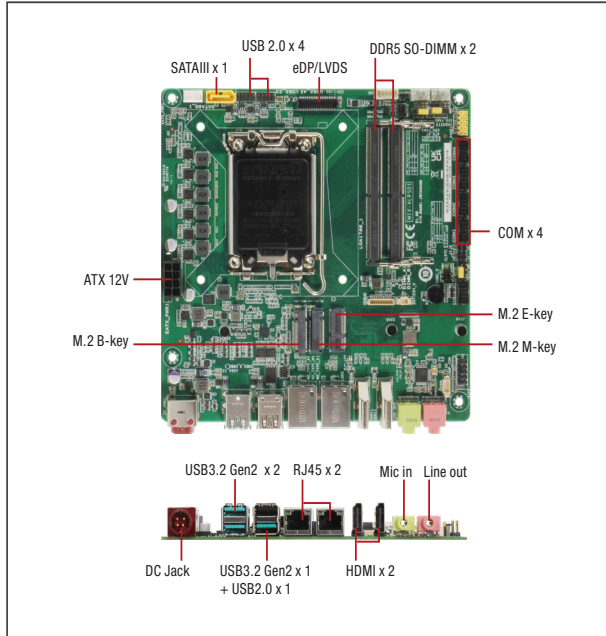


MIX-ALPSD1

Mini-ITX with 13th/12th Gen Intel® Core™ Processors for IoT Edge

Industrial Motherboards



Features

- 12th/13th Gen Intel® Core™ Processors for IoT Edge, up to 45W, LGA 1700 Socket-Type
- DDR5 4800MHz SODIMM, Max 64GB
- HDMI 2.0 x 2, LVDS/eDP x 1
- M.2 2280 M-Key x 1, M.2 2230 E-Key x 1 (PCIe [x1] x 2), M.2 3042 B-Key x 1
- USB 3.2 x 3, USB 2.0 x 5
- GbE LAN x 2
- RS-232/422/485 Header x 1, RS-232 Header x 3
- SATA 6Gb/s x 1
- DC 12V input



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 (0.5 Kg)
MTBF (Hours)	415,160

Rear Panel I/O Ports	
USB	USB 3.2 Gen 2 x 3, USB 2.0 x 1
Display I/O	HDMI 2.0 x 2
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	—

Internal I/O Connectors	
Storage	SATA 6Gb/s x 1 with SATA Power Connector x 1 (1A) M.2 2280 M-Key x 1 (PCIe [x4]/NVMe)
USB	USB 2.0 x 4 via 2x5P Headers x 2
Display I/O	40-pin LVDS/eDP connector x 1 with Inverter
Audio I/O	HD Audio x 1 (via AAFP Header), Internal Speaker x 1 (2W/40hmΩ)
Serial Port	COM Box Header x 1 (RS-232/422/485) COM Box Header x 3 (RS-232)
PS/2 Port	—
Parallel Port	—
DIO	Digital I/O Box Header x 1
FAN	4-pin CPU Fan connector x 1, 4-pin Chassis Fan connector x 1
Power	—

Others	Clear CMOS Jumper x 1 Front Panel Connector x 1 Chassis Intrusion x 1 Buzzer Onboard 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
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OS	
OS Support	Windows® 10 64-bit, Windows® 11 64-bit

Specifications

System	
Processor	13th Gen Intel® Core™ CPUs: Intel® Core™ 3 processor 100HL Intel® Core™ 5 processor 120HL Intel® Core™ 5 processor 120UL Intel® Core™ 5 processor 130HL Intel® Core™ 7 processor 150HL Intel® Core™ 7 processor 160HL 12th Gen Intel® Core™ CPUs: Intel® Core™ i7-1255UL Processor Intel® Core™ i7-12700HL Processor Intel® Core™ i5-1235UL Processor Intel® Core™ i5-12500HL Processor Intel® Core™ i3-1215UL Processor Intel® Core™ i3-12300HL Processor Intel® Celeron® Processor 7305L
Chipset	—
Memory	Single-Channel DDR5 4800 MHz SODIMM x 2 (Non-ECC, Max. 64GB)
I/O Chipset	NCT6126D
Ethernet	Realtek® RTL8111H-CG x 2
Audio	Realtek® ALC897 with Amp.
TPM	TPM2.0
Expansion Slots	M.2 3042 B-Key x 1 (PCIe [x1]) M.2 2230 E-Key x 1 (PCIe [x1] x 2)
BIOS	256Mbit Flash ROM, AMI BIOS
H/W Monitor	Temperature Monitor on CPU/Chassis, Voltage Monitor on Vcore/5V, Fan Monitor on CPU/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	S3, S4, S5
Graphics	
Graphics Chipset	Intel® UHD Graphics
Graphics Multi Display	HDMI x 2 + eDP x 1, HDMI x 2 + LVDS x 1
VGA	—
DVI	—
HDMI	HDMI 2.0, Up to 4096 x 2160 @60Hz
Display Port	—
LVDS	Dual-Channel 18/24 bit LVDS via CH7513, up to 1920 x 1080 @60Hz, colay eDP
eDP	Up to 1920 x 1080 @60Hz
Backlight Control	PWM
Environment & Power & ME	
Battery	Lithium battery
Power Requirement	DC 12V Power consumption: Peak 150W; Typical 120W

