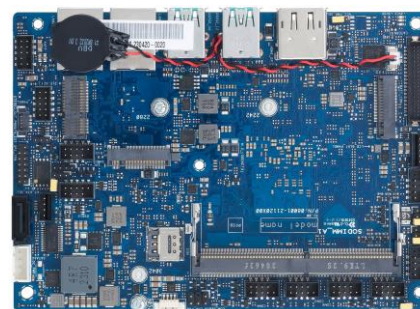


# X621ES-IM-AA

3.5" SBC, Intel Atom® Processor, DDR4 SO-DIMM, DP, HDMI, LVDS, Dual-LAN, Multiple COM, 9-36V DC-in put

## Features

- Up to 6 COM ports, includes 2 x RS-232/422/485, 4 x RS232
- Supports 3 display configuration by multiple interface: DP/HDMI/LVDS
- Supports I2C, SMBus and GPIO
- Wide temperature range endurance: -40~85 °C



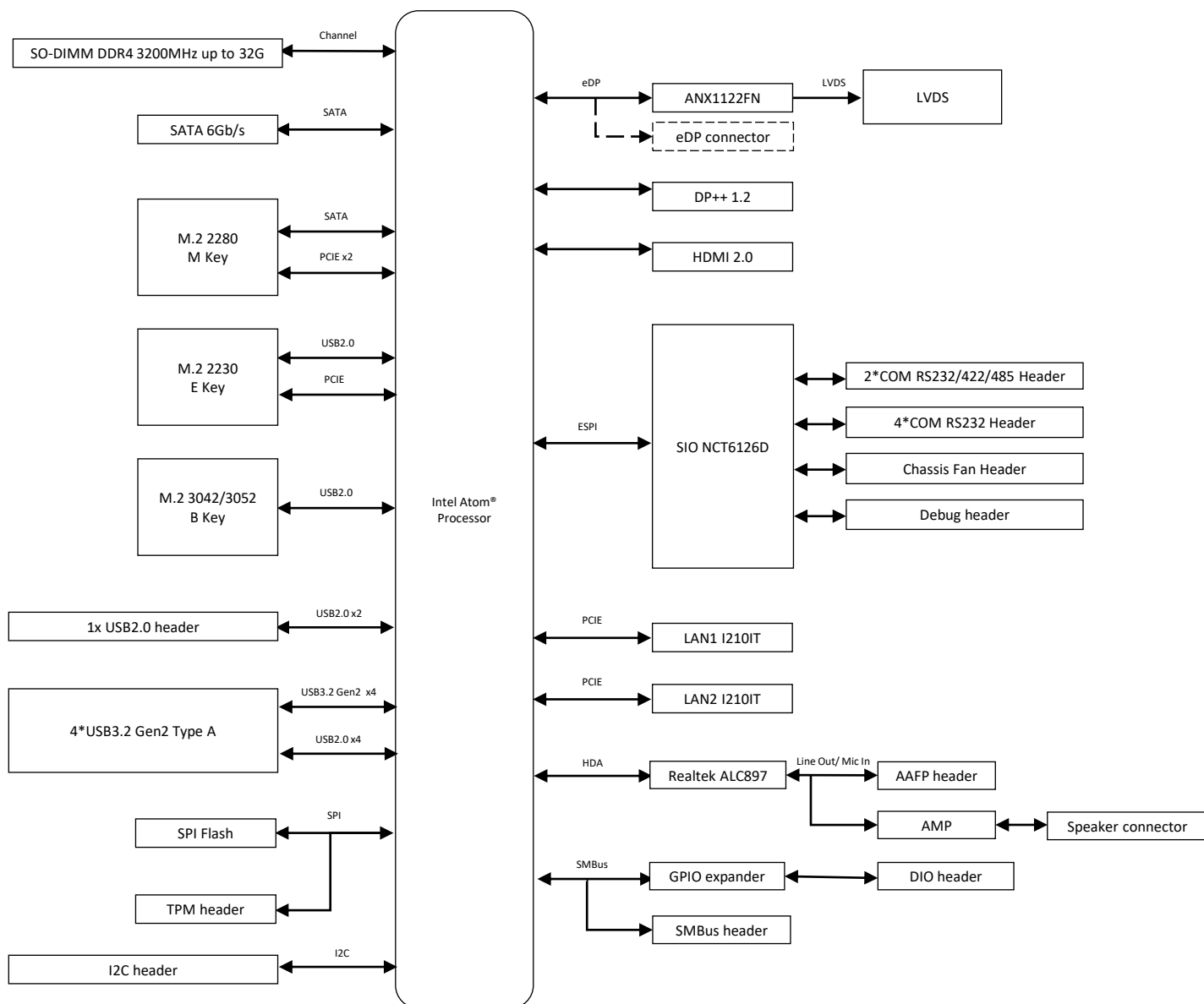
## Specifications

|   |                                 |   |
|---|---------------------------------|---|
| <b>Processor System</b>   | CPU                             | Intel Atom® x6211E  |
|   | TDP                             | 6W  |
|   | # of Cores                      | 2   |
|   | Base Freq.                      | 1.3 GHz   |
| <b>Memory</b>   | Max Turbo Freq.                 | 3.0 GHz   |
|   | Technology                      | DDR4 3200 MHz, In-Band ECC (IBECC)                                |
|   | Max.                            | 32GB  |
|   | Socket                          | 1 x SO-DIMM   |
| <b>Display</b>  | HDMI                            | 1, Supports HDMI 2.0 up to 4K x 2K @ 60 Hz                        |
|   | Display Port                    | 1, Supports DP++1.2 up to 4096 x 2160 @ 60 Hz                     |
|   | Embedded Display Port           | 1, Supports eDP1.2 (co-lay with LVDS)                             |
|   | LVDS (default)                  | 1, Supports 1920 x 1080 @ 60 Hz (co-lay with eDP)                 |
| <b>Expansion Slot</b>   | Multi Display                   | 3 Display Configuration: HDMI+DP+LVDS/eDP                         |
|   | M.2                             | 1 x M.2 2230 E key socket (USB2.0, PCIe) supports Wi-Fi/BT module |
|   |                                 | 1 x M.2 2280 M key socket (SATA, PCIe) supports M.2 SSD/PCIe mode |
| 1 x M.2 3042/3052 B key (USB 2.0) supports LTE connected to Nano-SIM socket |                                 |   |
| <b>Ethernet</b>   | Speed                           | 10/100/1000Mbps   |
|   | Controller                      | 2 x Intel® i210-IT, supports WOL/PXE                              |
|   | Connector                       | 2 x RJ-45   |
| <b>Audio</b>  | Codec                           | Realtek ALC897 High Definition Audio                              |
| <b>Storage</b>  | SATA port                       | 1 x SATA Gen 3.0, up to 6Gb/s                                     |
| <b>Rear I/O</b>   | HDMI                            | 1   |
|   | Display Port                    | 1   |
|   | USB 3.2 Gen2                    | 4 (Type A)  |
|   | LED (Back)                      | Power status, HDD R/W   |
|   | Ethernet                        | 2   |
