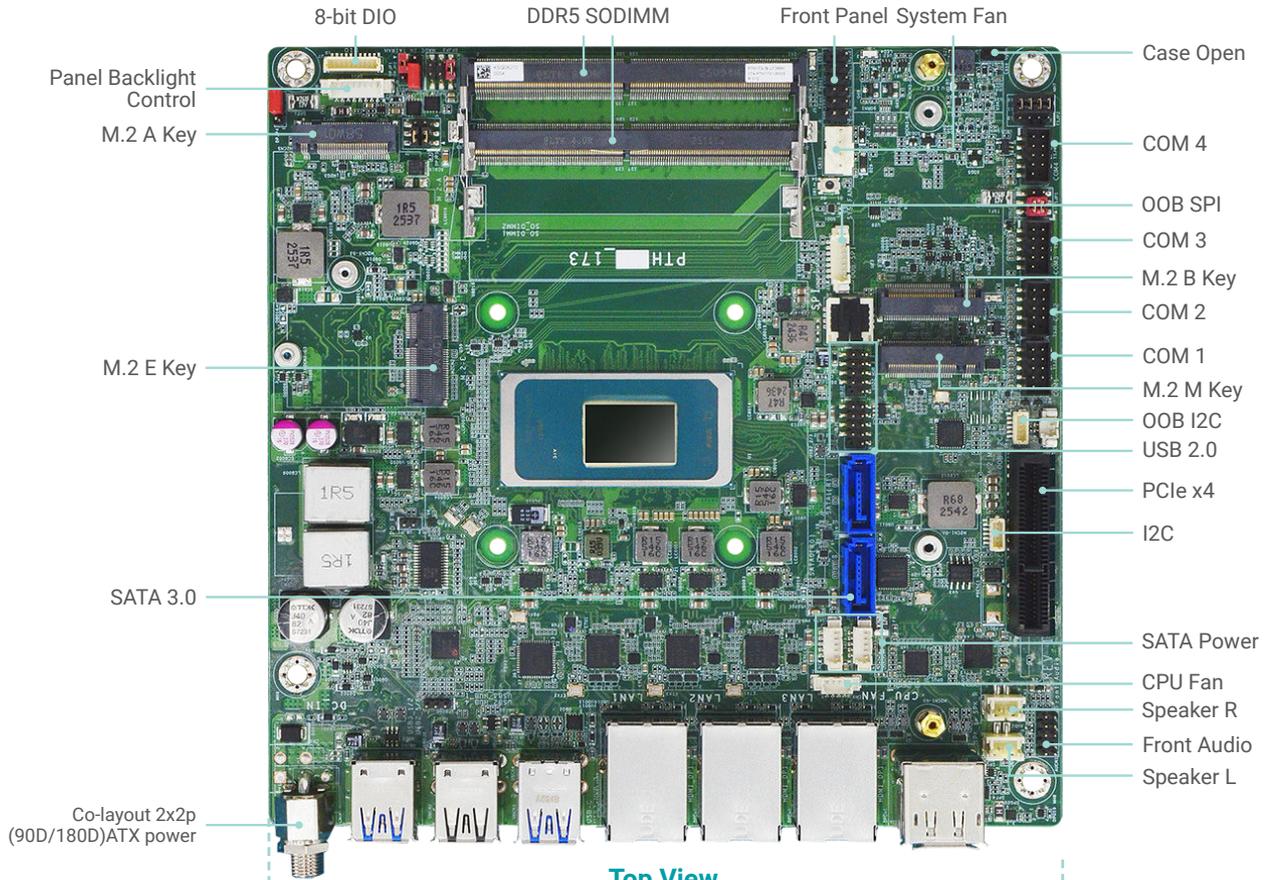


PTH171/PTH173

Inter Panther Lake H
Mini-ITX



Top View



KEY FEATURES



DDR5

2 DDR5 6400/7200MHz SODIMM up to 128GB



4K High Resolution

Supports 4K/ 2K resolution



Quad Displays

HDMI, DP, USB Type C (DP alt-mode/USB3.2 Gen2 /PD 15W), M2A-Display (optional)



