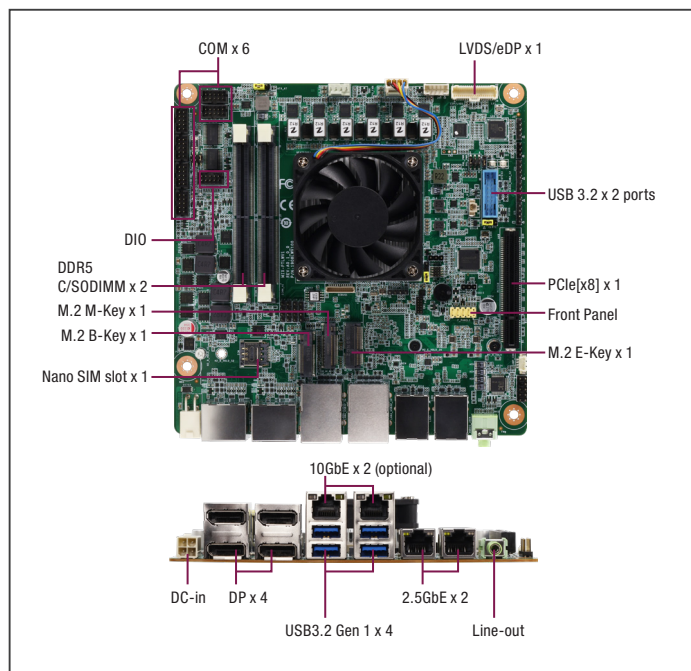


MIX-PTLWV1 PRELIMINARY

Mini-ITX with Intel® Core™ Ultra Series 3 Processors, 12V~24V DC-in Power



Features

- Intel® Core™ Ultra Series 3 Processors, TDP 15~25W
- DDR5 C/SO-DIMM x 2, Max. 128GB
- PCIe Gen 5 [x8] x 1
- Up to LAN x 4 (10GbE x 2 + 2.5GbE x 2)
- M.2-1A 2280 M-Key x 1
- M.2 2230 E-Key x 1, M.2 3042/52 B-Key x 1 with SIM socket
- 12V~24V DC-in power



Certificate	CE & FCC (Class A)
Form Factor	Mini-ITX: 6.7" x 6.7" (170mm x 170mm)
Weight	TBD
MTBF (Hours)	—
Rear Panel I/O Ports	
USB	USB 3.2 Gen 1 x 4 ports (5Gbps)
Display I/O	DP 1.4 x 4
Audio I/O	Line-out x 1
LAN I/O	SKU 4L: RJ-45 LAN x 4 (10GbE x 2 + 2.5GbE x 2), SKU 2L: RJ-45 LAN x 2 (2.5GbE x 2),
Serial Port	—
PS/2 Port	—
Others	2x2-Pin Connector x 1
Internal I/O Connectors	
Storage	M.2-1A 2280 M-Key x 1 (PCIe [x4]; Gen 4, NVMe)
USB	USB 3.2 Gen 1 x 1 (via 2 x 10-pin, 2.0mm header), supports additional 2 USB ports interface
Display I/O	40-pin LVDS/eDP Connector x 1
Audio I/O	1x4-Pin header x 1, supports 2W/4ohm
Serial Port	RS-232/422/485 Box Header x 1 (5V/12V/RI optional), RS-232 Box Header x 5
PS/2 Port	—
Parallel Port	—
DIO	8-bit programmable (4-in/4-out) x 1
FAN	Chassis Fan connectors (4-pin) x 1, CPU Fan connectors (4-pin) x 1
Power	—
Others	Clear CMOS Jumper x 1 Front Panel Header x 1 ATX/AT Mode Select x 1 ME Disable x 1 eDP/LVDS Tcon IC Voltage Select x 1 eDP/LVDS Panel Backlight Voltage Select x 1 (3.3V/5V/12V) LVDS Inverter x 1
OS	
OS Support	Windows® 11 64-bit, Linux Ubuntu 24.04 / Kernel 6.8

