

EHL556

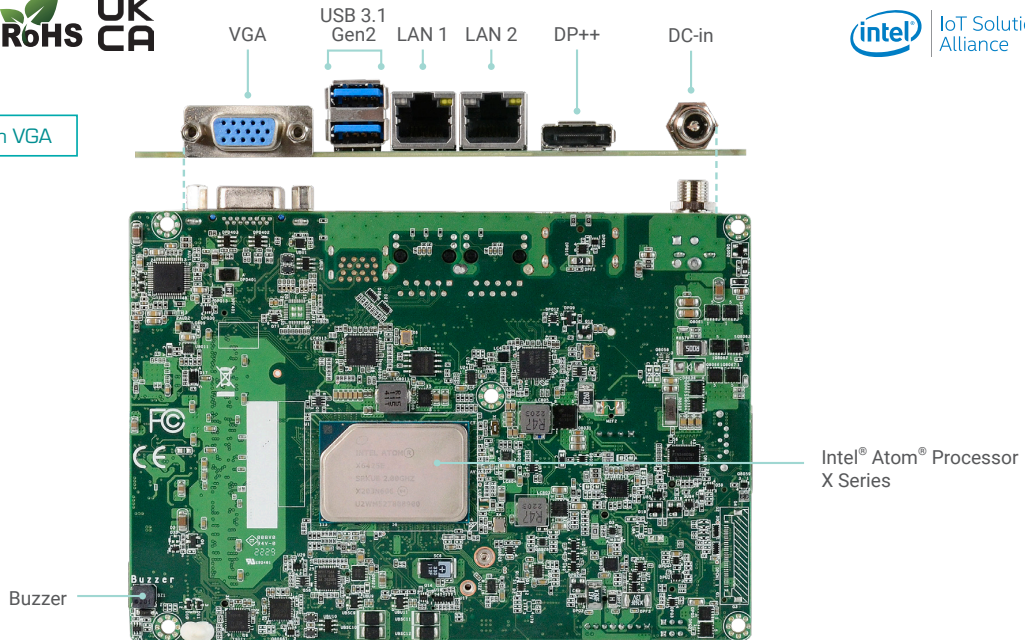
Atom



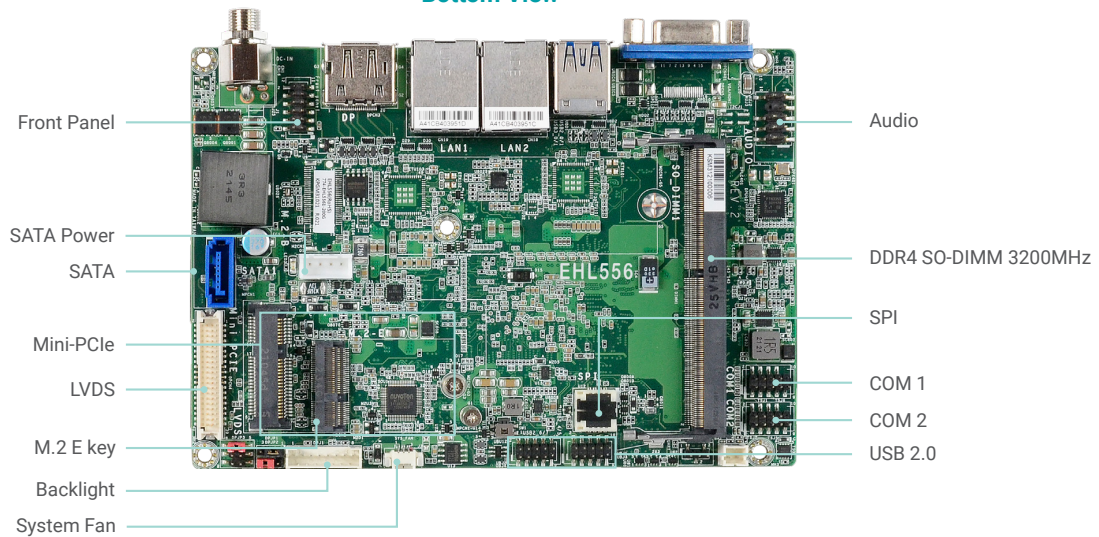
Intel® Atom® Processor X Series
3.5" SBC