Multiple Expansion

1 PCIe Gen5 x4, 1 M.2 M Key, 1 M.2 B Key, 1 M.2 E Key, 1 M.2 A Key



Rich I/O

Up to 3 2.5GbE LAN, 4 USB 3.2, 1 USB Type C, 5 USB 2.0, 2 SATA 3.0, 4 COM

SPECIFICATION

Model Name		PTH171	PTH173
SYSTEM	Processor	Inter Panther Lake H processor, TDP up to 25W Intel® Core™ Ultra 9 388H (H484-12XeET, vPro) Intel® Core™ Ultra 7 368H (H484-12XeET, vPro) Intel® Core™ Ultra 7 358H (H484-12XeET) Intel® Core™ Ultra 5 338H (H484-12XeET, vPro) Intel® Core™ Ultra 9 386H (H484-4XeET, vPro) Intel® Core™ Ultra 7 366H (H484-4XeET, vPro) Intel® Core™ Ultra 7 356H (484-4XeET) Intel® Core™ Ultra 5 336H (444-4XeET, vPro) Intel® Core™ Ultra 7 365 (404-4XeET, vPro) Intel® Core™ Ultra 7 355 (404-4XeET) Intel® Core™ Ultra 5 335 (404-4XeET, vPro) Intel® Core™ Ultra 5 325 (404-4XeET)	
	Memory	2x 262-pin SODIMM up to 128GB Dual-channel SODIMM DDR5 up to 6400 MHz (H404)/7200 MHz (H484)	2x 262-pin SODIMM up to 128GB Dual-channel SODIMM DDR5 up to 6400 MHz (H404)/7200 MHz (H484)
	BIOS	AMI SPI 256Mbit	AMI SPI 256Mbit
GRAPHICS	Controller	Intel® Arc Xe3	Intel® Arc Xe3
	Display	1 x HDMI 1 x DP++ HDMI: resolution up to 4096x2160 @60Hz DP: resolution up to 4096x2304 @60Hz USB Type C (DP alt-mode/USB3.2 Gen2/PD 15W): resolution up to 4096x2304 @60Hz (HBR2)	1 x HDMI 1 x DP++ HDMI: resolution up to 4096x2160 @60Hz DP: resolution up to 4096x2304 @60Hz USB Type C (DP alt-mode/USB3.2 Gen2/PD 15W): resolution up to 4096x2304 @60Hz (HBR2)
	Quad Displays	HDMI + DP + USB Type C (DP alt-mode/USB3.2 Gen2/PD 15W) + M2A-Display (optional)	HDMI + DP + USB Type C (DP alt-mode/USB3.2 Gen2/PD 15W) + M2A-Display (optional)
EXPANSION	Interface	1 x PCIe Gen 5 x4 slot	1 x PCIe Gen 5 x4 slot
		1 x M.2 2242/2280 M Key (PCIe Gen4x4, SATA3 opt. selected by BIOS, support NVMe)	1 x M.2 2242/2280 M Key (PCIe Gen4x4, SATA3 opt. selected by BIOS, support NVMe)
		1 x M.2 2242/3042/3052 B Key (PCIe Gen4x1 shared with M.2 A key by request, USB3.2 Gen2, USB2.0, SIM)	1 x M.2 2242/3042/3052 B Key (PCIe Gen4x1 shared with M.2 A key by request, USB3.2 Gen2, USB2.0, SIM)
		1 x M.2 2230 E Key (PCIe Gen4x1 and USB2.0, support Intel® CNVi,WIFI7)	1 x M.2 2230 E Key (PCIe Gen4x1 and USB2.0, support Intel® CNVi,WIFI7)
		1 x M.2 3042/3060 A Key (Standoff 3030) Support M2A Display solution (eDP/LVDS/VGA/DP/HDMI or DVI via optional cable) Support M2A-M21 expansion solution (PCIEx1,USB3/USB2,SIM)	1 x M.2 3042/3060 A Key (Standoff 3030) Support M2A Display solution (eDP/LVDS/VGA/DP/HDMI or DVI via optional cable) Support M2A-M21 expansion solution (PCIEx1,USB3/USB2,SIM)
AUDIO	Audio Codec	Realtek ALC888S	Realtek ALC888S
ETHERNET	Controller	LAN1/2: i226V/IT (10/100/1000/2.5G speeds) LAN3(vPro): i226LM/IT (10/100/1000/2.5G speeds)	LAN1/2: i226V/IT (10/100/1000/2.5G speeds) LAN3(vPro): i226LM/IT (10/100/1000/2.5G speeds)
REAR I/O	Ethernet	Up to 3 x 2.5GHz RJ45 (LAN 3 colayout with internal vertical RJ45 by option)	Up to 3 x 2.5GHz RJ45 (LAN 3 colayout with internal vertical RJ45 by option)
	USB	4 x USB 3.2 Gen2 Type A 1 x USB 2.0 Type A 1 x USB 3.2 Gen 2 Type C (DP alt-mode/USB3.2 Gen 2/PD 15W)	4 x USB 3.2 Gen2 Type A 1 x USB 2.0 Type A 1 x USB 3.2 Gen 2 Type C (DP alt-mode/USB3.2 Gen 2/PD 15W)
	Display	1 x HDMI 2.0 1 x DP++	1 x HDMI 2.0 1 x DP++
INTERNAL I/O	Serial	2 x RS-232/422/485 (2.0mm pitch) 1 x RS-232 with power (2.0mm pitch) 1 x RS-232 (2.0mm pitch) colay with DIO-4bit or PS/2 (Option)	2 x RS-232/422/485 (2.0mm pitch) 1 x RS-232 with power (2.0mm pitch) 1 x RS-232 (2.0mm pitch) colay with DIO-4bit or PS/2 (Option)
	USB	4 x USB 2.0 (2.0mm pitch) 1 x M.2 A key with M2A-M21 supports up to 2 USB3 Gen1 and 4 USB2.0 (Option)	4 x USB 2.0 (2.0mm pitch) 1 x M.2 A key with M2A-M21 supports up to 2 USB3 Gen1 and 4 USB2.0 (Option)
	Display	1 x M.2 A key, support M2A-Display (eDP / LVDS / VGA / DP / HDMI or DVI via optional cable)	1 x M.2 A key, support M2A-Display (eDP / LVDS / VGA / DP / HDMI or DVI via optional cable)
	Audio	1 x Line-out/Mic-in 2 x 3W speaker header (L/R)	1 x Line-out/Mic-in 2 x 3W speaker header (L/R)
	SATA	2 x SATA 3.0 H484 RAID 0,1,5 supported by Intel VMD H404 RAID 0,1 (shared with M.2 M key)	2 x SATA 3.0 H484 RAID 0,1,5 supported by Intel VMD H404 RAID 0,1 (shared with M.2 M key)
	DIO	1 x 8-bit DIO	1 x 8-bit DIO
	Case open	1 x case open header	1 x case open header
	SMBus	1 x SMBus	1 x SMBus
WATCHDOG TIMER	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds	System Reset, Programmable via Software from 1 to 255 Seconds

