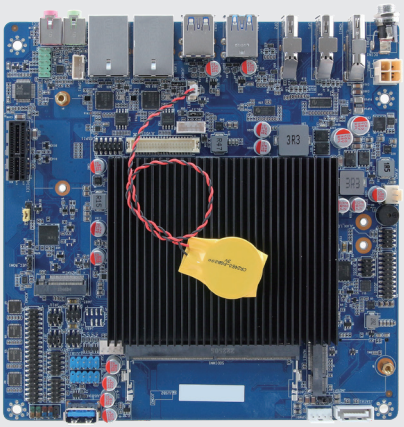
EMX-ASLP

Onboard Intel® Processor N97, and Intel® Core™ i3-N305 Processor, Intel Atom® x7000RE series processors, Thin Mini ITX Motherboard



Features

- Onboard Intel® Processor N97, and Intel® Core™ i3-N305 Processor, Intel Atom® x7000RE series processors
- 1 x 262-pin DDR5 4800 MHz SO-DIMM Socket, Supports Up to 16GB Max
- HDMI, DP++, DP, eDP or LVDS
- 1 x PCIe x1
- 2 x Intel® i226V or i226IT
- 2 x USB3.2 Gen2, 3 x USB3.2 Gen1, 4 x USB 2.0
- 1 x M.2 Type B, 1 x M.2 Key E, 1 x M.2 Key M
- 6 x COM
- DC in +12V~24V

DDR5 SO-DIMM | USB 3.2 Gen2 | 2.5GbE LAN | Triple Display

Specifications

System Information	
Processor	Onboard Intel® Processor N97, and Intel® Core™ i3-N305 Processor, Intel Atom® x7000RE series processors
System Memory	1 x 262-Pin DDR5 4800MHz SO-DIMM Socket Supports Up to 16GB
I/O Chipset	EC iTE IT5782VG
Watchdog Timer	H/W Reset: 1Sec. ~ 65535Sec./Min. and1 Sec. or 1Min./Step
BIOS	AMI uEFI BIOS, 256Mbit SPI Flash ROM
H/W Status Monitor	CPU Temperature Monitoring Voltage Monitoring CPU Fan Speed Control
TPM	Onboard nuvoTon NPCT754AADYX support SPI TPM 2.0 (BOM option)
Board	Thin Mini ITX
Expansion	
Expansion	1 x M.2 Type B slot for 3042/3052/2242 size with USB 3.2 Gen1x1, USB 2.0, SIM Slot for LTE/IO Cards support WWAN+GNSS 1 x M.2 Key E 2230 (1 x PCIe Gen3 x1 & USB 2.0 Signal) 1 x M.2 Type M 2242/2280 SSD Support PCIe Gen3 x1 or SATA III
Display	
Graphic Chipset	Intel® UHD Integrated Graphics
Spec. & Resolution	1 x HDMI 2.0b HDMI 2.0b Max resolution 4096 x 2160@60Hz 1 x DP++ DP++ Max resolution 1920 x 1080@60Hz 1 x DP 1.4a Max resolution 4096 x 2160@60Hz 1 x eDP or LVDS eDP 1920 x 1080@60Hz (2 Lanes) LVDS 1920 x 1080 (Dual Channel 18/24-bits)
Multiple Display	Triple Display
LVDS	1 x LVDS (Dual Channel 18/24-bits) or 1 x eDP (2 Lanes) Chrontel CH7513A-BF eDP to LVDS Converter
Audio	
Audio Codec	Realtek ALC888S HD Audio Decoding Controller
Audio Interface	Mic-in, Line-out
Audio Amplifier	2 x 2W 4Ω Amplifier

