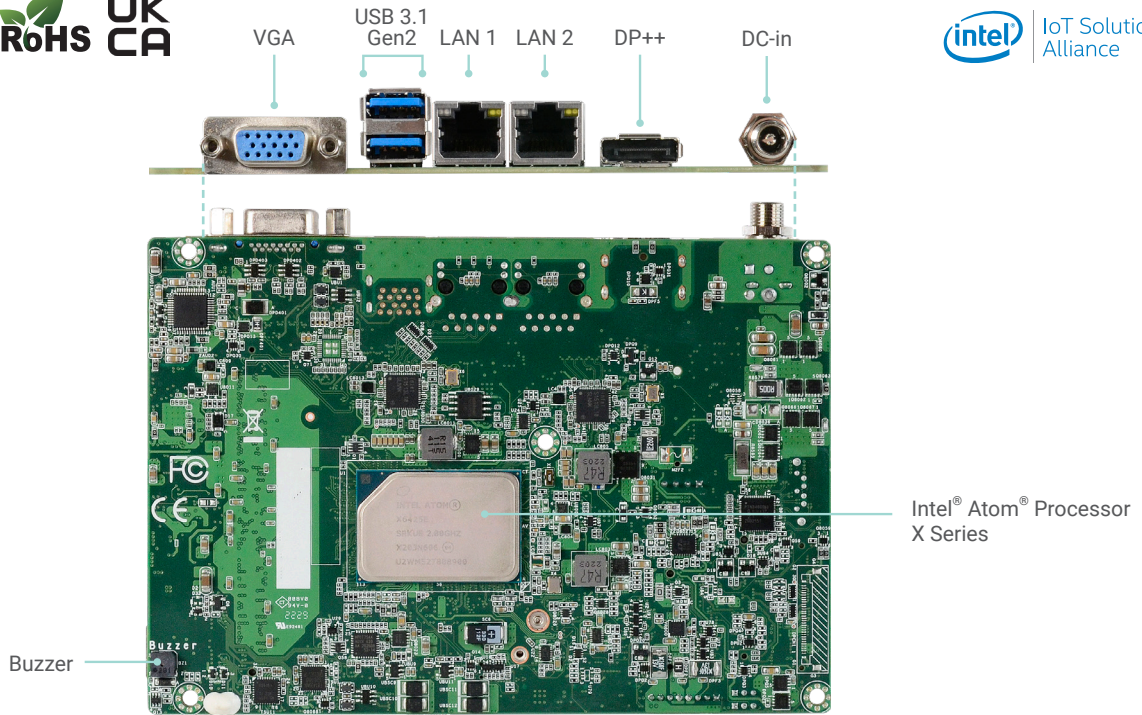


# EHL556

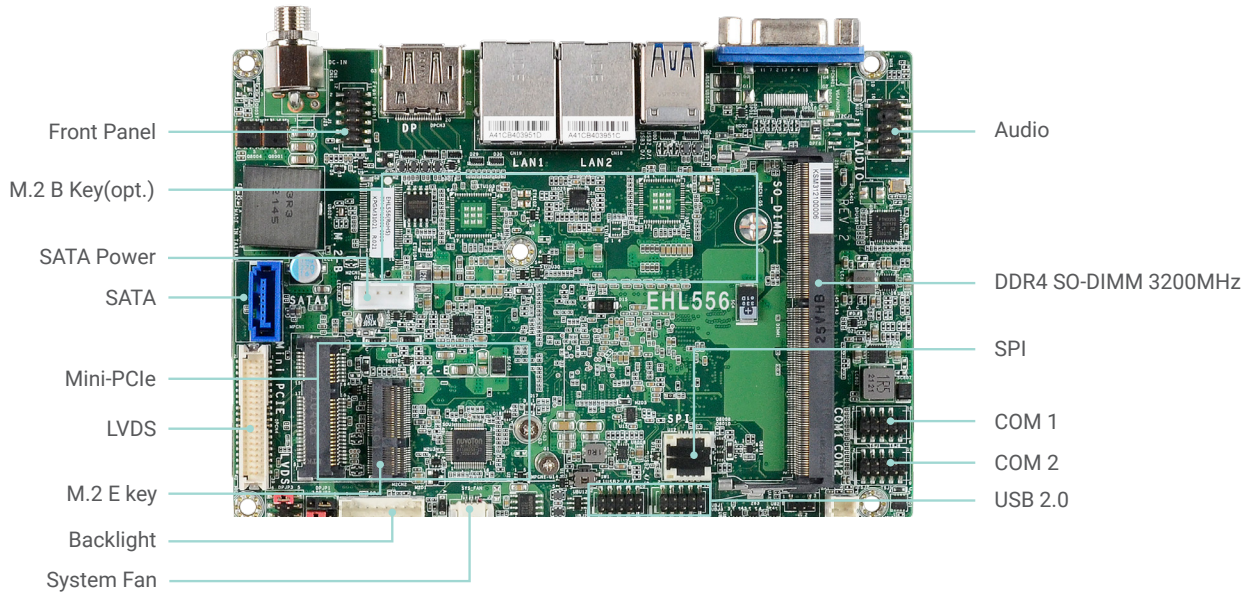
Atom



Intel® Atom® Processor X Series  
3.5" SBC



Bottom View



Top View

## KEY FEATURES



### DDR4

1 DDR4-3200 SODIMM up to 32GB



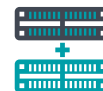
### 4K High Resolution

Supports 4K/ 2K resolution



### 3 Independent Displays

1 VGA + 1 DP++ + 1 LVDS/eDP



### Multiple Expansion

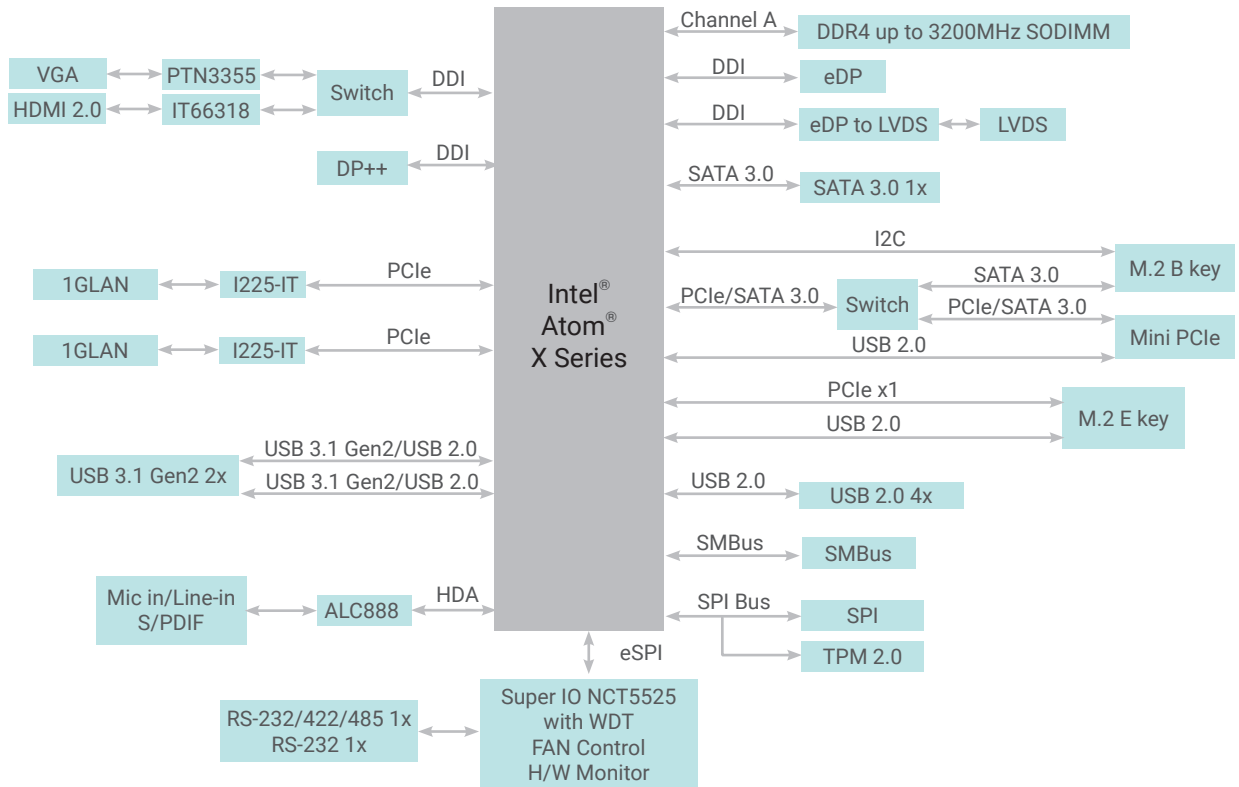
1 M.2 E Key, 1 Mini-PCIe/M.2 B Key, I2C



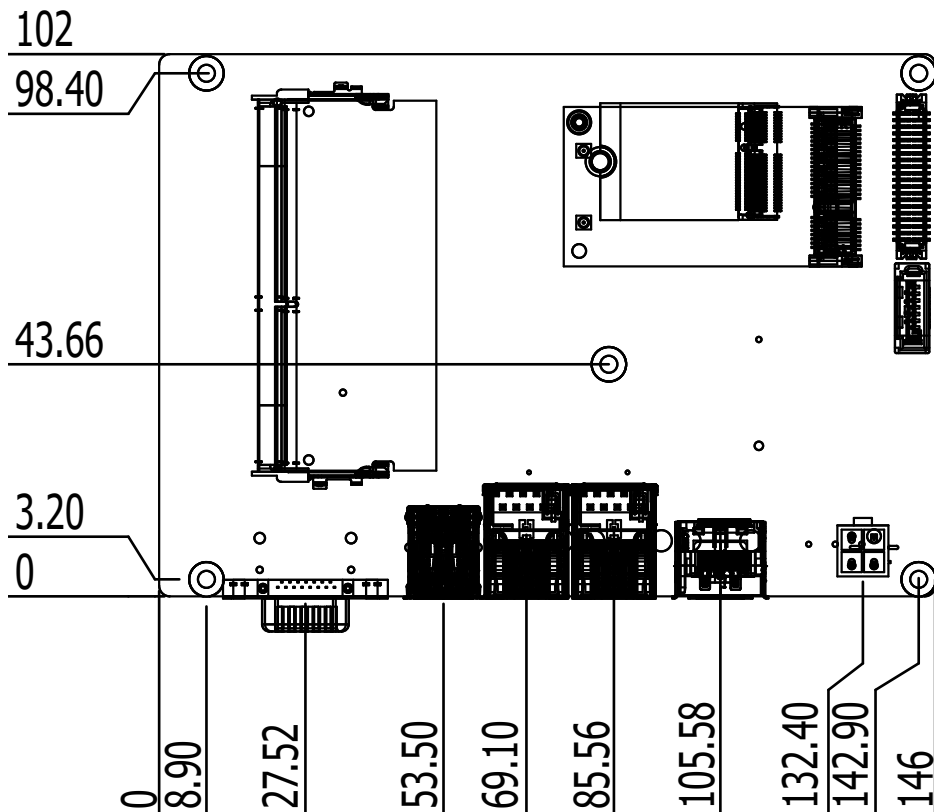
### Rich I/O

2 GbE, 2 USB 3.1 Gen2, 2 USB 2.0, 2 COM, 1 SATA 3.0

## BLOCK DIAGRAM



## MECHANICAL DRAWING



## SPECIFICATION

SYSTEM	Processor	Intel Atom Elkhart Lake <b>Industrial</b> Atom, x6425RE, 4C, 1.9GHz,12W Atom, x6414RE, 4C, 1.5GHz,9W <b>Embedded</b> Atom, x6425E, 4C, 2.0GHz(3.0GHz),12W Atom, x6413E, 4C, 1.5GHz(3.0GHz),9W <b>PC Client</b> Celeron N6210, 2C 1.2GHz(2.6GHz), 6.5W	
	Memory	Single DDR4-3200 SODIMM Up to 32GB	
	BIOS	AMI SPI 256Mbit	
GRAPHICS	Controller	Intel® HD Graphics	
