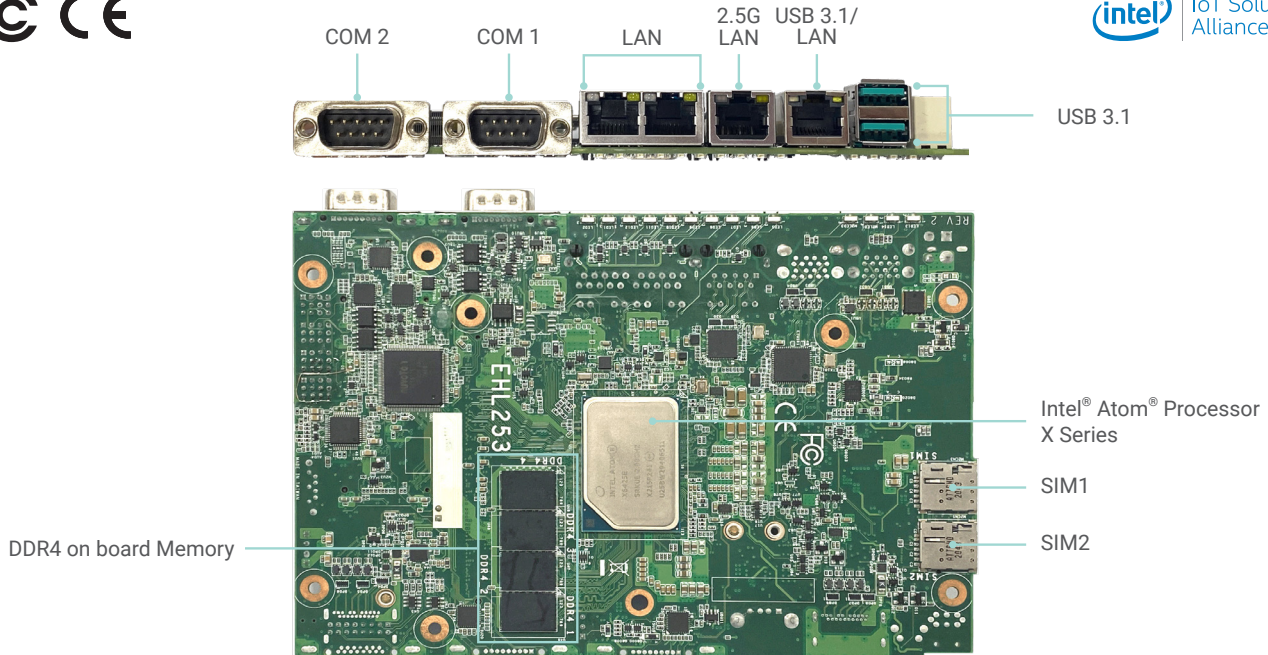


EHL253

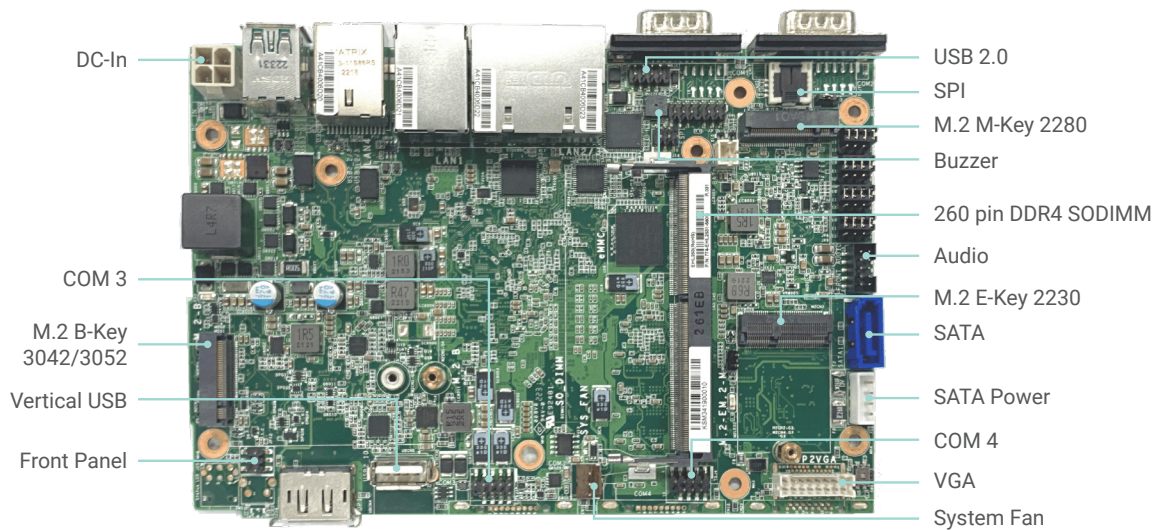
Atom



Intel® Atom® Processor X Series
4" SBC



Bottom View



Top View



KEY FEATURES



DDR4

On board DDR4 +
