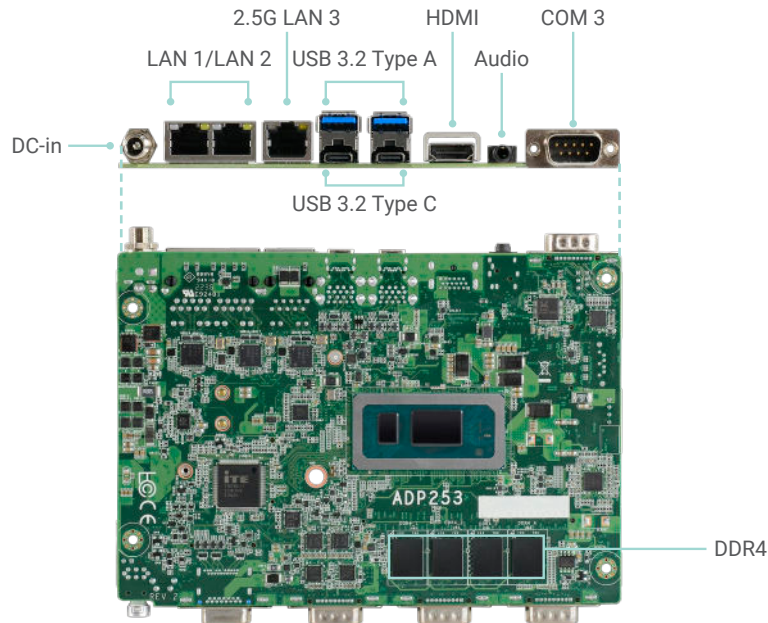


ADP253

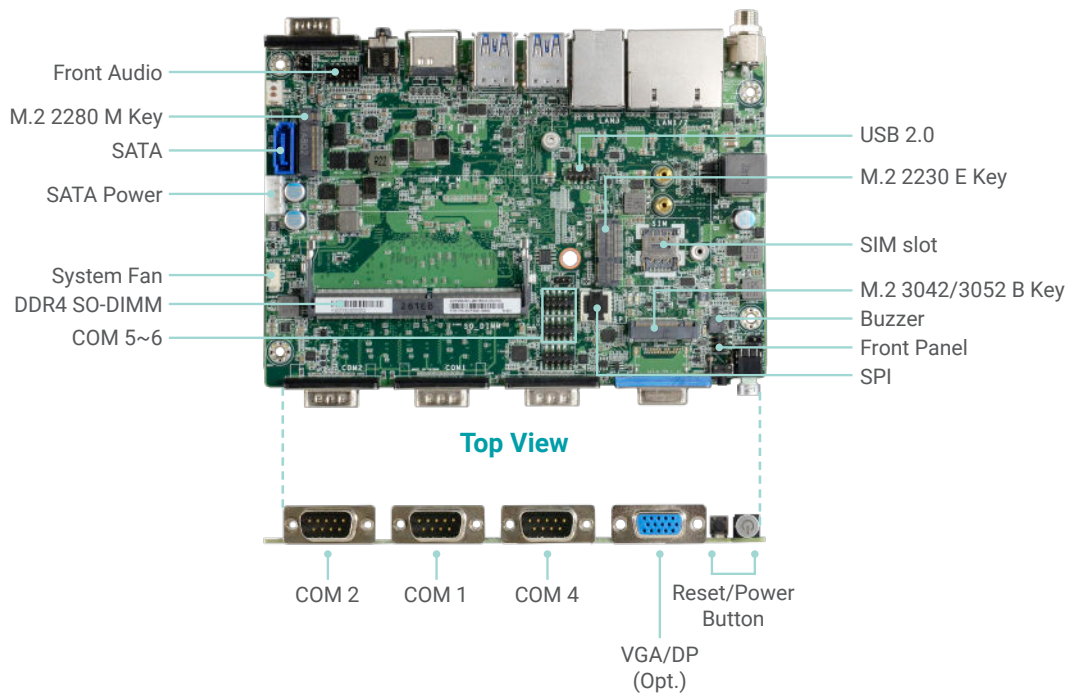
ULT



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

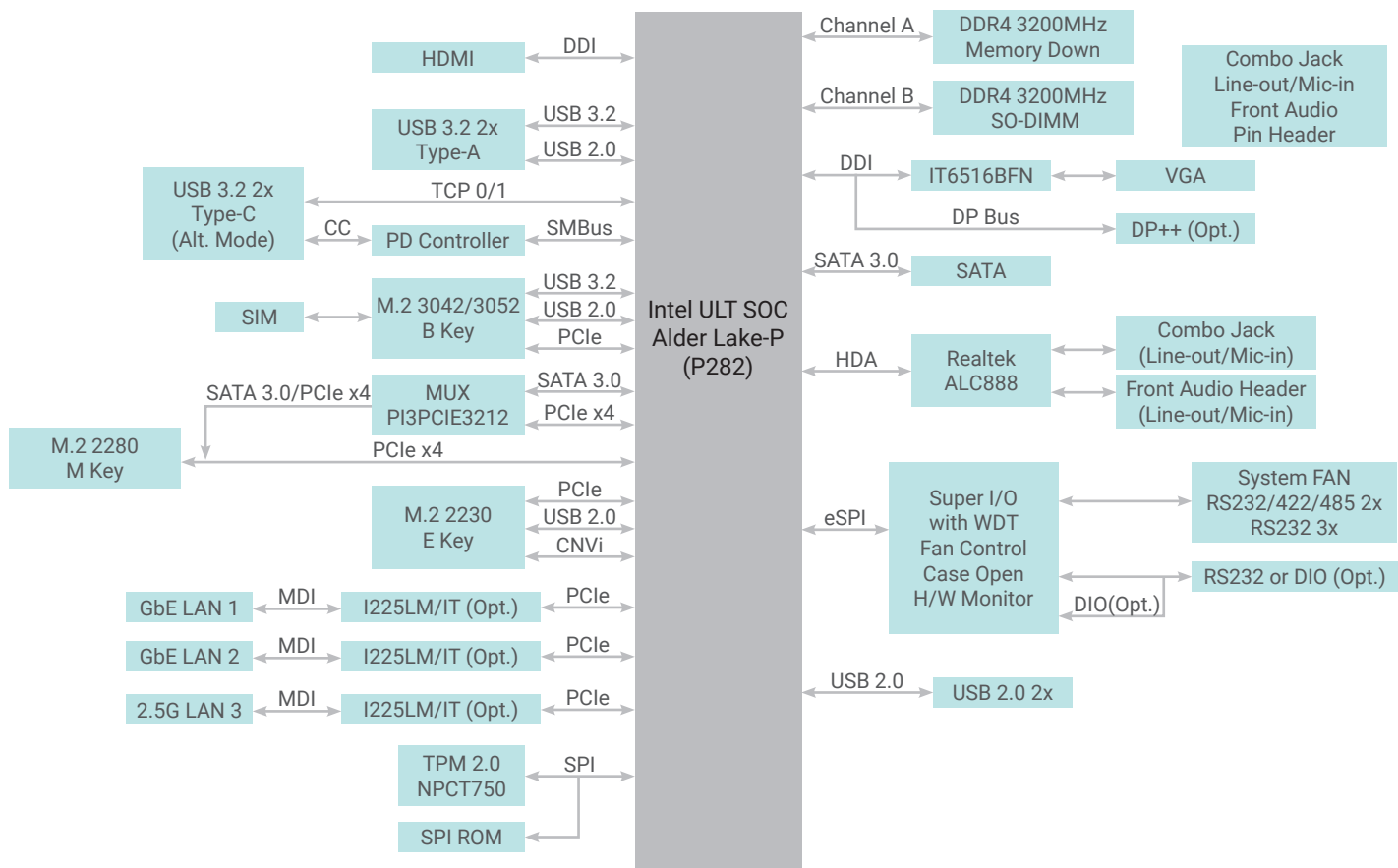
1 M.2 M Key,
1 M.2 B Key,
1 M.2 E Key



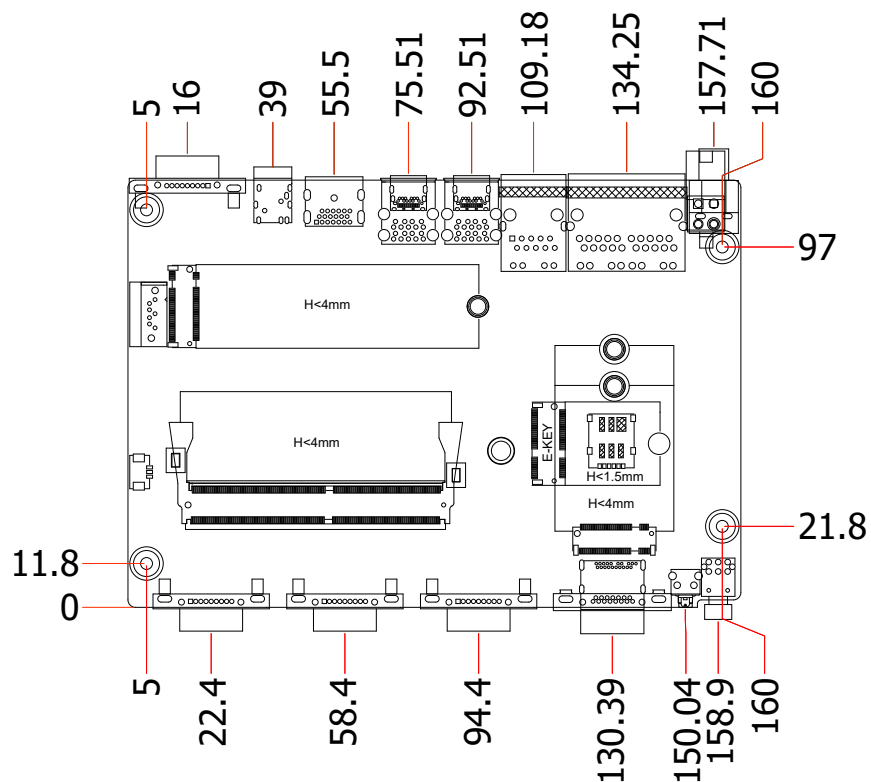
Rich I/O

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® 7305U 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 (PCIe4/SATA) 1 x M.2 B Key 3042/3052 (USB3.0/USB2.0/PCIe1), 1 x SIM slot for 4G/5G 1 x M.2 E Key 2230 (CNVi/PCIe1/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	