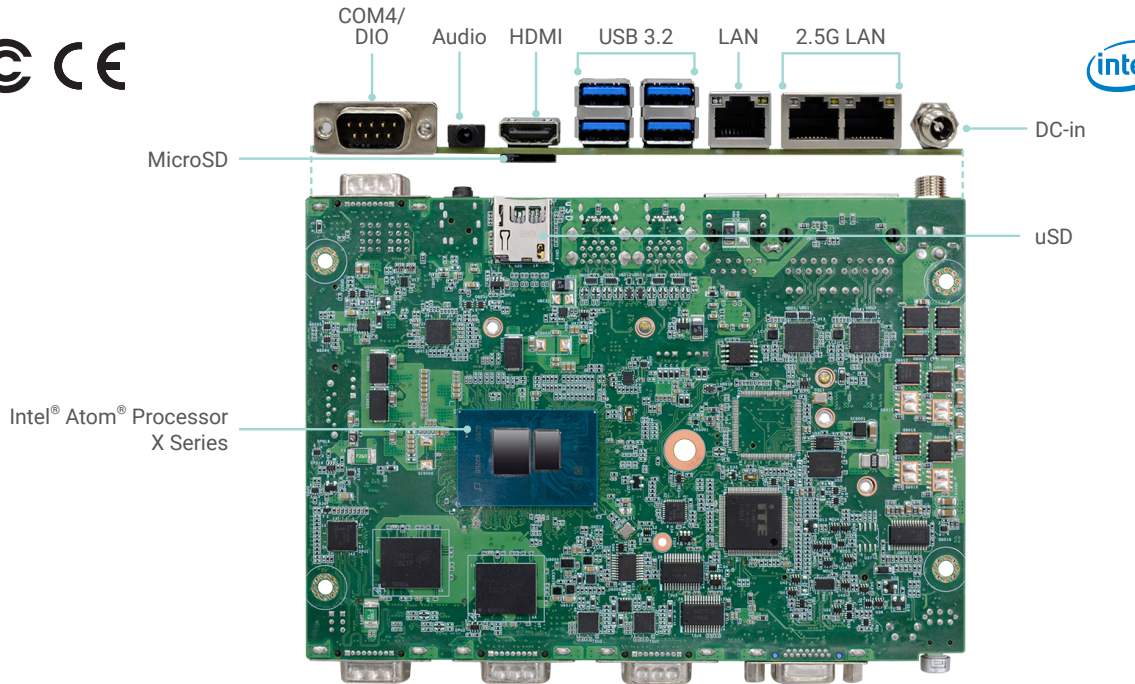


ADN253

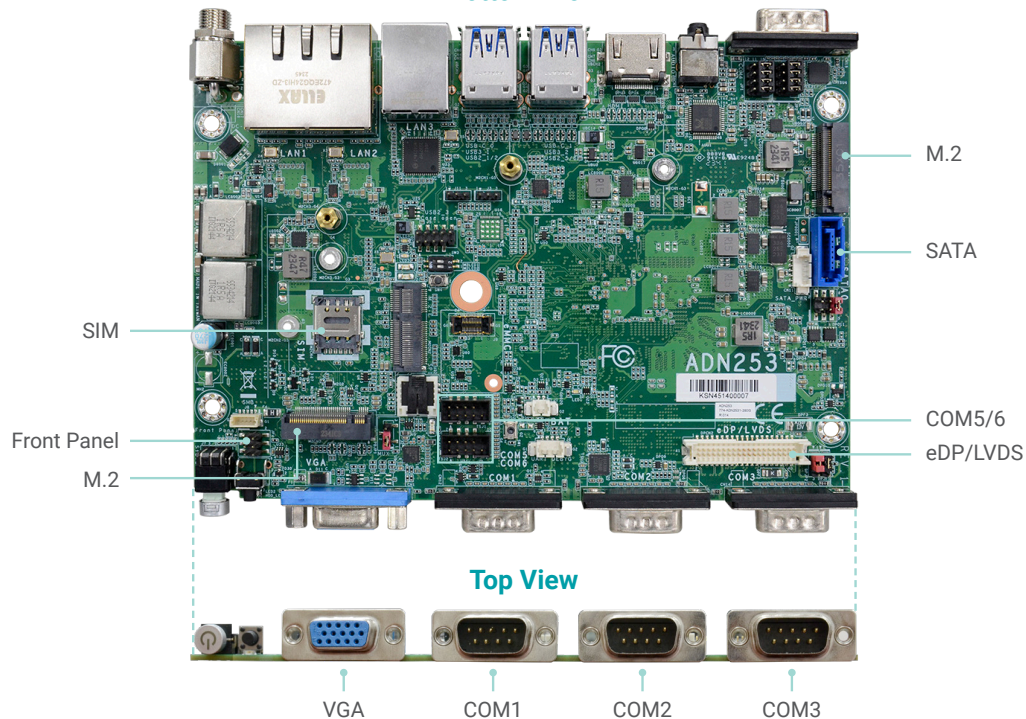
Atom



Intel® Atom® Processor X Series
4" SBC



Bottom View



Top View

KEY FEATURES



On Board OOB build-in

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



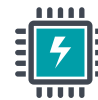
Rich I/O

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



Intel TCC within the system

Supported by X series CPU and TSN standard up to 2.5GbE.