	Feature	OpenGL 5.0, DirectX 12, OpenCL 2.1 HW Decode: AVC/H.264, MPEG2, VC1, WMV9, JPEG/MJPEG, HEVC/H.265, VP8, VP9, MVC HW Encode: AVC/H.264, JPEG/MJPEG, HEVC/H.265, VP8, VP9, MVC	
	Display	1 x VGA (or BOM option change to HDMI 2.0)	HDMI: resolution up to 1920x1080 @60Hz
		1 x DP++	DP++: resolution up to 4096x2304 @60Hz
1 x LVDS or eDP + Backlight		LVDS: resolution up to 1920x1200 @60Hz	
Triple Display	VGA + DP++ + LVDS/eDP		
EXPANSION	Interface	1 x M.2 2230 E key (USB/PCIe) (Support WiFi 5 & WiFi 6) 1 x mini-PCIe (USB/PCIe) or M.2 2280 Key B SATA I2C (optional, not available with M.2 2280)	
AUDIO	Audio Codec	Realtek ALC888	
ETHERNET	Controller	2 x Intel® I225-IT PCIe	
REAR I/O	Ethernet	2 x GbE (RJ-45)	
	USB	2 x USB 3.1 Gen2 10Gbps	
	Display	1 x DP++ 1 x VGA	
INTERNAL I/O	Serial	1 x RS232/422/485 + 1 x RS232, or 1 x RS232/422/485 + 8bit DIO (BIOS select)	
	USB	4 x USB 2.0	
	Display	1 x LVDS or eDP + Backlight	
	Audio	1 x Audio (Line-out/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	2 x SMBus	
WATCHDOG TIMER	Output & Interval	System Reset, Programmable via Software from 1 to 255 Seconds	
