



Features

- Onboard Intel® Processor N97, and Intel® Core™ i3-N305 Processor, Intel Atom® x7000RE series processors
- Bottom Layer Soldered Processor
- Triple Display, DP 1.4a, HDMI 2.0b, 1x 2CH LVDS/eDP
- Dual Intel® Gigabit Ethernet, 2.5GbE
- Dual Expansion Slot, M.2 Key-B, M.2 Key-E
- DC in +9V ~ +36V



HDMI



DP



DDR5
SO-DIMM



USB 3.2



RS232/422/485

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 Max.
I/O Chipset	EC ITE IT5782VG
Watchdog Timer	H/W Reset, 1sec. ~ 65535sec and 1sec. or 1min./step
BIOS	AMI BIOS, 256Mbit SPI Flash ROM
H/W Status Monitor	CPU temperature monitoring Voltages monitoring CPU fan speed control
TPM	Onboard NuvoTon_NPCT750AABYX (for standard temp) & NPCT754AABYX (for extend temp) supports TPM 2.0
Board	3.5"

Expansion

Expansion	1 x M.2 Type B slot for 3042/3052/2242 size (PCIe x1+USB 3.2 GEN1 + USB 2.0) 1 x M.2 Type E 2230 support CNVi WiFi module (1 x PCI-e x1 & USB 2.0 Signal)
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Storage

Storage	1 x M.2 (Type B) 1 x SATA III
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Display

Graphic Chipset	Intel® UHD Graphics
Spec. & Resolution	HDMI 2.0b Max resolution 4096 x 2160 @ 60Hz DP 1.4a Max resolution 4096 x 2160 @ 60Hz LVDS 1920 x 1080 Dual channel 18/24-bits or eDP 1920 x 1080 @ 60Hz (2 Lanes)
Multiple Display	Triple Display
LVDS	1 x LVDS: 1920 x 1080 Dual channel 18/24-bits LVDS

Audio

Audio Codec	Realtek ALC888S HD Audio Decoding Controller
Audio Interface	Line-in, Mic-in, Line-out

Ethernet

LAN Chipset	2 x Intel® I226LM/I226IT
Ethernet Interface	10/100/1000/2.5G Base-Tx GbE compatible
LAN Port	2 x RJ-45

Power Requirement

Power Mode	AT/ATX (Default Setting: AT)
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Software Support

OS	Windows 11, Linux
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Certification