On Board DDR5 & eMMC Support

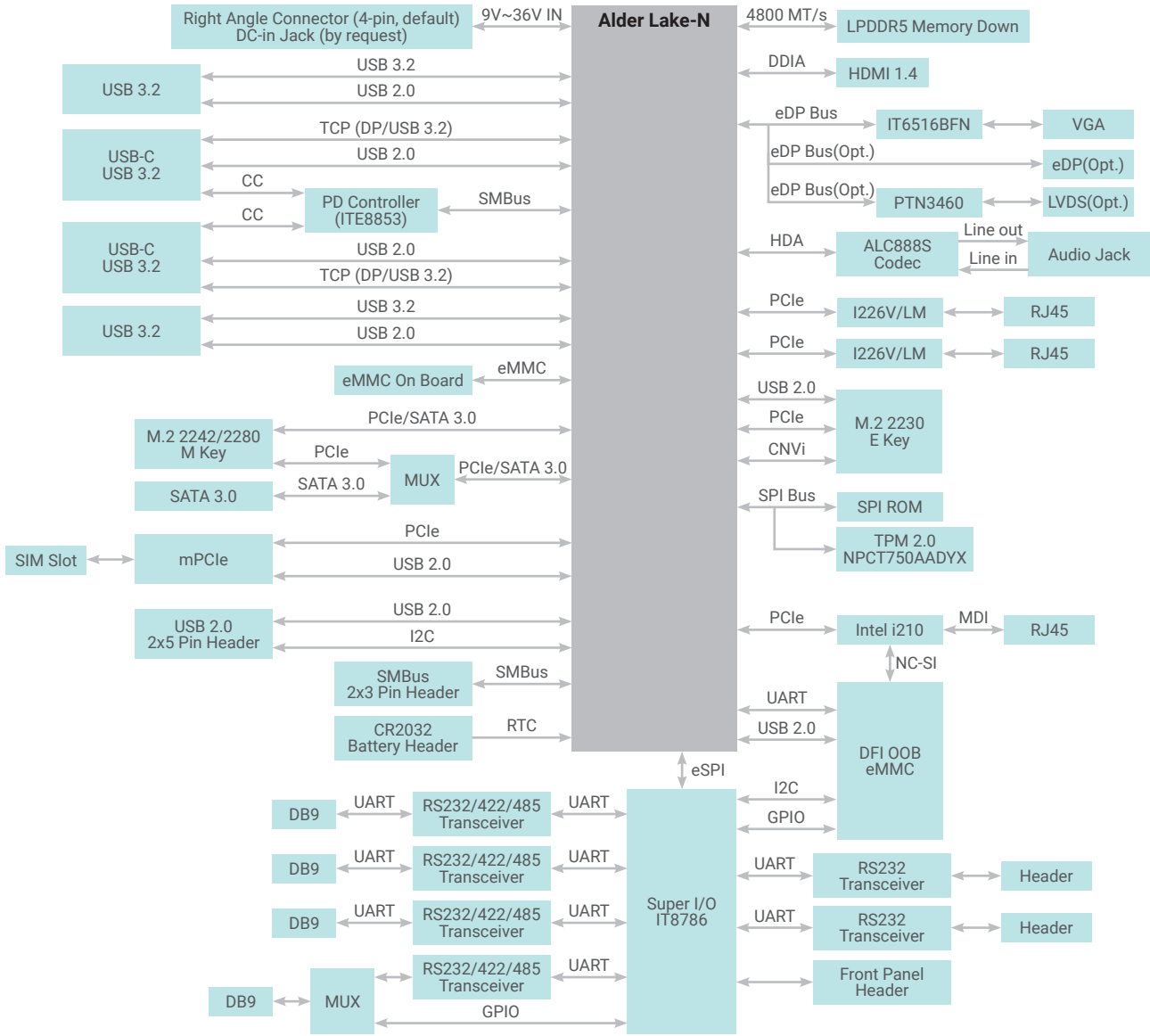
- LPDDR5 5200 MHz memory down
- eMMC module – Easy maintenance



