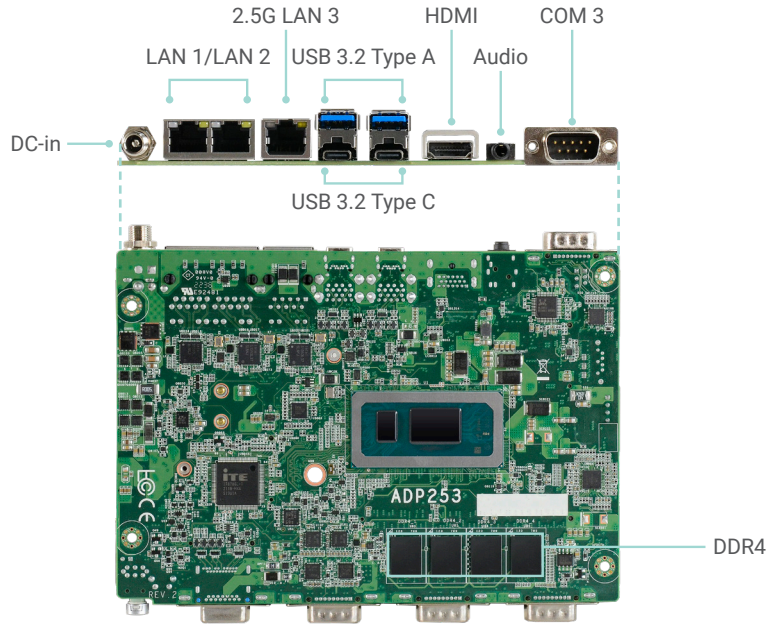


ADP253

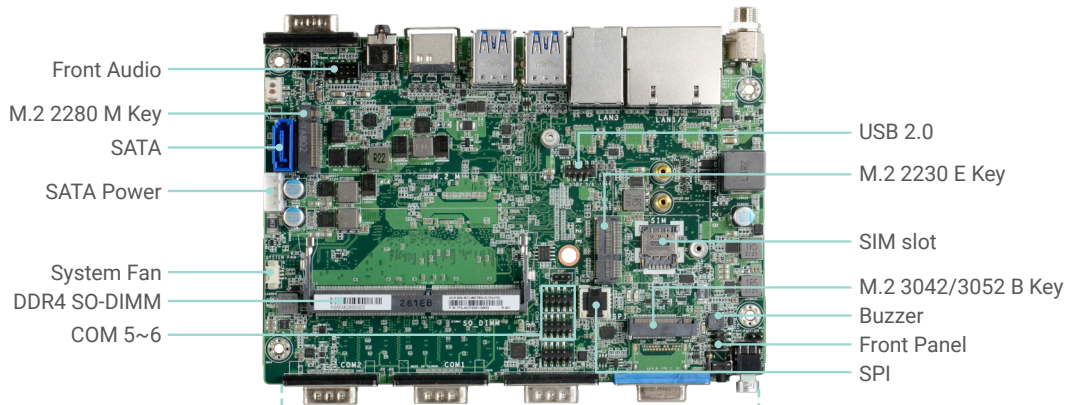
ULT



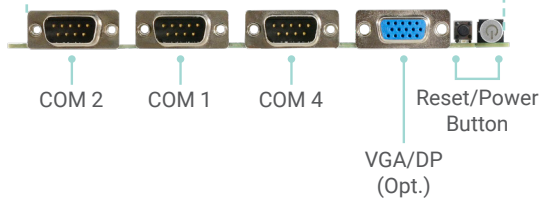
12th Gen Intel® Core™
4" SBC



Bottom View



Top View



KEY FEATURES



DDR4

On board memory and 1 DDR4 SO-DIMM



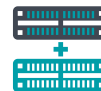
4K High Resolution

Supports 4K/ 2K resolution



Multiple Displays

1 HDMI, 1 VGA/DP, 2 Type-C Alt. Mode



Multiple Expansion

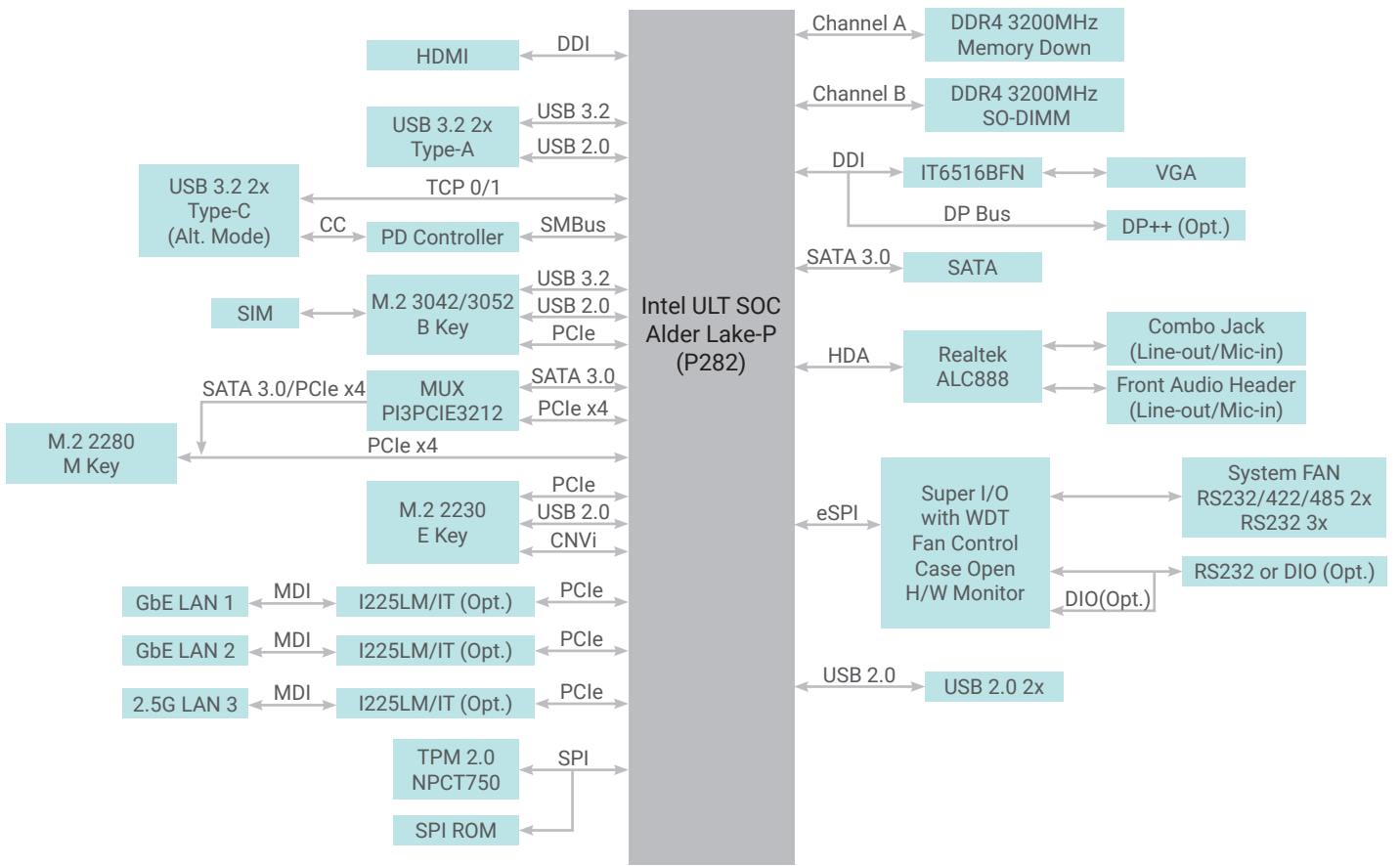
1 M.2 M Key, 1 M.2 B Key, 1 M.2 E Key



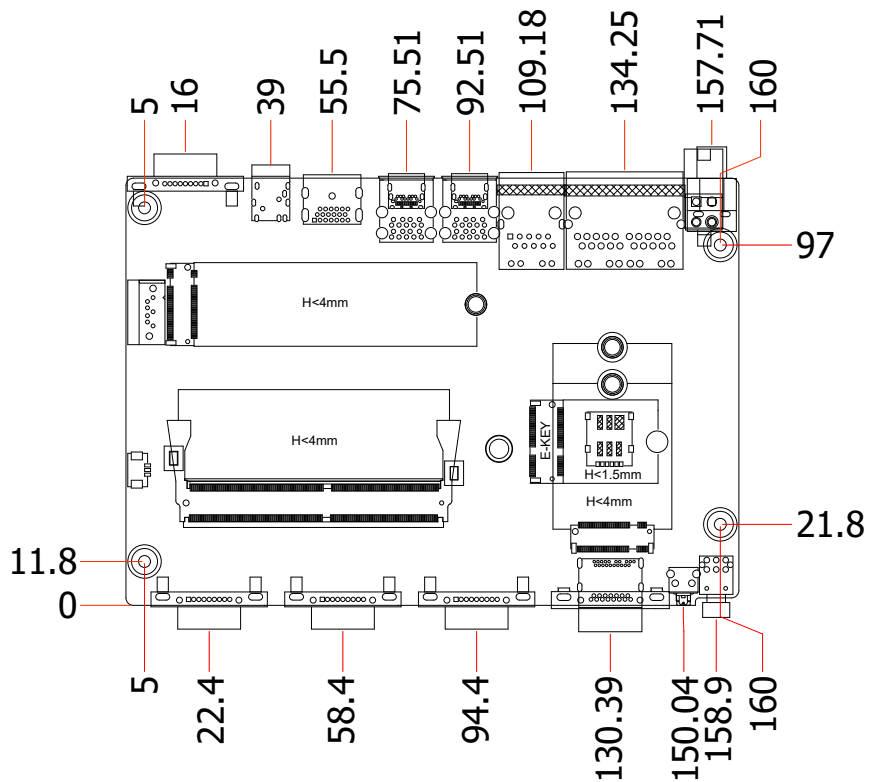
Rich I/O

1 Intel 2.5GbE, 2 Intel GbE, 6 COM, 4 USB 3.2, 2 USB 2.0, 1 SATA 3.0

BLOCK DIAGRAM



MECHANICAL DRAWING



SPECIFICATION

| | | | |
|----------------|-------------------|---|---|
| SYSTEM | Processor | 12th Gen Intel® Core™ Processors, BGA 1744 (Alder Lake-P, 15W) Intel® Core™ i7-1265UE Processor, 10C12T, 12M Cache, 1.7GHz (4.7GHz) Intel® Core™ i5-1245UE Processor, 10C12T, 12M Cache, 1.5GHz (4.4GHz) Intel® Core™ i3-1215UE Processor, 6C8T, 10M Cache, 1.2GHz (4.4GHz) Intel® Celeron® 7305E Processor, 5C5T, 8M Cache, 1.0GHz | |
| | Memory | 8GB On-board memory & one SO-DIMM DDR4 up to 32GB Dual Channel DDR4 3200MHz | |
| | BIOS | AMI SPI 256Mbit (Supports UEFI boot only) | |