SECURITY	TPM	TPM 2.0	
POWER	Type	Wide Range 9~36VDC	
	Connector	DC Jack (or vertical type 4pin connector)	
	Consumption	TBD	
	RTC Battery	CR2032 Coin Cell	
OS SUPPORT	Microsoft	Windows 10 IoT 2019 LTSC Windows 10 IoT 2021 LTSC Linux	
	Linux	Linux	
ENVIRONMENT	Temperature	Operating: -40 to 85°C	Storage: -40 to 85°C
	Humidity	Operating: 5 to 90% RH	Storage: 5 to 90% RH
	MTBF	TBD	
MECHANISM	Dimensions	3.5" SBC Form Factor	146mm (5.75") x 102mm (4.02")
STANDARDS AND CERTIFICATIONS	Certifications	CE, FCC Class B (TBD in later stage), RoHS, UKCA	

## ORDERING INFORMATION

Model Name	Part Number	Description	CPU	Display	LAN	COM	GPIO	TPM	DC-in	Expansion
EHL556	770-EHL5561-000G	EHL556: N6210, eDP, 2LAN, I2C, TPM2.0, Single Pack, F/G RoHS	N6210	eDP	2 GbE	1	8bit	Yes	DC jack	Mini-PCIe, M.2 2230, I2C
EHL556	770-EHL5561-100G	EHL556: x6413E, LVDS, 2LAN, TPM2.0, Single Pack, F/G RoHS	x6413E	LVDS	2 GbE	2	N/A	Yes	DC jack	Mini-PCIe, M.2 2230
EHL556	770-EHL5561-200G	EHL556: x6425E, LVDS, 2LAN, TPM2.0, Single Pack, F/G RoHS	x6425E	LVDS	2 GbE	2	N/A	Yes	DC jack	Mini-PCIe, M.2 2230