Products with VGA



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

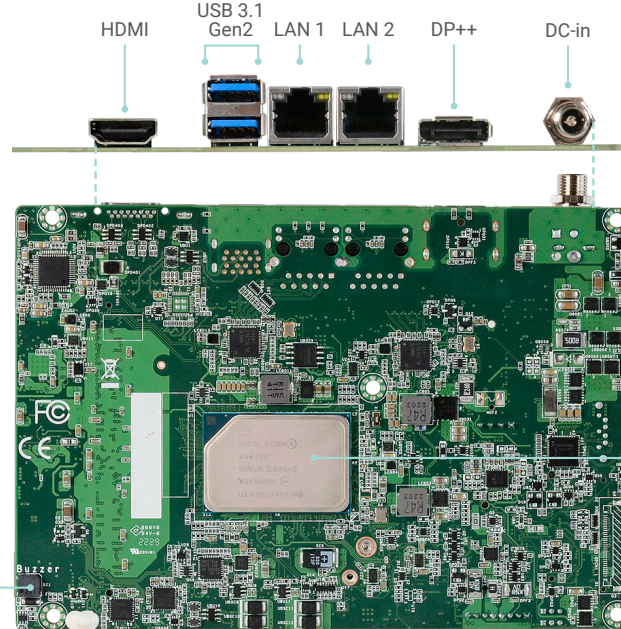
1 M.2 E Key,
1 Mini-PCle, I2C



Rich I/O

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

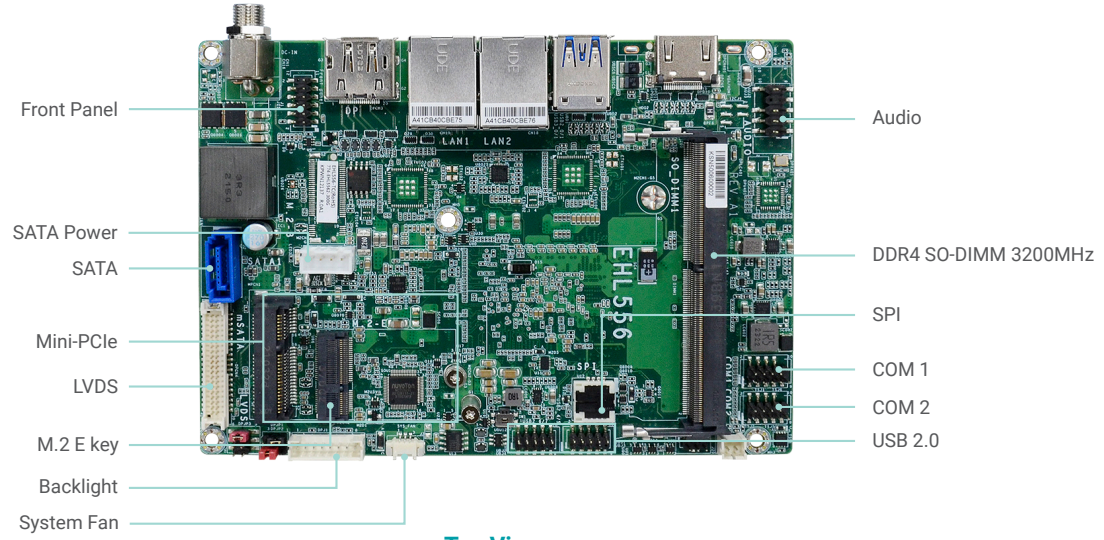
Products with HDMI



Buzzer

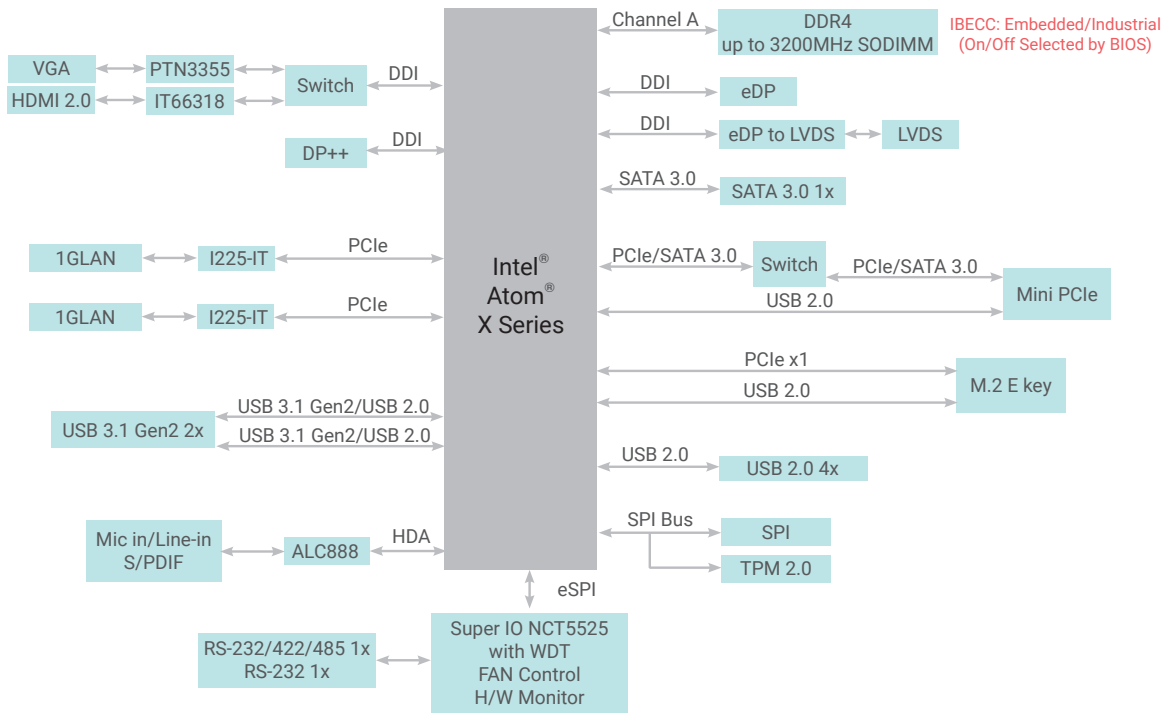
Intel® Atom® Processor X Series

Bottom View

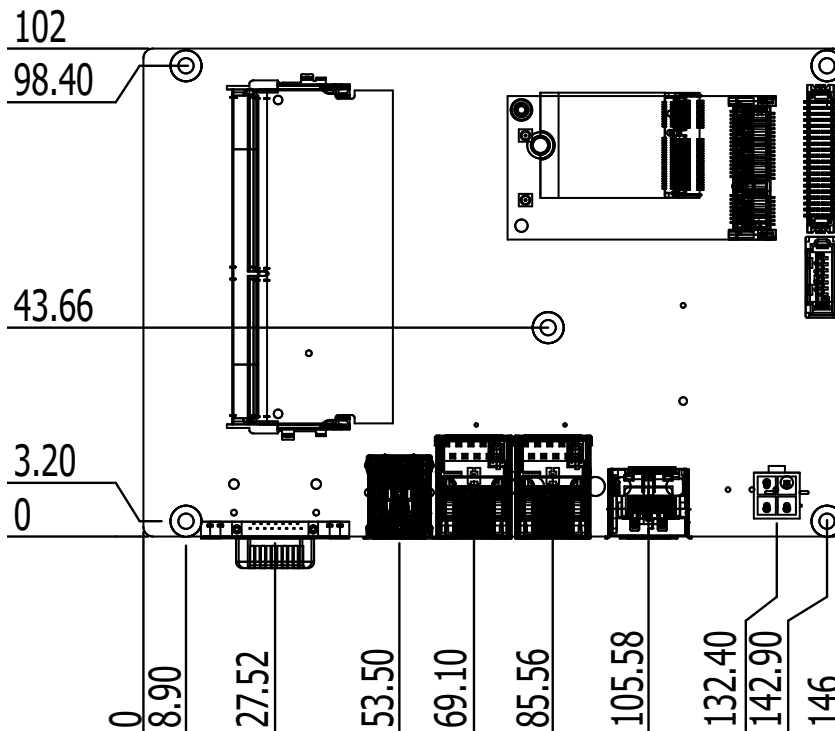


Top View

BLOCK DIAGRAM



MECHANICAL DRAWING



SPECIFICATION

| | | | |
|------------------------------|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| SYSTEM | Processor | Intel Atom Elkhart Lake Industrial Atom, x6425RE, 4C, 1.9GHz,12W Atom, x6414RE, 4C, 1.5GHz,9W Embedded Atom, x6425E, 4C, 2.0GHz(3.0GHz),12W Atom, x6413E, 4C, 1.5GHz(3.0GHz),9W PC Client Celeron N6210, 2C 1.2GHz(2.6GHz), 6.5W | |
| | Memory | Single DDR4-3200 SODIMM Up to 32GB (in-band ECC support in embedded/industrial SKU) | |
| | 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 |
| Triple Display | 1 x LVDS or eDP + Backlight | LVDS: resolution up to 1920x1200 @60Hz | |
| EXPANSION | Interface | 1 x M.2 2230 E key (USB/PCIe) (Support WiFi 5 & WiFi 6) 1 x mini-PCIe (USB/PCIe) I2C | |
| | Audio Codec | Realtek ALC888 | |
| AUDIO | Controller | 2 x Intel® I225-IT PCIe | |