| GRAPHICS | Controller | Intel® Iris® Xe Graphics Intel® UHD Graphics | |
| | Feature | DirectX 12, Open GL 4.6, Vulkan 1.2 HW Decode: AV1, AVC/H.264, MJPEG, HEVC/H.265, VP9, SCC HW Encode: MJPEG, AVC/H.264, HEVC/H.265, VP9, SCC | |
| | Display | 1 x HDMI 1 x VGA/DP (Opt.) 2 x Type-C Alt. Mode | HDMI: Resolution up to 4096x2160 @60Hz VGA: Resolution up to 1920x1200 @60Hz DP: Resolution up to 4096x2304 @60Hz |
| | Multiple Displays | HDMI + VGA/DP (Opt.) + Type-C Alt. Mode + Type-C Alt. Mode | |
| EXPANSION | Interface | 1 x M.2 M Key 2280 (PClex4/SATA) 1 x M.2 B Key 3042/3052 (USB3.0/USB2.0/PClex1), 1 x SIM slot for 4G/5G 1 x M.2 E Key 2230 (CNVi/PClex1/USB2.0) | |
| AUDIO | Audio Codec | Realtek ALC888S | |
| ETHERNET | Controller | 1 x Intel® I225LM/IT (10/100/1000/2500Mbps) 2 x Intel® I225LM/IT (10/100/1000Mbps) (Only Core i7/i5 supports iAMT) | |
| REAR I/O | Ethernet | 1 x 2.5GHz (RJ-45) + 2 x GbE (RJ-45) | |
| | Serial | 1 x RS-232 | |
| | USB | 4 x USB 3.2 Default: 2 x Type A + 2 x Type C connector | |
| | Audio | 1 x Audio Combo Phone Jack (Line-out/Mic-in) | |
| | Display | 1 x HDMI 2 x Type-C Alt. Mode | |
| FRONT I/O | Serial | 2 x RS-232/422/485 1 x RS-232 (also supports an optional 8-bit DIO) | |