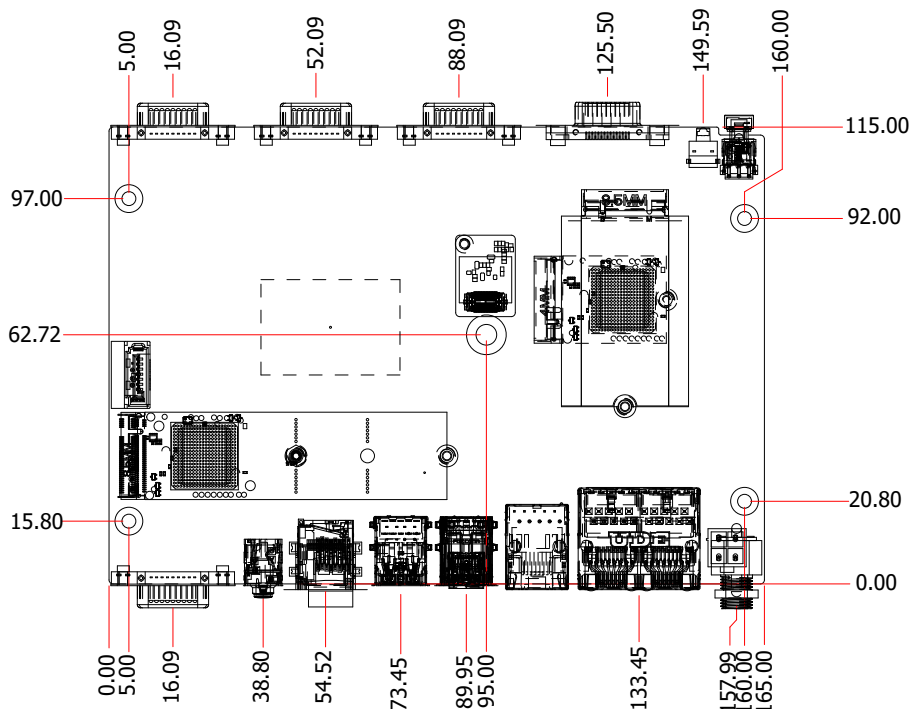
Up to Quad Display Support

Support via VGA/HDMI/USB-C

BLOCK DIAGRAM



MECHANICAL DRAWING



SPECIFICATION

| | | | |
|------------------------------|-------------------|--|----------------------|
| SYSTEM | Processor | Intel Alder Lake-N Series Intel PC Client Series Intel® Processor N50 2 Cores, 1.0GHz to 3.4 GHz Intel® Processor N97 4 Cores, 2.0GHz to 2.9 GHz Intel® Processor N200 4 Cores, 1.0GHz to 3.2 GHz Intel® Core™ i3-N305 8 Cores, 1.0GHz to 3.0 GHz Intel® Embedded Series Intel® Atom® X7211E 2 Cores, 1.0GHz to 2.9 GHz Intel® Atom® X7213E 2 Cores, 1.7GHz to 2.9 GHz Intel® Atom® X7425E 4 Cores, 1.5GHz to 2.7 GHz | |
| | Memory | 8GB/16GB LPDDR5 5200 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 VGA 1 x HDMI 1.4 1 x USB-C Alt. Mode, one more USB-C(opt.) | |
| STORAGE | Internal | 1 x M.2 2280 B+M key (SATA/PCIe) 1 x M.2 2230 A+E key (PCIe) 1 x SATA III | |
| | eMMC | eMMC 32GB/64GB | |
| EXPANSION | Interface | 1 x M.2 2242/2280 (SATA) 1 x M.2 2230 (USB/*PCIe) 1 x mPCIe (USB 2.0/*PCIe) *PCIe: support one of the M.2 2230/mPCIe by BOM Opt. | |
| AUDIO | Audio Codec | ALC888S | |
| ETHERNET | Controller | 2 x Intel Ethernet controller i226 2.5GbE (support TSN) 1 x Intel Ethernet controller i210 GbE (support DFI OOB function) | |
| FRONT I/O | Serial | 3 x RS232/422/485 DB9 connector | |
| | Display | 1 x VGA | |
| 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 (support DFI OOB) | |
| | Serial | 1 x COM/DIO port | |
| | USB | 2 x USB 3.2 type A + 2 x USB-C Ports or 4 x USB 3.2 type A | |
| | Display | 1 x HDMI | |
| | Audio | 1 x 3.5mm Line out/Mic In | |
| | Storage | 1 x MicroSD (configuration options) | |
| WATCHDOG TIMER | Output & Interval | System Reset, Programmable via Software from 1 to 255 Seconds | |
| SECURITY | TPM | TPM 2.0 (Available Upon Request) | |
| 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 | Linux | |
| ENVIRONMENT | Temperature | Operating: 0 to 80°C | Storage: -40 to 85°C |
| | Humidity | Operating: 5 to 90% RH | Storage: 5 to 90% RH |
| MECHANISM | Dimensions | 4" SBC Form Factor 165mm (6.5") x 115mm (4.53") | |
| STANDARDS AND CERTIFICATIONS | Certifications | CE, FCC Class B (TBD in later stage) | |

PACKING LIST

• 1 ADN253 board