Certification Information	CE, FCC Class, RoHS Compliant
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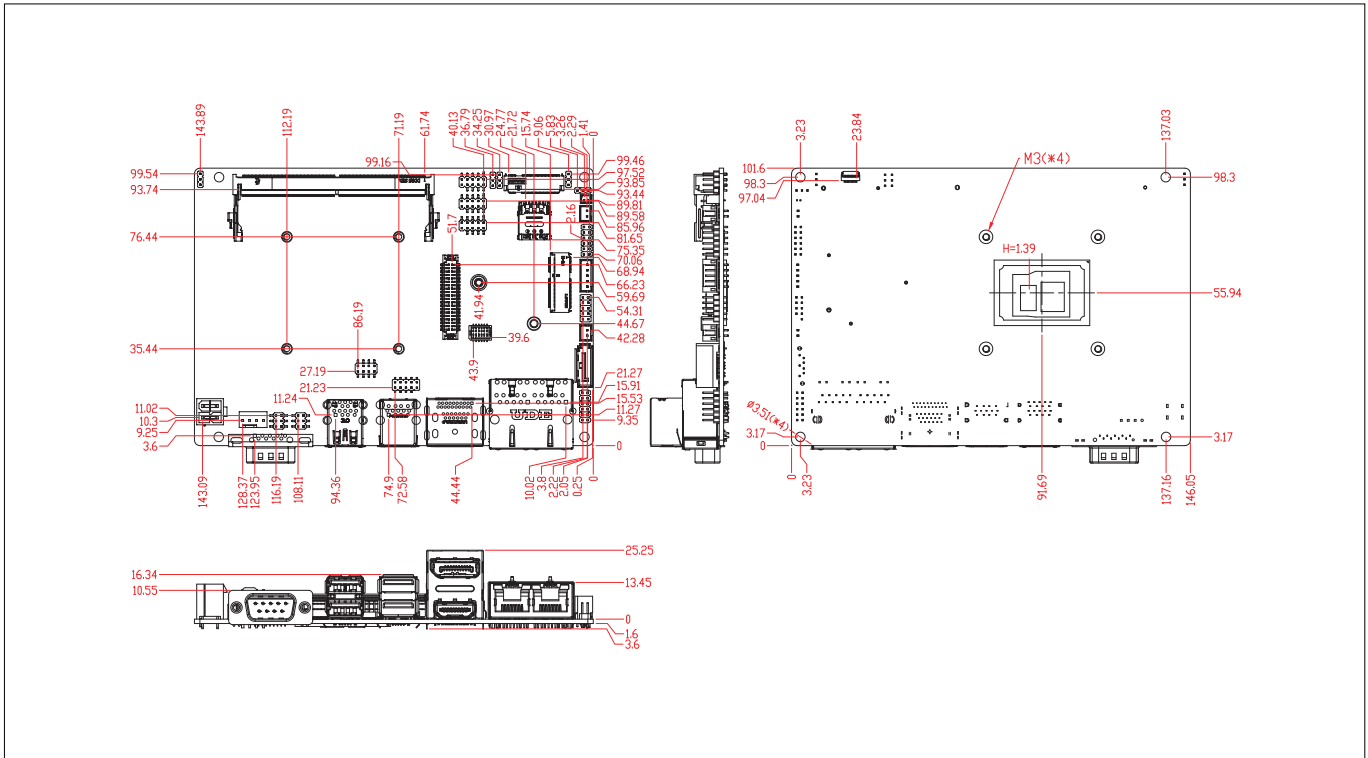
I/O

USB	3 x USB 3.2 Gen2, 1 x USB 2.0 at IO 2 x USB2.0 by Pin header
COM Port	3 x RS-232 1 x RS-232/422/485
SATA	1 x SATA III
DIO	1 x 8-bit GPIO
MIO	1 x eSPI 1 x SIM Card Slot

Mechanical & Environmental

Operating Temp.	Standard Temperature: 0°C ~ 60°C (-4 ~ 140°F) with 0.5m/s Air Flow Extend Temperature: -40°C ~ 80°C (-40°F ~ 176°F) with 0.5m/s Air Flow for Wide Temp. CPU SKU
Storage Temp.	-40°C ~ 85°C (-40°F ~ 185°F)
Operating Humidity	40°C @ 95% Relative Humidity, Non-condensing
Weight	0.44lbs (0.2kg)
Power Requirement	DC in +9V ~ +36V
Dimension (L x W)	5.7" x 4" (146mm x 101mm)