| | Display | 1 x VGA/DP (Opt.) | |
| | Button | 1 x Power Button 1 x Reset Button | |
| INTERNAL I/O | Serial | 2 x RS-232 (2.0mm pitch) | |
| | USB | 2 x USB 2.0 (2.0mm pitch) | |
| | Audio | 1 x Front Audio Box header (Line-out/Mic-in, 2.0mm pitch) | |
| | SATA | 1 x SATA 3.0 (up to 6Gb/s) 1 x SATA Power (5V/12V) | |
| | Others | 1 x Front Panel 1 x System Fan Connector | |
| WATCHDOG TIMER | Output & Interval | System Reset, Programmable via Software from 1 to 255 Seconds | |
| SECURITY | TPM | Discrete TPM 2.0 | |
| POWER | Type | 9~36 VDC input | |
| | Connector | One power jack with lock. (Default) Co-lay 2x2 pin power connector straight type and right angle type | |
| | Consumption | TBD | |
| | RTC Battery | CR2032 Coin Cell, link mother board with cable | |
| OS SUPPORT | Microsoft | Windows 10 IoT Enterprise 64-bit | |
| | Linux | Linux | |
| ENVIRONMENT | Temperature | Operating: -5 to 65°C / -30 to 80°C | Storage: -40 to 85°C |
| | Humidity | Operating: 5 to 90% RH | Storage: 5 to 90% RH |
| | MTBF | TBD | |
| MECHANISM | Dimensions | 4" SBC Form Factor | 165mm (6.49") x 115mm (4.53") |
| | Height | PCB: 1.6mm Top Side: 16.34mm, Bottom Side: 3mm | |