Ethernet	
LAN Chipset	2 x Intel® i226V or i226IT 2.5 Gigabit Ethernet
Ethernet Interface	100/1000/2500 Base-Tx GbE compatible Gigabit Ethernet
LAN Port	2 x RJ-45
Software Support	
OS	Windows 10, Windows 11, Linux
Certification	
Certification Information	CE, FCC, RoHS Compliant
I/O	
USB	2 x USB 3.2 Gen2 2 x USB 3.2 Gen1 1 x USB 3.2 Gen1 Vertical Type A 4 x USB 2.0
COM Port	4 x RS232 2 x RS232/422/485
SIM Slot	Co-lay 1 x 10pin FPC Connector for SIM Card Adapter
SATA	1 x SATA III 1 x SATA Power
DIO	1 x 16-bit GPIO
Mechanical & Environmental	
Operating Temp.	Standard Temperature: 0~60°C (32~140°F) with 0.5m/s air flow Extend Temperature: -20~70°C (-4~158°F) with 0.5m/s air flow
Storage Temp.	-40 ~ 75°C (-40 ~ 167°F)
Operating Humidity	40°C at 95% relative humidity, non-condensing
Weight	0.88lbs (0.4Kgs)
Power Requirement	DC in +12V~24V
Power Mode	AT/ATX (Default Setting: ATX)
Dimension (L x W)	6.7" x 6.7" (170mm x 170mm)

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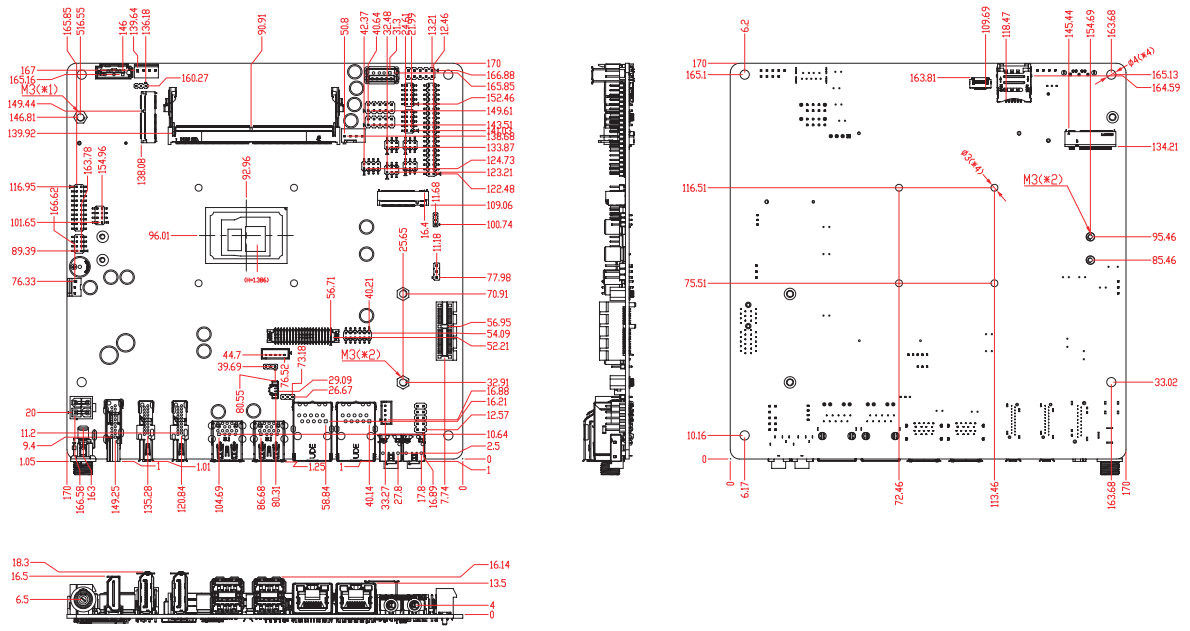
Mechanical Drawing