| <b>Internal Connector &amp; Jumper</b>                                      | Serial Port                     | 6 (2 x RS-232/422/485, 4 x RS-232)                                |
|   | USB2.0                          | 1 x Header support additional 2 x USB2.0 connectors               |
|   | Chassis Fan Header              | 1 (PWM+DC Mode)   |
|   | Chassis Intrusion Header        | 1   |
|   | Front Panel Audio Header (AAFP) | 1   |
|   | System Panel Header             | 1 (10-1 Pin)  |
|   | Clear CMOS Jumper               | 1   |
|   | SATA Power Header               | 1   |
|   | COM Debug Header                | 1   |
|   | SMBus Header                    | 1   |
|   | I <sup>2</sup> C Header         | 1   |
|   | GPIO Header                     | 1 (8-bit)   |
|   | AT/ATX jumper                   | 1   |
|   | AMP header                      | 1   |
|   | Power Connector                 | 1 x 4-pin ATX Power Connector                                     |

# Specifications

|                         |                           |                                    |
|-------------------------|---------------------------|------------------------------------|
| <b>Watchdog Timer</b>   | S/W                       | YES                                |
| <b>Security</b>         | TPM                       | 1 x SPI TPM header                 |
| <b>Power</b>            | Power Type                | DC power input                     |
|                         | Voltage                   | 9V-36V                             |
| <b>Operating System</b> | Microsoft Windows         | Windows 10 IoT Enterprise          |
|                         | Linux                     | Ubuntu                             |
| <b>Environment</b>      | Operating Temperature     | -40~85°C                           |
|                         | Non-Operating Temperature | -40~85°C                           |
|                         | Relative Humidity         | 10 to 95% (non condensing)         |
| <b>Dimension</b>        | Form Factor               | 3.5", 146 x 105 mm                 |
| <b>Certification</b>    | EMC, Safety               | CE, FCC, BSMI, VCCI, ISED, EN62368 |
|                         | Green                     | GA (RoHS)                          |

# Block Diagram



## Order Information

| Model name   | Part number | Description                             |
|--------------|-------------|---|
| X621ES-IM-AA | 90ME0790*   | FCBGA1493, X6211E, HDMI, DP++, LVDS, MB |

\* The part number might vary for different regulations and package. Please consult the TPM in your region for exact 90PN.

## Packing List

| Part number | Description   | Quantity |
|-------------|---------------|----------|
| 14013*      | SATA 6G CABLE | 1        |

\* The part number might vary due to part number revision.