1 DDR4 3200 SODIMM



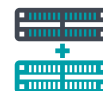
4K High Resolution

Supports 4K/ 2K resolution



Dual Independent Displays

1 VGA + 1 DP++



Multiple Expansion

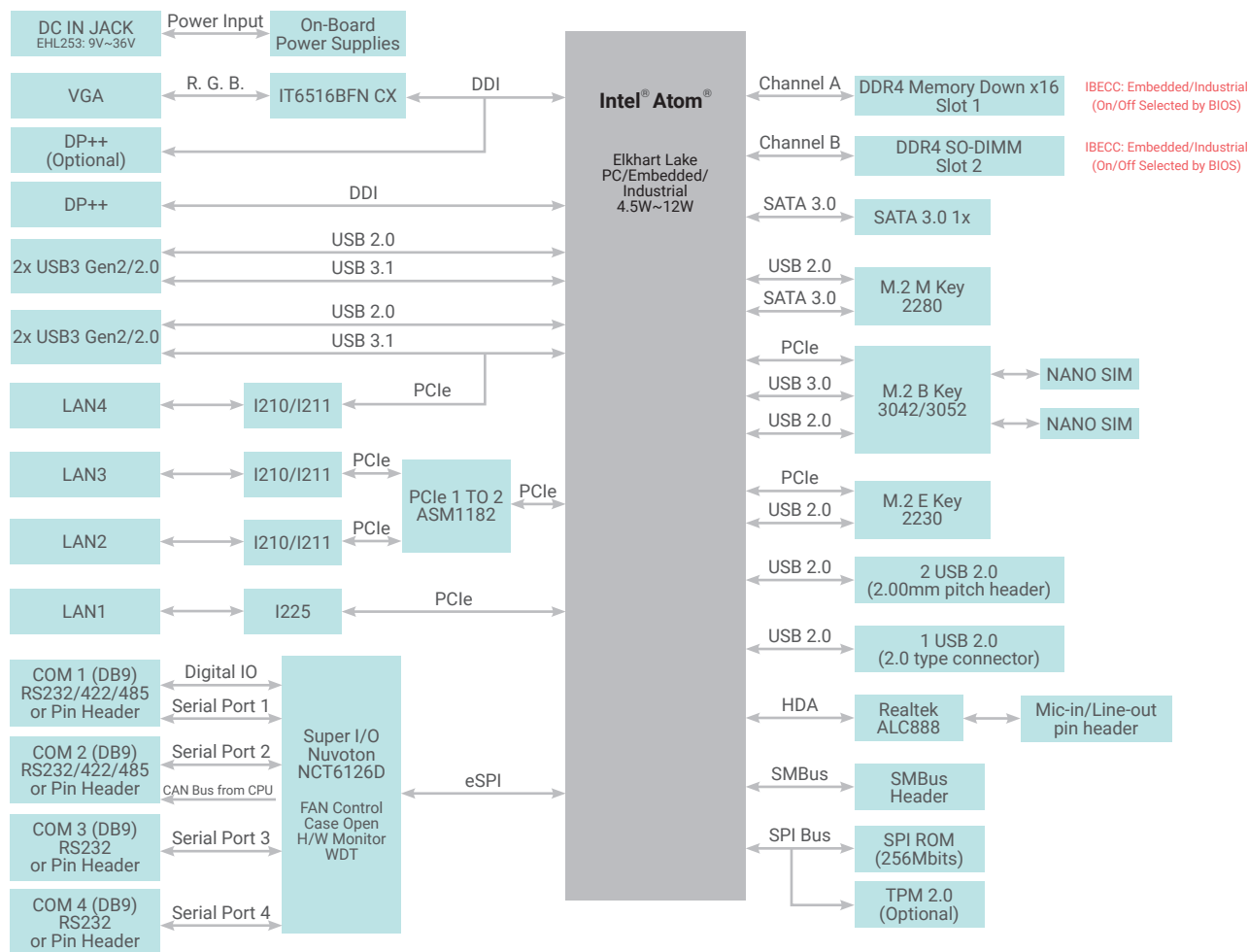