Mechanical Drawing



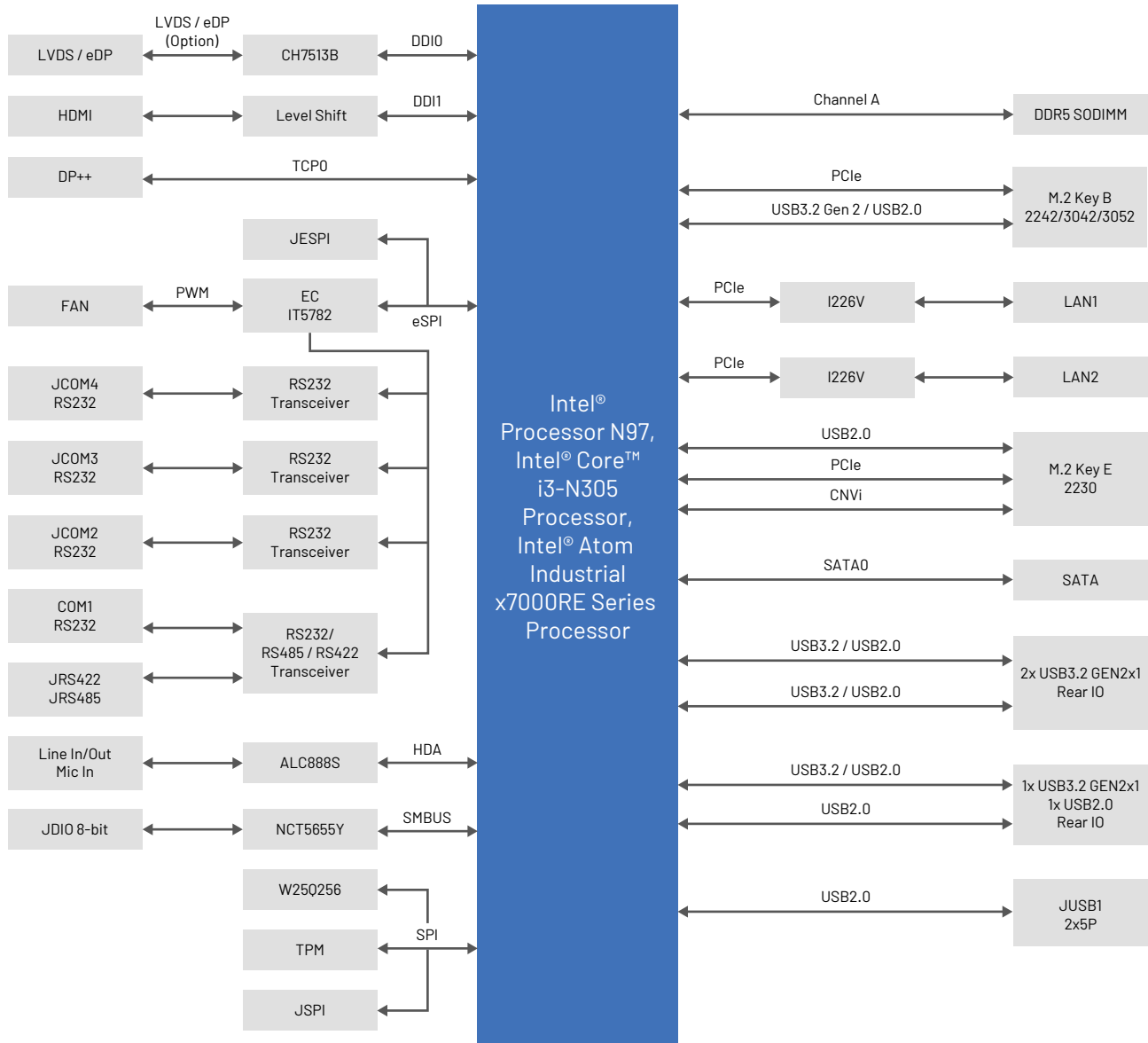
Ordering Information

P/N	Processor	Chipset	LAN	USB	COM	PCIe Slot	Power Input	Temp.
ECM-ASL-N97-A1R	Intel® Processor N97	NA	2	6	4	0	+9~36V DC	0°C ~ 60°C (32°F ~ 140°F)
ECM-ASL-N305-A1R	Intel® Core™ i3-N305 Processor	NA	2	6	4	0	+9~36V DC	0°C ~ 60°C (32°F ~ 140°F)
ECM-ASL-7433-A1R	Intel Atom® Processor x7433RE	NA	2	6	4	0	+9~36V DC	-40°C ~ 80°C (-40°F ~ 176°F)
ECM-ASL-7835-A1R	Intel Atom® Processor x7835RE	NA	2	6	4	0	+9~36V DC	-40°C ~ 80°C (-40°F ~ 176°F)

Packing List

Item	P/N	Quantity
Serial ATA cable (7-pin, standard)	-	1
Wire SATA power cable (15-pin, 2P/2.0mm)	-	1
Flat cable 9P (M)-PHD 10P/2.0mm)	-	1
CPU Heatsink	-	1

Block Diagram



I/O Overview

