

MIX-MTLD1 PRELIMINARY

Mini-ITX with Intel® Core™ Ultra Processor, TDP 15W (U-series)/28W (H-series)

TBD

Features

- Intel® Core™ Ultra processors (H-series & U-series support)
- Dual Channel DDR5 Support, 5600MHz, Max 96GB
- HDMI 2.0 x 4
- M.2 3042/52 B-Key x 1, M.2 2230 E-Key x 1, M.2 2280 M-Key x 1
- USB 2.0 x 5, USB 3.2 x 3
- USB 3.2 Gen 1 (Type-C) x 1
- Intel® Ethernet Controller I210-AT x 1, Intel® Ethernet Controller I226-V x 1
- SATA 6Gb/s x 2
- 12V DC-in power
- PCIe [x8] x 1 (SKU dependent)
- OOB Module Support (via i210-AT)



Rear Panel I/O Ports

USB	USB 3.2 Gen 2 (Type-A) x 1 USB 2.0 x 3 USB 3.2 Gen 1 (Type-C) x 1 (5Gbps)
Display I/O	HDMI 2.0 x 4
Audio I/O	Line-out x 1, MIC-in x 1
LAN I/O	RJ-45 LAN Port x 2
Serial Port	—
PS/2 Port	—
Others	2x4-pin DC-in connector x 1

Internal I/O Connectors

Storage	SATA 6Gb/s x 2 with SATA power Connector x 1 (2A), RAID 0,1,5,10 support M.2 2280 M-Key x 1 (PCIe Gen 4 [x4], NVMe)
USB	USB 3.2 Gen 1 x 1 (2x10-pin, 2.0mm Header) additional 2 USB port interface USB 2.0 x 1 (2x5-pin, 2.00mm Header) additional 2 USB port interface
Display I/O	LVDS/eDP Header x 1
Audio I/O	Pin header (1x4-pin) Support 2W/4ohm x 1
Serial Port	Box Header x 1 for RS-232/422/485 Box Header x 3 for RS-232
PS/2 Port	—
Parallel Port	—
DIO	8-bit programmable (4-in/4-out) x 1
FAN	4-pin CPU Fan connector x 1, 4-pin Chassis Fan connector x 1
Power	2x4-pin DC-in 12V (-5% ~ +5%) x 1
Others	Clear CMOS Jumper x 1 Front Panel Connector x 1 Buzzer 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 SATA PWR Connector x 1 LVDS Inverter Connector x 1 1x3-pin ME Lock Header 1x5-pin SMBUS Header NCSI Header x 1 for OOB Module (via Intel® Ethernet Controller I210-AT)
OS	
OS Support	Windows® 10 64-bit, Windows® 11 64-bit