1 M.2 E Key,
1 M.2 B Key,
1 M.2 M Key



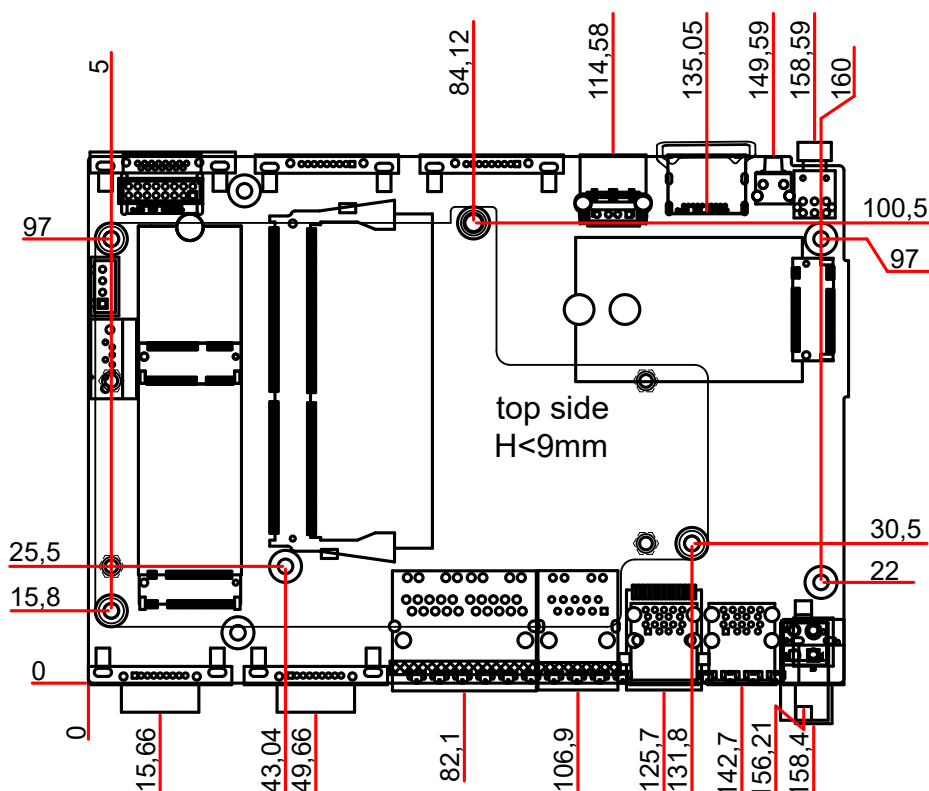
Rich I/O

2 or 3 GbE, 1 2.5 GbE,
2 or 4 USB 3.1, 2 USB 2.0,
1 USB 2.0 (Vertical),
2 COM + 2 COM (Internal),
1 SATA 3.0