SPECIFICATION

Model Name		PTH171	PTH173
SECURITY	TPM	dTPM (default) fTPM (option)	dTPM (default) fTPM (option)
POWER	Type	Single 12VDC	Wide Range 12~28VDC
	Connector	DC-in Jack Right Angle Connector (4-pin) (Option) Straightl Type Connector (4-pin) (Option)	DC-in Jack Right Angle Connector (4-pin) (Option) Straightl Type Connector (4-pin) (Option)
	Consumption	Idle: TBD Max: TBD	Idle: TBD Max: TBD
	RTC Battery	CR2032 Coin Cell	CR2032 Coin Cell
OS SUPPORT	Microsoft	Windows 11 24H2 LTSC 64-bit	Windows 11 24H2 LTSC 64-bit
	Linux	Ubuntu 24.04	Ubuntu 24.04
ENVIRONMENT	Temperature	Operating: -5 to 65°C, -20 to 70°C Storage: -40 to 85°C	Operating: -5 to 65°C, -20 to 70°C Storage: -40 to 85°C
	Humidity	Operating: 5 to 95% RH Storage: 5 to 95% RH	Operating: 5 to 95% RH Storage: 5 to 95% RH
ENVIRONMENT	MTBF	TBD	TBD
MECHANISM	Dimensions	Mini-ITX Form Factor 170mm (6.7") x 170mm (6.7")	Mini-ITX Form Factor 170mm (6.7") x 170mm (6.7")
	Height	PCB: TBDmm Top Side: TBDmm Bottom Side: TBDmm	PCB: TBDmm Top Side: TBDmm Bottom Side: TBDmm
STANDARDS AND CERTIFICATION	Certifications	CE, FCC, RoHS, UKCA	CE, FCC, RoHS, UKCA

PACKING LIST

• 1 PTH171/PTH173 motherboard	
• 1 COM port cable with bracket (Length: 250mm, 1 x COM ports)	A81-015115-018G
• 1 Serial ATA data with power cable (Length: 300mm)	A81-002144-018G
• 4 M.2 screw/standoff	
• 1 I/O Shield	
- (2 LAN, Regular type)(For Sample)	TBD
- (3 LAN, Regular type)(For Sample)	TBD
- (2 LAN, Thin type)(For Sample)	TBD
- (3 LAN, Thin type)(For Sample)	TBD
• 1 Cooler	
- (Wide/Normal Temp. -Cooler for 25W)	TBD (Default)