Specifications

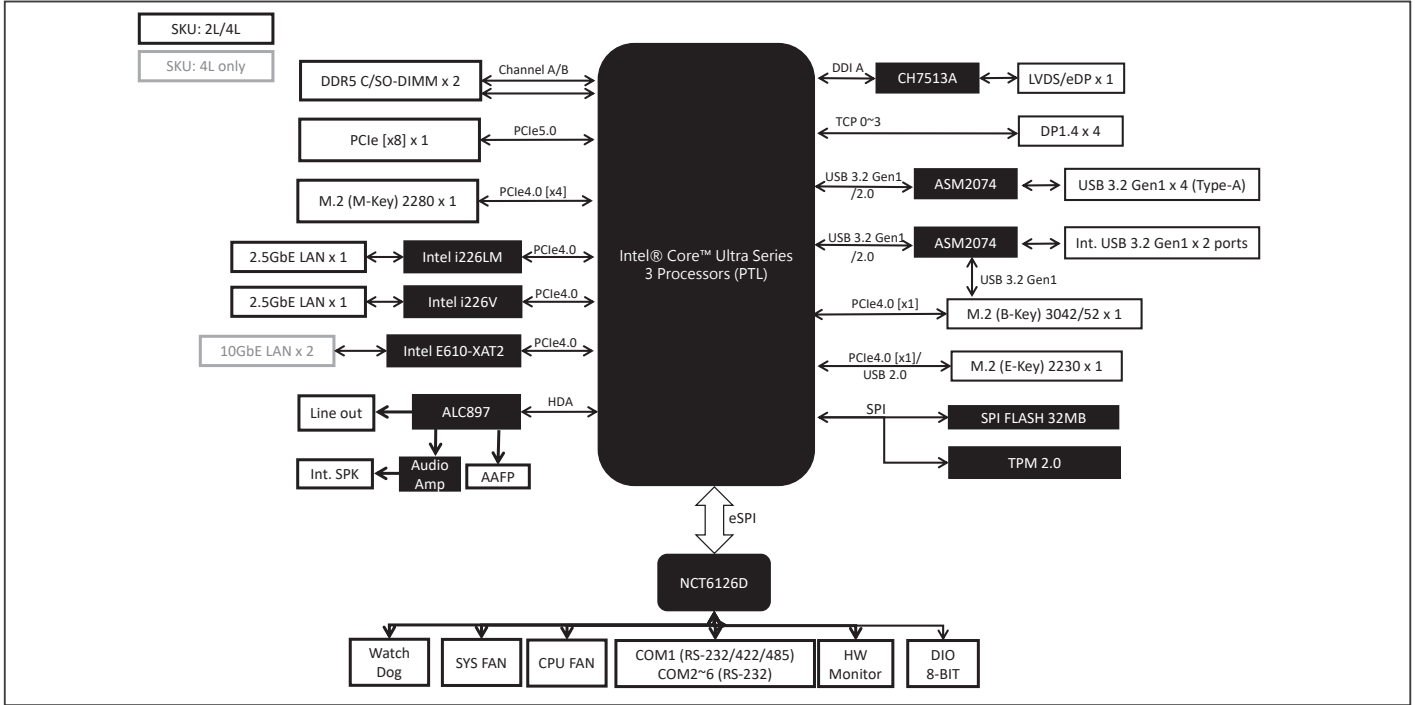
System	
Processor	Intel® Core™ Ultra Series 3 Processors, PTL-H404/PTL-H484 processors, TDP 15~25W
Chipset	—
Memory	DDR5 C/SO-DIMM x 2, 1DPC, Max. 128GB H404: 6400 MHz / H484: 7200 MHz
I/O Chipset	Nuvoton NCT6126D
Ethernet	Intel® Ethernet Controller I226-LM, 2.5GbE x 1 Intel® Ethernet Controller I226-V, 2.5GbE x 1 Intel® Ethernet Controller E610-XAT2, 10GbE x 2 (SKU 4L)
Audio	Realtek® ALC897
TPM	Infineon SLB9672 TPM2.0 onboard
Expansion Slots	PCIe Gen 5 [x8] x 1 (open edge) (BOM optional on H484) M.2 2230 E-Key x 1 (PCIe 4.0 [x1]/USB 2.0/CNVi) M.2 3042/3052 B-Key x 1 (PCIe [x1]/USB 3.2 Gen 1) with Nano SIM Socket (Default 3052 by BOM optional)
BIOS	256Mbit Flash ROM, AMI BIOS
H/W Monitor	Temperature Monitor on CPU/System, Voltage Monitor on Vcore/5V/3.3V/12V, Fan Monitor on Chassis
WatchDog Timer	1~255 steps by software program
Smart Fan Control	CPU Fan, SYS Fan
Wake On LAN/ PXE	Yes (WOL/PXE)
Power State	S4, S5
Graphics	
Graphics Chipset	Intel® Xe LPG Graphics
Graphics Multi Display	Quad Display
VGA	—
DVI	—
HDMI	—
Display Port	DP1.4, up to 4096 x 2160 @60Hz
LVDS	Up to 1920 x 1080 @60Hz, Dual Channel 18/24 bit, co-layout eDP (default LVDS)
eDP	eDP1.4, up to 4096 x 2160 @120Hz, 4ch, co-layout LVDS by BOM optional
Backlight Control	—
Environment & Power & ME	
Battery	Lithium battery
Power Requirement	12V ~ 24V DC-in (±5%)
Operating Temperature	32°F ~ 140°F (0°C ~ 60°C) (Operational humidity: 60°C @90% RH Non-Condensing)
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)