BLOCK DIAGRAM



MECHANICAL DRAWING



SPECIFICATION

SYSTEM	Processor	Intel Atom Elkhart Lake Industrial Intel® Atom® x6425RE 4 cores, 1.9 GHz, TDP 12W Embedded Intel® Atom® x6211E 2 cores, 1.3 to 3.0 GHz, TDP 6.5W Intel® Atom® x6413E 4 cores, 1.5 to 3.0 GHz, TDP 9W Intel® Atom® x6425E 4 cores, 2.0 to 3.0 GHz, TDP 12W PC Client Intel® Celeron® J6412 4 cores, 2.0 to 2.6 GHz, TDP 10W Intel® Celeron® J6413 4 cores, 1.8 to 3.0 GHz, TDP 10W	
	Memory	4GB/8GB DDR4 Memory onboard One 260 pin DDR4 SODIMM up to 3200MHz Total Memory up to 32GB (in-band ECC support in embedded/industrial SKU)	
	BIOS	AMI SPI 256Mbit (supports UEFI boot only)	
GRAPHICS	Controller	Intel® UHD Graphics for 10th Gen Intel® Processors	
	Feature	OpenGL 4.5, DirectX 12, Open CL 1.2, Vulkan 1.1 HW Decode: AVC/H.264, MPEG2, VC1/WMV9, JPEG/MJPEG, HEVC/H.265, VP8, VP9 HW Encode: AVC/H.264, JPEG/MJPEG, HEVC/H.265, VP9	
	Display	1 x VGA (Support via VGA cable) 1 x DP++	
STORAGE	Internal	SATA III	
	eMMC	16GB/32GB (Available upon request)	
EXPANSION	Interface	1 x M.2 2280 (SATA) 1 x M.2 2230 (USB/PCIe) 1 x M.2 3042/3052 (USB 3.0/PCIe) with dual SIM	
AUDIO	Audio Codec	Realtek ALC888	
ETHERNET	Controller	2 or 3 x Intel® Ethernet Controller I210/I211 GbE LAN 1 x Intel® Ethernet 2.5GbE LAN	
FRONT I/O	Ethernet	2 or 3 x GbE (RJ-45) (configuration options) 1 x 2.5GbE TSN RJ45	
	Serial	2 x RS232/422/485	
	USB	2 or 4 x USB 3.1 (configuration options)	
	DIO	8-bit DIO (jumper switch to COM)	
INTERNAL I/O	Serial	2 x RS232	
	USB	2 x USB 2.0 (Pin header) 1 x USB 2.0 (Vertical)	
	Display	1 x VGA	
	Audio	1 x Audio (Line Out and Mic in)	
	SATA	1 x SATA 3.0 1 x 5V SATA Power (support SATA HDD LED via front panel)	
	Front Panel	1 x front panel (power button/reset button, power LED, HDD act LED)	
	SMBus	1 x SMBus	
REAR I/O	Display	1 x DP++	
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 10 IoT Enterprise LTSC 2019 RS5	
	Linux	Linux	
ENVIRONMENT	Temperature	Operating: 0 to 80°C (PC Client SKU) Operating: -40 to 80°C (Embedded SKU)	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)	

ORDERING INFORMATION

Model Name	Part Number	Processor	Memory	Display	USB	LAN	COM	In-Band ECC Support	Operating Temp.	TCC
EHL253	770-EHL2531-000G	Intel® Celeron® J6412	1 SODIMM	DP++ / *VGA	2 USB 2.0 4 USB 3.1	1 2.5GbE 2 GbE	2 COM	N/A	0 to 80°C	N/A
EHL253	770-EHL2531-400G	Intel® Atom® x6425RE	1 SODIMM	DP++ / *VGA	2 USB 2.0 2 USB 3.1	1 2.5GbE 3 GbE	2 COM	YES (Default disabled)	-40 to 80°C	Support

*VGA: VGA display support via cable

PACKING LIST

• 1 EHL253 board	
• 1 COM port cable	A81-015019-004G
• 1 SATA data with 4pin power cable	A81-002118-054G
• 1 Heat sink	
• 1 VGA cable	A81-012004-001G
• 1 DC cable	A81-004241-054G

OPTIONAL ITEMS

• Power adapter, 60W L=1000mm	671-106013-000G
• Power adapter, 60W L=1500mm	671-106012-000G
• USB 2.0 cable	A81-001170-016G
• Front panel cable	TBD
• Audio Cable	A81-022019-016G
• Heat spreader	TBD