| ETHERNET | Ethernet | 2 x GbE (RJ-45) | |
| REAR I/O | 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) | |
| 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°C ~ 85°C | Storage: -40°C ~ 85°C |
| | Humidity | Operating: 5% ~ 90% RH | Storage: 5% ~ 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 | Working temp. | Expansion |
|------------|------------------|---------------------------------------------------------------|--------|-----------|-------|-----|------|-----|---------|---------------|--------------------------|
| EHL556 | 770-EHL5561-000G | EHL556: N6210, eDP, 2 LAN, I2C, TPM 2.0 | N6210 | VGA+ eDP | 2 GbE | 1 | 8bit | Yes | DC jack | -20°C ~ 70°C | Mini-PCIe, M.2 2230, I2C |
| EHL556 | 770-EHL5561-100G | EHL556: x6413E, LVDS, 2 LAN, TPM 2.0 | x6413E | VGA+ LVDS | 2 GbE | 2 | N/A | Yes | DC jack | -40°C ~ 85°C | Mini-PCIe, M.2 2230 |
| EHL556 | 770-EHL5561-200G | EHL556: x6425E, LVDS, 2 LAN, TPM 2.0 | x6425E | VGA+ LVDS | 2 GbE | 2 | N/A | Yes | DC jack | -40°C ~ 85°C | Mini-PCIe, M.2 2230 |
| EHL556 | 770-EHL5562-200G | EHL556: x6425E, HDMI+DP, LVDS, 2 LAN, TPM 2.0 | x6425E | HDMI+ DP | 2 GbE | 2 | N/A | Yes | DC jack | -40°C ~ 85°C | Mini-PCIe, M.2 2230 |
