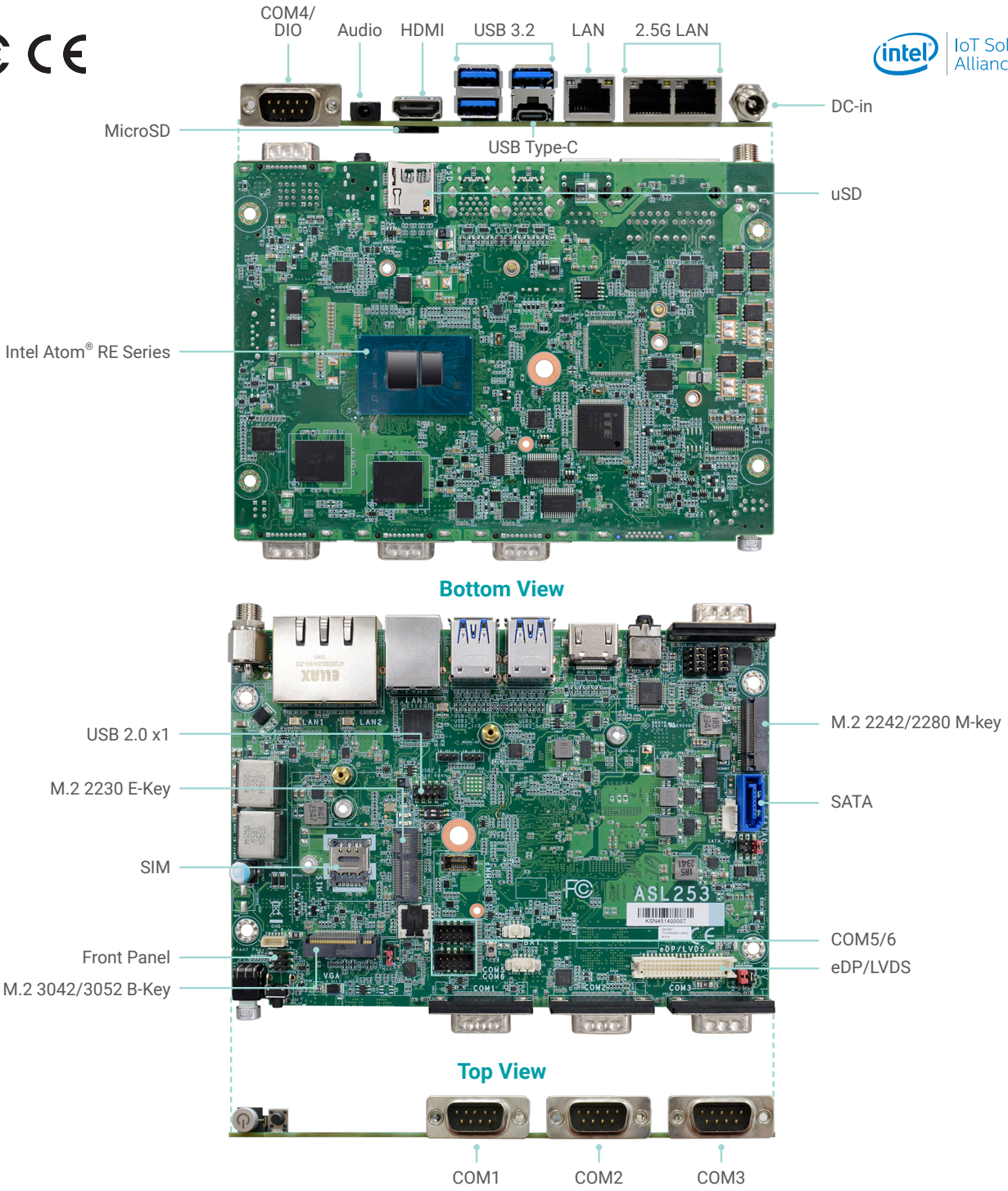
ASL253

Atom

Intel Atom® RE Series
4" SBC



KEY FEATURES

On Board OOB built-in (Opt.)