Packing List

- MIX-ALPSD1
- I/O Shield
- SATA Cable
- SATA Power Cable

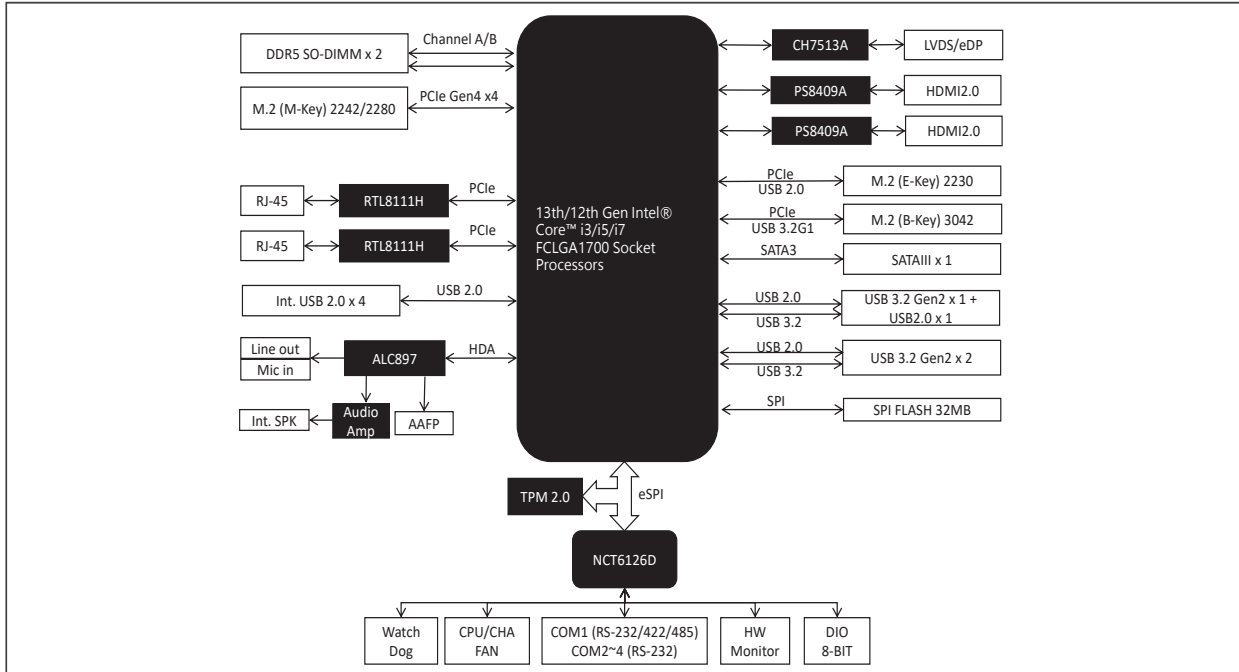
Note: All specifications are subject to change without notice.

MIX-ALPSD1

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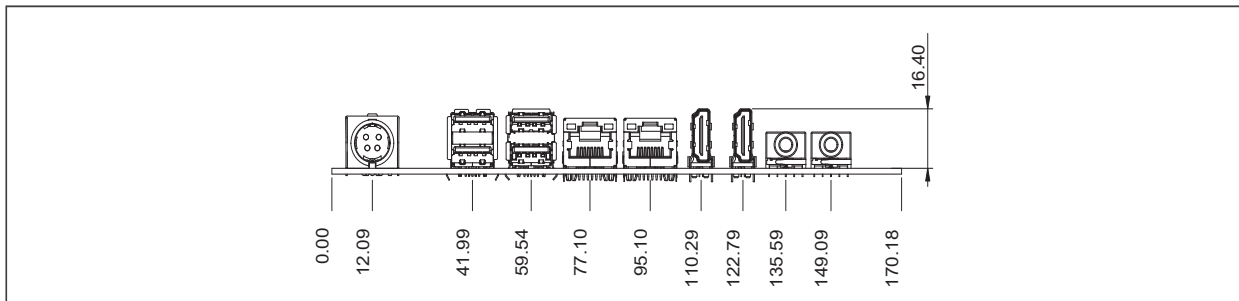
Industrial Motherboards

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-ALPSD1-A11	Socket	DDR5 SODIMM x 2	Fan	HDMI x 2	1	SATA III x 1, M.2 M-key x 1	GbE x 2	USB 2.0 x 5, USB 3.2 x 3	3	1	M.2 B-Key x 1, M.2 E-Key x 1	DC 12V	TPM2.0	0-60°C

Optional Accessories

Part Number	Description
1255X00011	(TF)AC/DC Adapter.12V.192W.16A.FSP192-AHAN3.9NA1920100
1709100201	USB 2.0 Cable (10P, 200MM, p=2.00mm, w/bracket)
1701100206	COM Cable (200MM, p=2.00mm)
1700100491	USB 2.0 Cable (10P, 490mm, p=2.00mm)
AP-FNTH11700020	(TF).1U CPU cooler for LGA1700.TDP up to 125W.12V.5400RPM.Smart FAN.90*90*25mm.Ablecom.ACL-D11122
AP-FNTH11700030	(TF).2U CPU cooler for LGA1700.TDP up to 125W.12V.8400RPM.Smart FAN.95*95*63.5mm.Ablecom.ACL-D21120
AP-FNTH11700010	(TF).2U CPU cooler for LGA1700.TDP up to 95W.12V.2500RPM.Smart FAN.91*91.Ablecom.ACL-S41120

Assured Systems

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