| EHL556 | 770-EHL5562-300G | EHL556: x6425E, HDMI+DP, LVDS, 2LAN, 1COM+DIO, mPCIe, TPM 2.0 | X6425E | HDMI+ DP | 2 GbE | 1 | 8bit | Yes | DC jack | -40°C ~ 85°C | Mini-PCIe, M.2 2230 |

OPTIONAL ITEMS

| Items | Part Number | Description |
|---------------|-----------------|------------------------------------------------------------------------------------------------------|
| Power adapter | 671-106012-000G | 60W, 12V, DC Jack, 0~40°C |
| | 671-106013-000G | 60W, 12V, DC Jack, -30 to 70°C |
| USB 2.0 cable | A81-001032-016G | Length: 200mm |
| Heat spreader | A71-808363-010G | HEATSPREADER, AL1050 146*102*7.5mm, FOR EHL556 BARE DIE CPU (J6413, J6412, J646, N621, N6210, N6415) |
| | A71-808363-000G | HEATSPREADER, AL1050 146*102*7.5mm, FOR EHL556 IHS CPU (x6211E, x6413E, x6425E, x6414RE, x6425RE) |

PACKING LIST

| | |
|-----------------------------------------|---------------------------------|
| • 1 EHL556 board | |
| • 1 SATA cable (Length: 300mm) | 332-553001-205G |
| • 1 SATA power cable (Length: 250mm) | A81-004041-016G |
| • 1 COM cable (Length: 250mm) | 332-753040-000G |
| • 1 Heatsink -20 to 70°C (Height: 29mm) | A71-008357-010G (PC client CPU) |
| • 1 Heatsink -40 to 80°C (Height: 29mm) | A71-008357-000G (Industry CPU) |

Assured Systems

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