Packing List

- MIX-PTLWV1
- I/O Shield

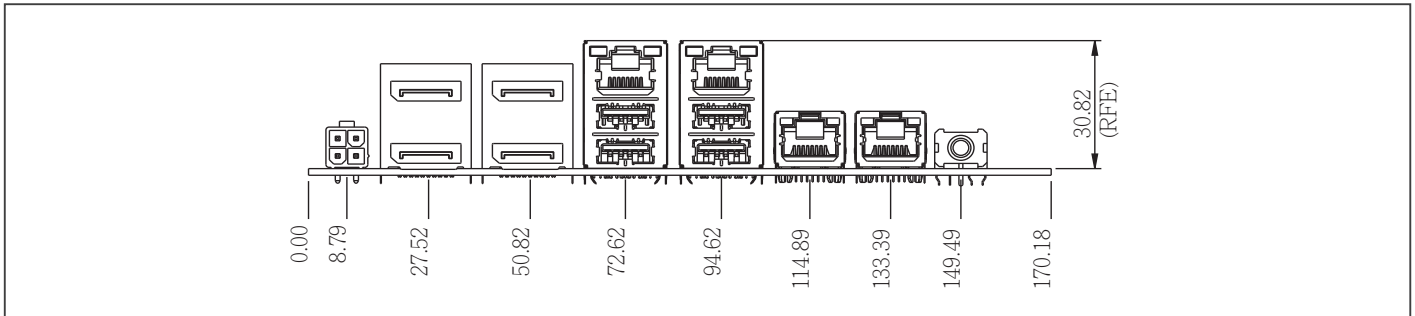


Block Diagram



Dimension

Unit: mm



Ordering Information

Part number	CPU	RAM	Fan/Fanless	Display	LVDS/eDP	Storage	LAN	USB	RS-232	RS-232/422/485	Expansion Slot	Power	TPM	Temp.
MIX-PTLWV1-A10-4L	Intel® Core™ Ultra Series 3	C/SODIMM x 2	Fan	DP1.4 x 4	LVDS/eDP x 1	M.2-1A M-Key x 1	10GbE LAN x 2 + 2.5GbE LAN x 2	USB 3.2 x 6	5	1	PCIe [x8] x 1 M.2 E-Key x 1 M.2 B-Key x 1 with Nano SIM Slot x 1	DC 12V-24V	TPM2.0	0°C -60°C
MIX-PTLWV1-A10-2L	Intel® Core™ Ultra Series 3	C/SODIMM x 2	Fan	DP1.4 x 4	LVDS/eDP x 1	M.2-1A M-Key x 1	2.5GbE LAN x 2	USB 3.2 x 6	5	1	PCIe [x8] x 1 M.2 E-Key x 1 M.2 B-Key x 1 with Nano SIM Slot x 1	DC 12V-24V	TPM2.0	0°C -60°C

Optional Accessories

- TBD