## OPTIONAL ITEMS

Items	Part Number	Description
Thermal Module	761-EHL5561-200G	embedded/industrial CPU SKU: 1 Assy. Heatsink (A71-010029-000G), 1 Heatspreader (A71-010030-030G), 6 SCREW(531-510210-000G), 20 in 1 bulk packing, Or contact DFI sales rep to provide configuration to assemble the thermal module on motherboard.
	761-EHL5561-300G	PC Client CPU SKU: 1 Assy. Heatsink (A71-010029-000G), 1 Heatspreader (A71-010030-040G), 6 SCREW(531-510210-000G), 20 in 1 bulk packing, Or contact DFI sales rep to provide configuration to assemble the thermal module on motherboard.
Power Adapter	671-106012-000G	60W, EA10681N-120, Input:100~240V, Output:12V/5A, 113x49x35mm, L=1500mm, DC PLUG 5.5*2.5*10mm(Lockable), LV6, 62368-1, EA10681N(183)(EDAC)RoHS, Op. Temp. 0 to 40°C
	671-106013-000G	60W, GST60A12, Input:100~240V, Output:12V/5A, 125x50x31.5mm, L=1000mm, DC Cord 5.5*2.5*17mm(Lockable), LV6, 62368-1, W/DFI JP PSE, GST60A12-DFI(MEAN WELL)RoHS, Op. Temp. -30 to 70°C

## PACKING LIST

1 EHL556 board
----------------