

ASL253

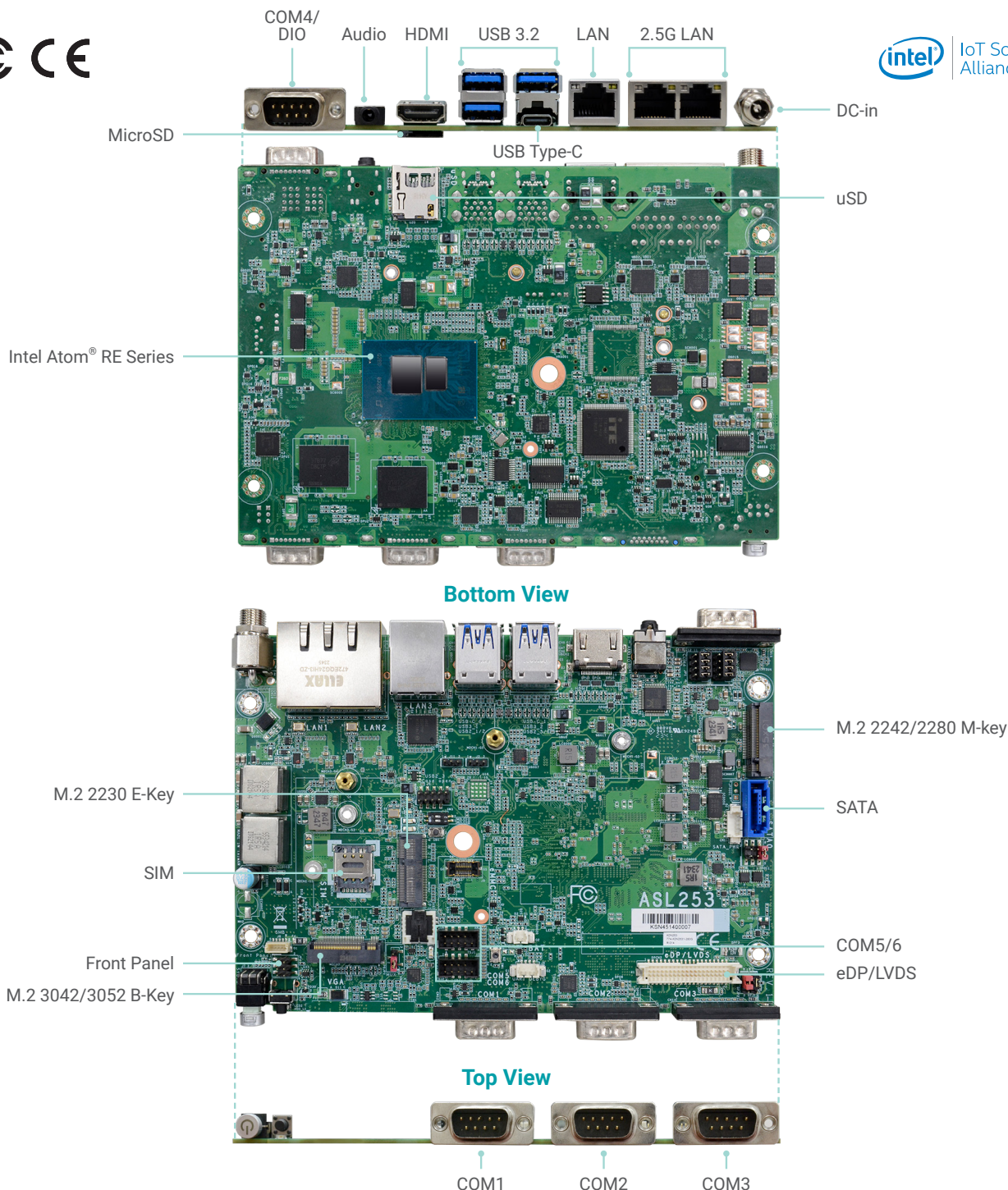
Atom



Intel Atom® RE Series
4" SBC



IoT Solutions
Alliance



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

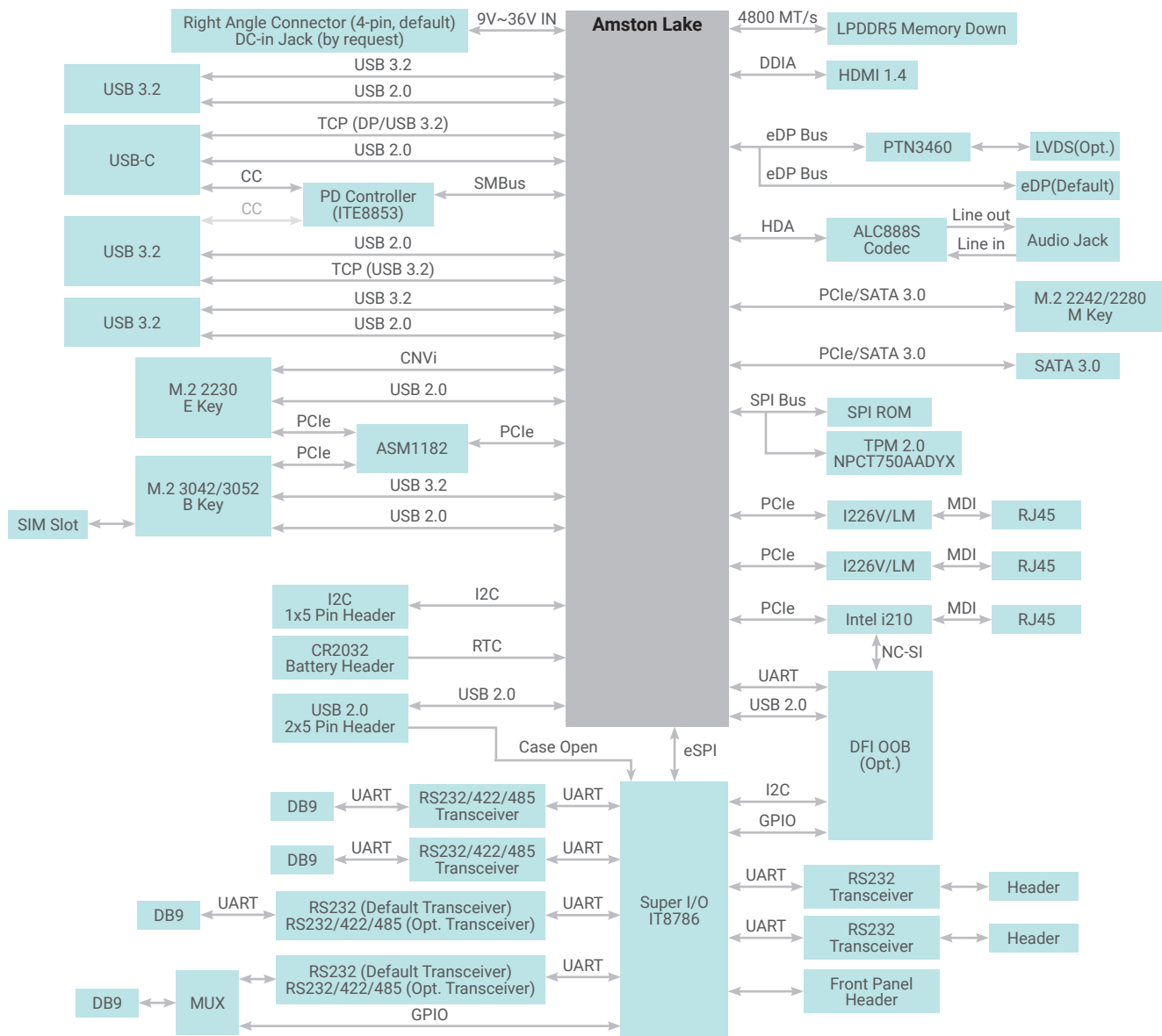
LPDDR5 4800 MHz
memory down



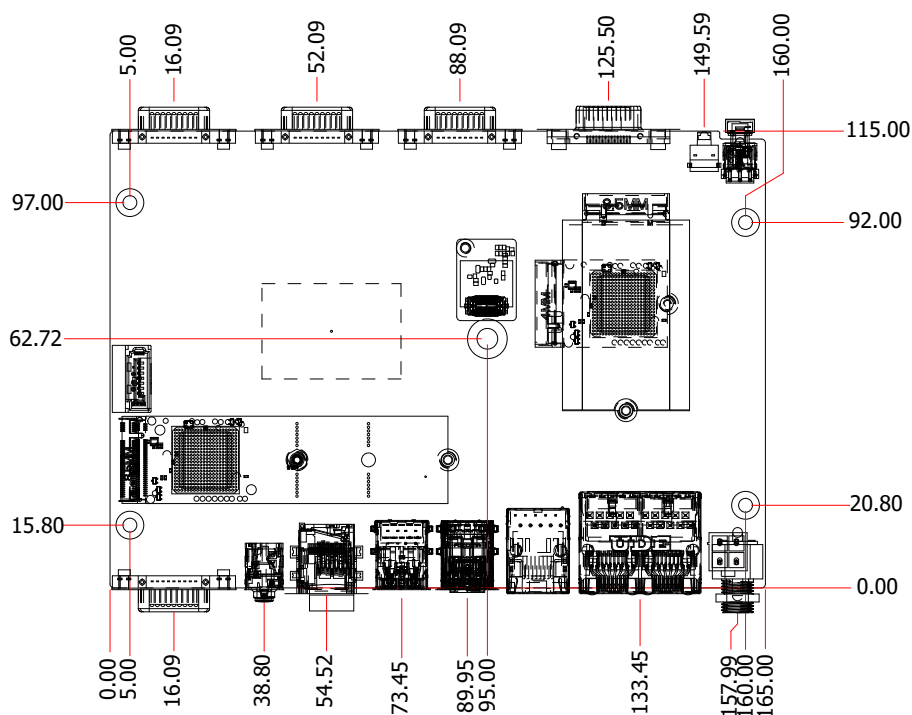
Up to Quad Display Support

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
EXPANSION	Interface	1 x M.2 2242/2280 M key: PCIe1/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
	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 00B(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)

PACKING LIST

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