Hardware status remote control&monitor, BIOS remote setup/update, OS remote recovery, Open-SSH/ UEFI Shell/ In-Band Windows support

Rich I/O

2 2.5GbE, 1 GbE, 4 USB 3.2, 3 COM, 1 COM/DIO, Internal: 1 USB 2.0, 2 COM

Intel TCC within the system

Supported by RE series CPU and TSN standard up to 2.5GbE. (Opt.)

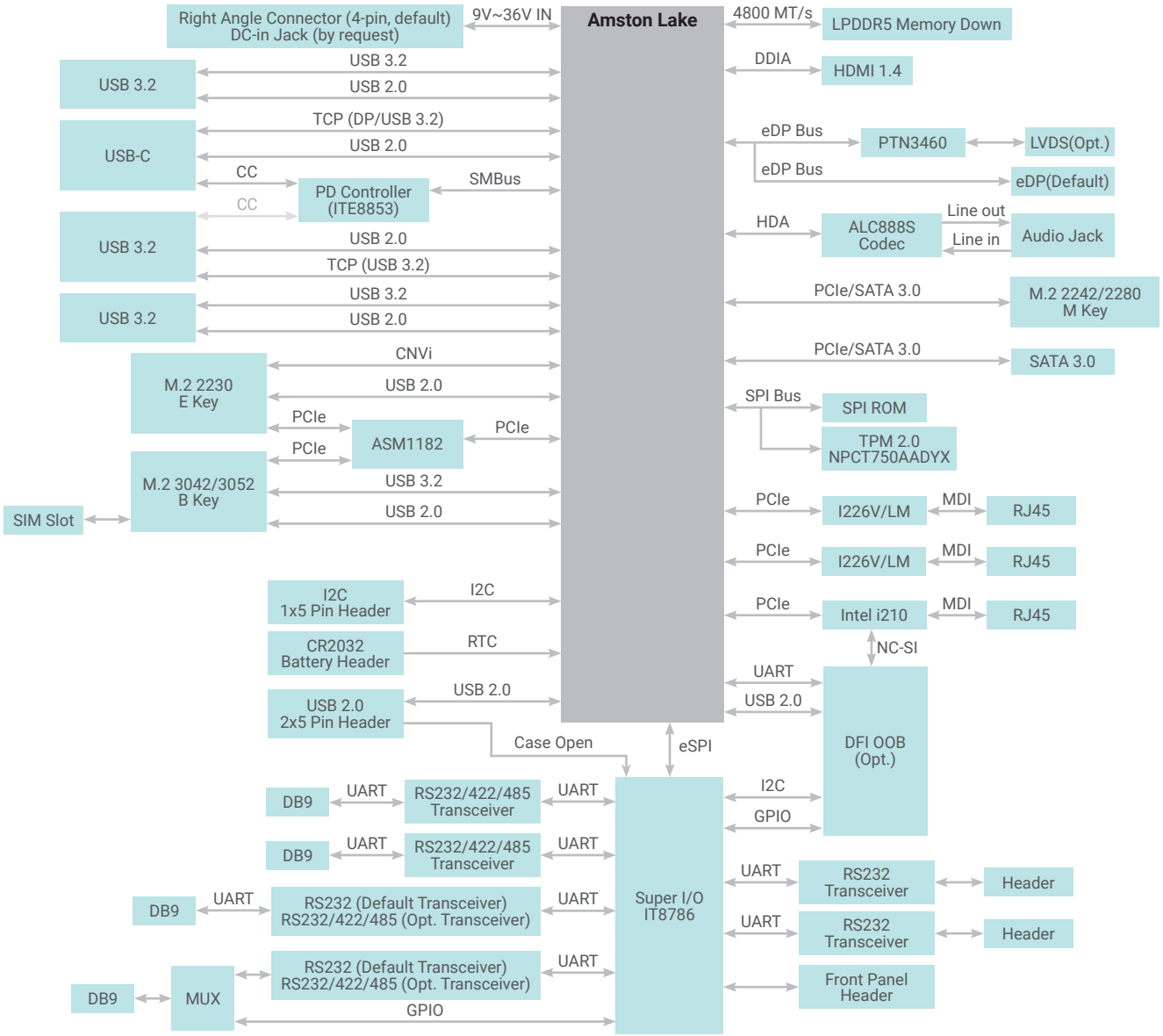
On Board DDR5 Support

LPDDR5 4800 MHz memory down

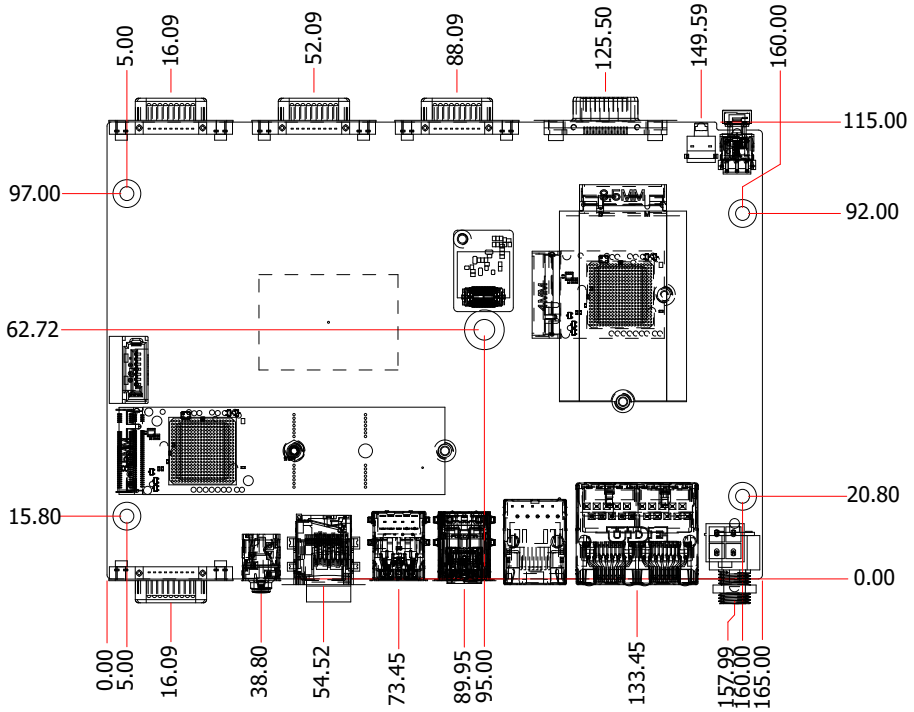
Up to Quad Display Support

Support via HDMI/USB-C/eDP, Quad display support by Dev

BLOCK DIAGRAM



MECHANICAL DRAWING



SPECIFICATION

SYSTEM	**Processor**	Intel Atom® RE Series Intel® Atom® X7211RE 2 Cores, 1.0GHz to 3.2 GHz Intel® Atom® X7213RE 2 Cores, 2.0GHz to 3.4 GHz Intel® Atom® X7433RE 4 Cores, 1.5GHz to 3.4 GHz Intel® Atom® X7835RE 8 Cores, 1.3GHz to 3.6 GHz
	Memory	8GB/16GB LPDDR5 4800 Memory down
	BIOS	AMI SPI 256Mbit (supports UEFI boot only)
GRAPHICS	**Controller**	Intel® UHD Graphics
	Feature	**Execution Units:** Up to 32 EUs **3D API:** Open GL 4.6, DirectX12, Vulkan 1.2 (Windows) Mesa 3D, OpenGL 4.6, Vulkan 1.2 (Linux) **Precision:** FP32, FP16, INT8 **Compute:** OpenCL 3.0
	Display	1 x eDP(Default)/LVDS 1 x HDMI 1.4 1 x USB-C Alt. Mode, one more USB-C(opt.)