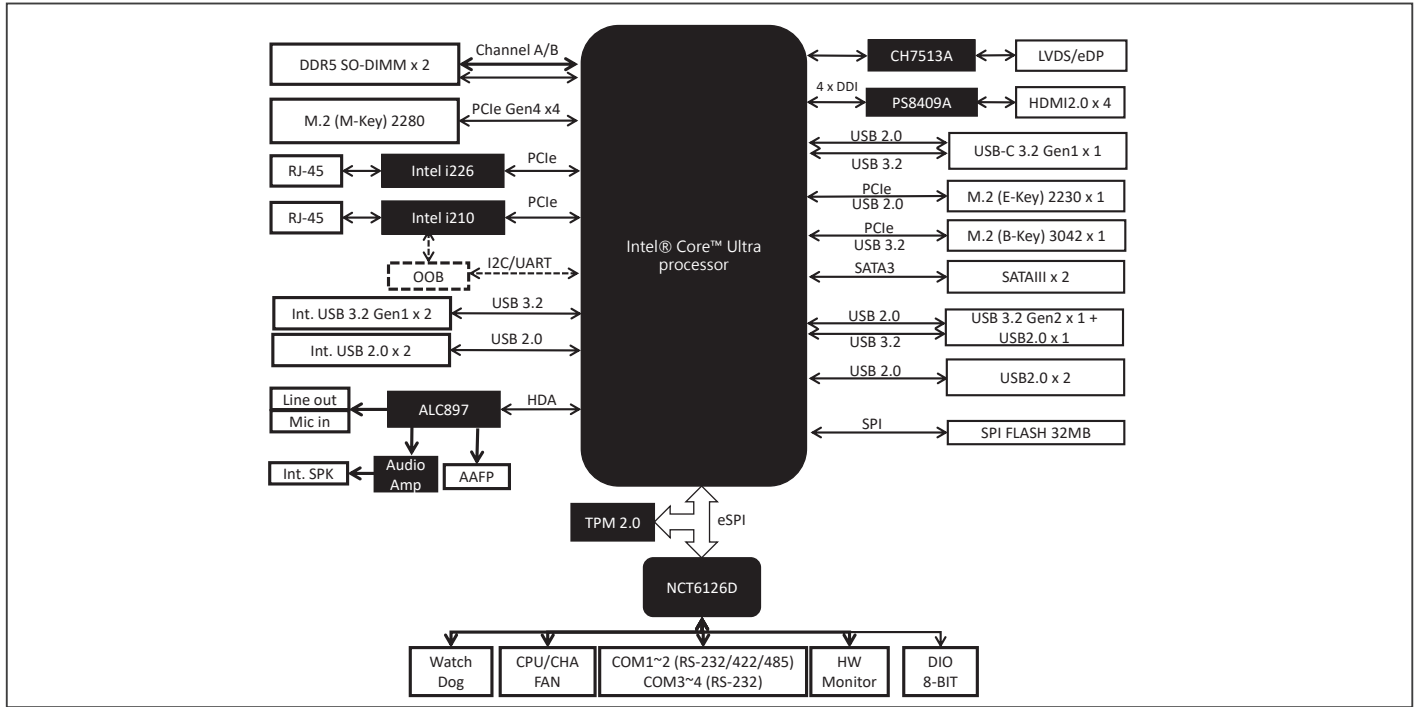
Packing List

- MIX-MTLD1
- I/O Shield
- SATA Cable
- SATA Power Cable

Specifications

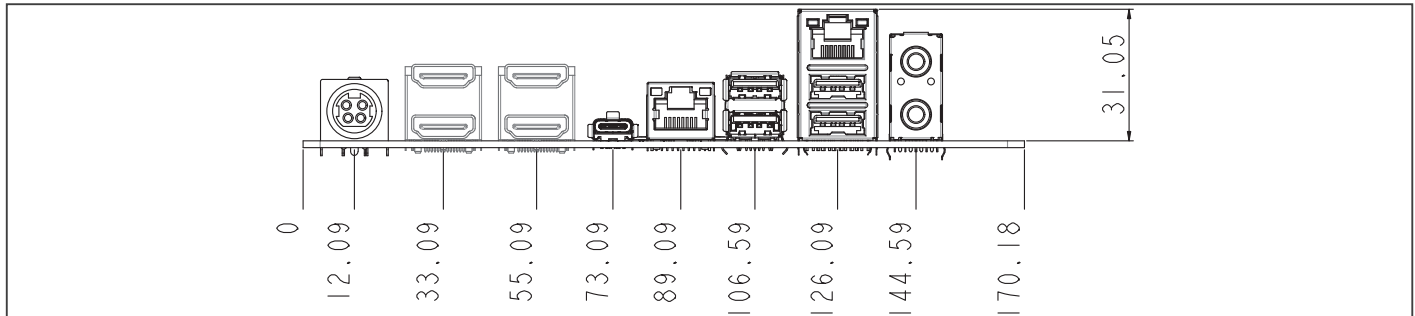
System	
Processor	Intel® Core™ Ultra processors (H-series & U-series support) TDP: 15W (U-series)/28W (H-series)
Chipset	—
Memory	Dual Channel DDR5 5600MHz SODIMM x 2, Max 64GB
I/O Chipset	NCT5525D
Ethernet	Intel® Ethernet Controller I210-AT x 1 Intel® Ethernet Controller I226-V x 1
Audio	Realtek® ALC897
TPM	Onboard TPM 2.0
Expansion Slots	M.2 2230 E-Key x 1 (one pair PCIe [x1], USB 2.0, CNVi) M.2 3042/52 B-Key x 1 (PCIe [x1], USB 3.2 Gen 1) with Nano SIM socket (Default 3052 by BOM) PCIe Gen 5 [x8], H-series only; Open edge
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/ Chassis 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	HDMI 2.0, up to 4096 x 2160 @60Hz, with Digital Audio
Display Port	—
LVDS	Dual-Channel 18/24 bit, up to 1920 x 1080 @60Hz (Co-layout eDP header; default: LVDS)
eDP	Up to 4096 x 2160 @60Hz (4ch; Co-layout LVDS by BOM optional)
Backlight Control	PWM
Environment & Power & ME	
Battery	Lithium battery
Power Requirement	12V ±5%
Operating Temperature	32°F ~ 140°F(0 ~ 60°C) (Operational humidity: 60°C @ 90% RH Non-Condensing)
Storage Temperature	—
Certificate	CE & FCC (Class A)
Form Factor	Mini-ITX: 6.7" x 6.7" (170mm x 170mm)
Weight	1.1 lb. (0.5Kg)
MTBF (Hours)	—

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-MTLD1-A10-125H	125H	SODIMM x 2	Fan	HDMI x 4 LVDS/eDP x 1	1	SATA 6Gb/s x 2 M.2 M-Key	2.5GbE x 1 1GbE x 1	USB 2.0 x 5 USB 3.2 x 3 USB 3.2 Type-C x 1	3	1	M.2 E-Key x 1 M.2 B-Key x 1 PCIe(x8) x 1	12V	2.0	0°C ~60°C

Optional Accessories

- TBD