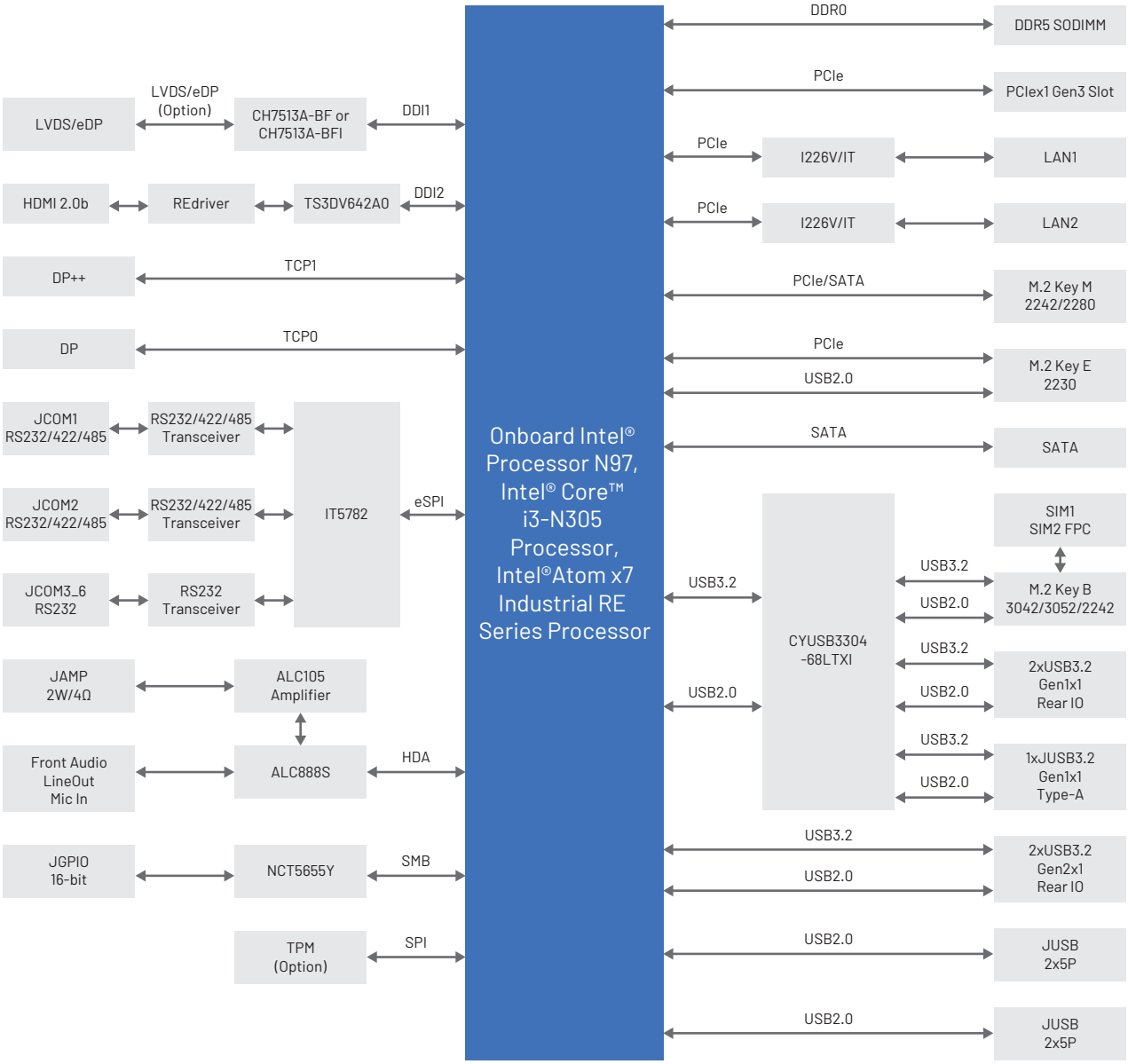
Ordering Information

P/N	Processor	Chipset	LAN	USB	COM	PCIe Slot	Power Input	Temp.
EMX-ASLP-N97-A1R	Intel Processor N97	Integrated	2	9	6	1	+12~24V DC	0 ~ 60°C (32 ~ 140°F)
EMX-ASLP-X7433-A1R	Intel® Atom® x7433RE	Integrated	2	9	6	1	+12~24V DC	-20 ~ 70°C (-4 ~ 158°F)