STORAGE	**Internal**	1 x M.2 2242/2280 M key (SATA/PCIe) 1 x SATA III 1 x eMMC (up to 128GB,optional)
EXPANSION	**Interface**	**1 x M.2 2242/2280 M key:** PCIex1/SATA **1 x M.2 2230 E Key:** USB2.0/PCIe **1 x M.2 3042/3052 B key:** USB3.0/USB2.0/PCIe (PCIe x2 support by project)
AUDIO	**Audio Codec**	ALC888S
ETHERNET	**Controller**	2 x Intel Ethernet controller i226 2.5GbE (TSN project support) 1 x Intel Ethernet controller i210 GbE
FRONT I/O	**Serial**	3 x RS232/422/485 DB9 connector
INTERNAL I/O	**Serial**	2 x RS232
	USB	1 x USB 2.0
	Display	1 x 40 pin LVDS/eDP (Default eDP)
	SATA	1 x SATA 3.0 1 x 5V SATA Power (support SATA HDD LED via front panel)
	Front Panel	1 x front panel
	SMBus	1 x SMBus
REAR I/O	**Ethernet**	2 x 2.5GbE RJ45 1 x GbE RJ45
	Serial	1 x COM/DIO port
	USB	3 x USB 3.2 type A 1 x USB-C 3.2
	Display	1 x HDMI
	Audio	1 x 3.5mm Line out/Mic In
	Storage	1 x MicroSD (only for OOB function update)
WATCHDOG TIMER	**Output & Interval**	System Reset, Programmable via Software from 1 to 255 Seconds
SECURITY	**TPM**	TPM 2.0 support
POWER	**Type**	Wide Range 9~36VDC
	Connector	DC Jack (or vertical type 4pin connector)
	RTC Battery	CR2032 Coin Cell
OS SUPPORT	**Microsoft**	Windows 11 IoT Enterprise
	Linux	Ubuntu 22.04
ENVIRONMENT	**Temperature**	**Operating:** -40 to 80°C with 0.2 m/s air flow -40 to 85°C with 0.2 m/s air flow (by project support)
	Humidity	**Storage:** 5 to 90% RH
MECHANISM	**Dimensions**	4" SBC Form Factor 165mm (6.5") x 115mm (4.53")
STANDARDS AND CERTIFICATIONS	**Certifications**	CE, FCC ClassA

ORDERING INFORMATION

Model Name	Part Number	CPU	Mry. Down	Operating Temp.	I/O	Display	Expansion
ASL253	770-ASL2531-000G	X7835RE	16GB	-40 to 80°C	• 3 USB-A + 1 USB-C • **DFI OOB(Opt.)** • 2 2.5GbE + 1 1GbE • 2 RS232/422/485 • 1 RS232 • 1 RS232/DIO • 2 RS232 via Pin header	• 1 HDMI • 1 eDP(Def.)/LVDS • 1 DP 1.2 Alt. Mode via USB-C	• M.2 M key: PCIe/SATA • M.2 B Key: USB3.0/USB2.0/PCIe • M.2 E Key: USB2.0/PCIe
	770-ASL2531-500G	X7433RE	16GB				

OPTIONAL ITEMS

Optional Items	Part Number	Description
Adapter	671-106012-000G	60W 12V inlet C14, locable DC Jack 5.5/2.5mm, cable length 1500mm
Power Cord	332-700010-201G	Power Cord US 3pin 1830mm Length
	A81-004003-000G	Power Cord EU 2pin 1830mm Length
	A81-000001-000G	Power Cord China 3pin 1830mm Length
	A81-000046-000G	Power Cord JP 3pin 1830mm length (with DFI PSE logo)
EMMC Module	774-EMMCBD1-000G	EMMC Board 64GB, -40°C ~ +80°C
	774-EMMCBD1-200G	EMMC Board 128GB, -40°C ~ +80°C

PACKING LIST

- 1 ASL253 board
- 1 SATA data with 4pin power cable
- 1 Heatsink

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