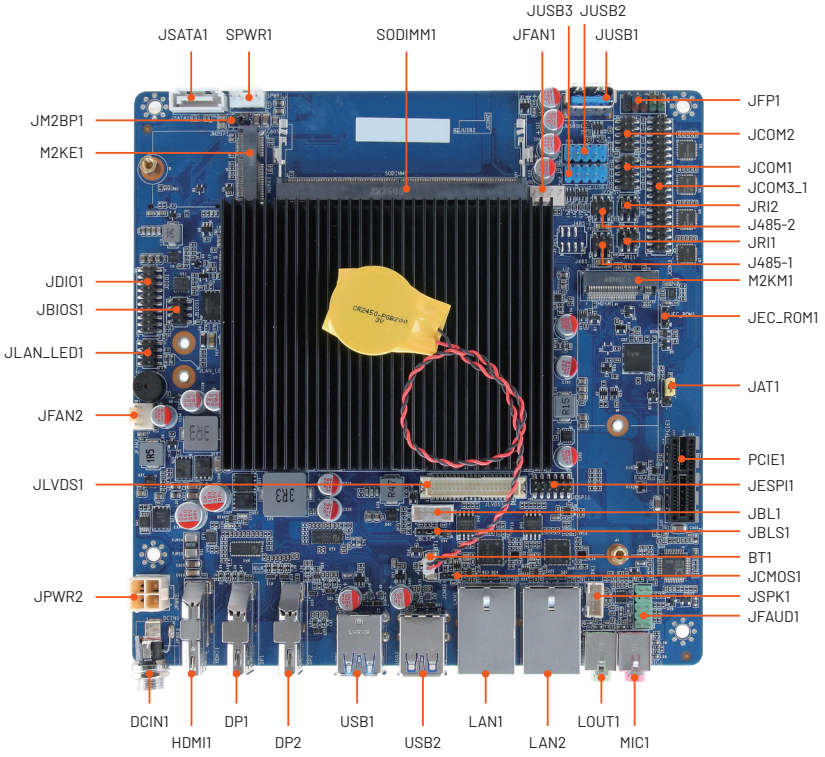
Packing List

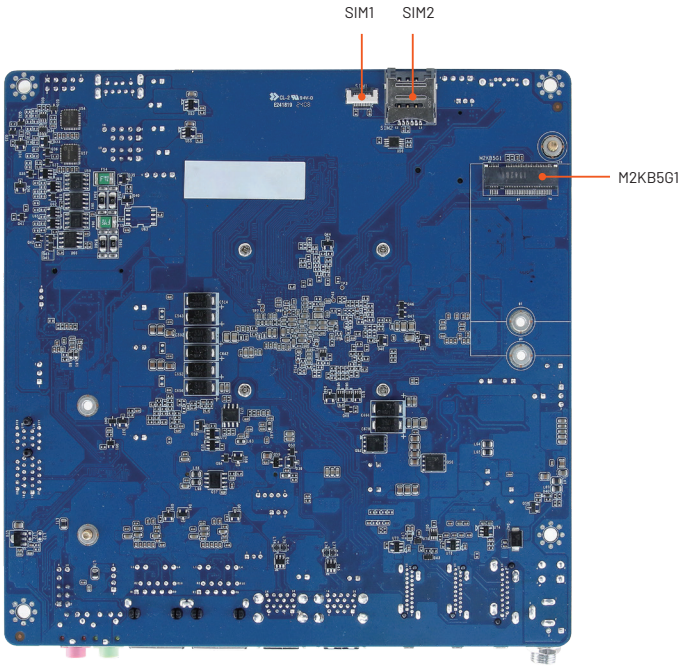
Item	P/N	Quantity
Half Size IO Shield	-	1
SATA Cable	-	1
Wire SATA Power	-	1

Block Diagram



I/O Overview


JSATA1
SPWR1
SODIMM1
JFAN1
JUSB3
JUSB2
JUSB1
JM2BP1
M2KE1
JDIO1
JBIOS1
JLAN_LED1
JFAN2
JLVDS1
JPWR2
JFP1
JCOM2
JCOM1
JCOM3_1
JRI2
J485-2
JRI1
J485-1
M2KM1
JEC_ROM1
JAT1
PCIE1
JESPI1
JBL1
JBLS1
BT1
JCMOS1
JSPK1
JFAUD1
DCIN1
HDMI1
DP1
DP2
USB1
USB2
LAN1
LAN2
LOUT1
MIC1


SIM1
SIM2
M2KB5G1