

# Datasheet

## ASUS IoT

### X7835RE-IM-A

**3.5" SBC, Intel® Atom® X7835RE, DDR5 SO-DIMM, 5G, LTE, WiFi 5/6/6E  
DP, HDMI, eDP/LVDS, Dual-LAN, Multiple COM, USB3.2, M.2, SATA 3.0, PCIE 3.0, TPM**

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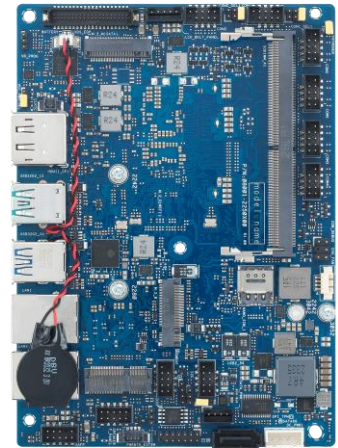
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## Features

- Intel® Amston Lake SoC, Low Power Consumption at 12W TDP
- 3x Display Configuration with Multiple Interface: HDMI, DP, eDP/LVDS
- Integrated Intel® UHD Graphics, up to 4K/60 Hz
- 6 COM ports, 2x RS-232/422/485 and 4x RS-232
- M.2 E-key 2230, M-key 2242/2280, B key 3042/3052, SATA 3.0
- Wide Voltage: 9~36V; Wide Operating Temperature: -20° ~ 70°C
- Built-in AI Acceleration with Intel® Deep Learning Boost

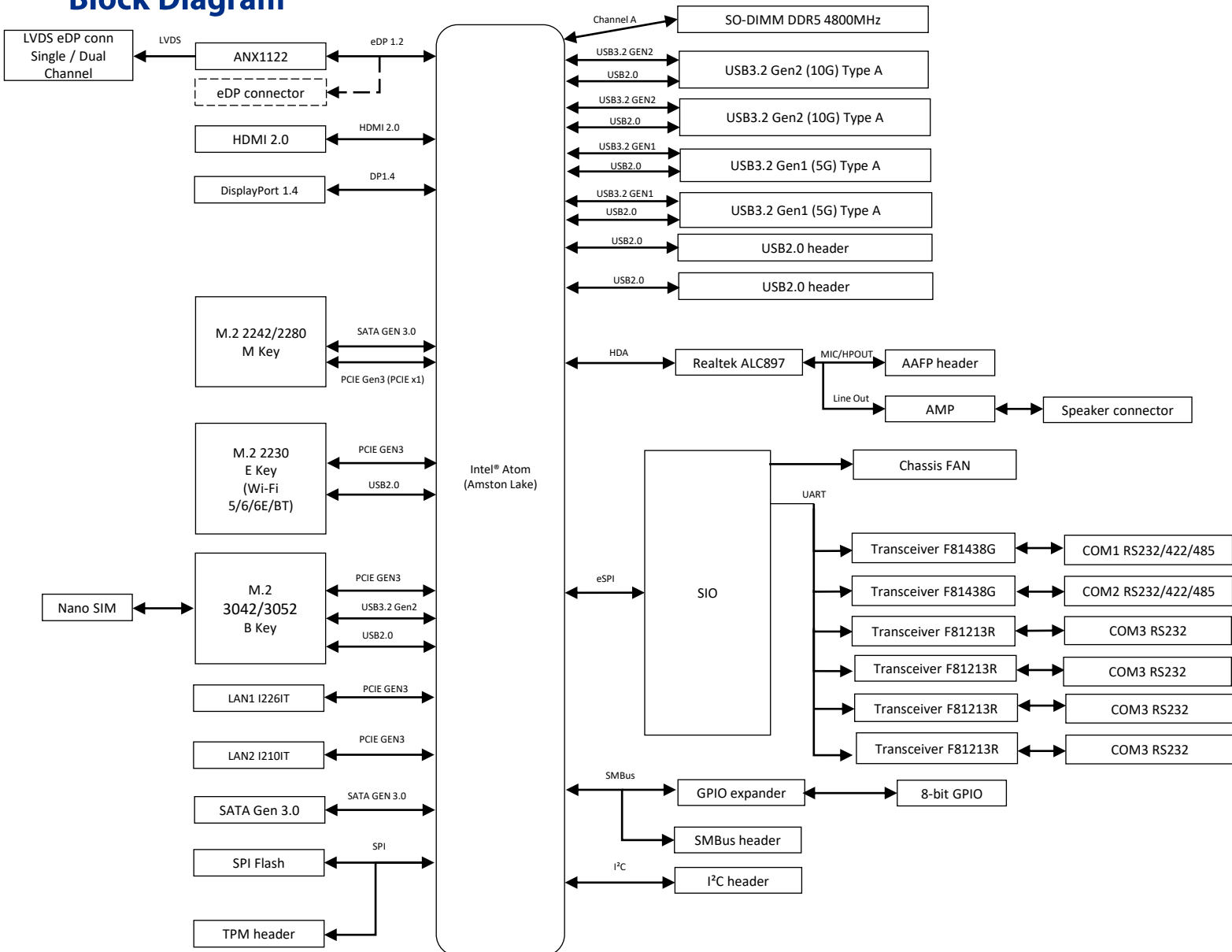
## Specifications

|                           |                                 |   |
|---------------------------|---------------------------------|---|
| <b>Processor</b>          | CPU                             | Intel® Atom® X7835RE  |
|                           | TDP                             | 12W   |
|                           | # of Cores                      | 8   |
|                           | Base Frequency                  | 1.3 GHz   |
|                           | Max. Turbo Frequency            | 3.6 GHz   |
| <b>Memory</b>             | Technology                      | DDR5 4800 MHz, In-Band ECC (IB ECC)   |
|                           | Max.                            | 16GB  |
|                           | Socket                          | SO-DIMM   |
| <b>Display</b>            | Controller                      | Integrated Intel® UHD Graphics  |
|                           | HDMI                            | 1, Supports HDMI 2.0 up to 4K x 2K @ 60 Hz                                      |
|                           | Display Port                    | 1, Supports DP1.4 up to 4096 x 2304 @ 60 Hz                                     |
|                           | LVDS                            | 1, Supports 1920 x 1080 @ 60 Hz (co-lay with eDP 1.2)                           |
|                           | Multiple Display                | 3 Display Configuration: HDMI+DP+LVDS/eDP                                       |
| <b>Expansion Slot</b>     | M.2                             | 1 x M.2 Socket 1 with E key, type 2230 for TPU/WIFI/BT device (PCIe/USB)        |
|                           |                                 | 1 x M.2 Socket 3 with M key, type 2242/2280 (SATA mode/PCIEx1)                  |
|                           |                                 | 1 x M.2 Socket 2 with B key (3042/3052) for 4G/5G (PCIe/USB2.0/USB3.2 Gen2)     |
| <b>Ethernet</b>           | Speed                           | 10/100/1000Mbps/2.5G  |
|                           | Controller                      | 1x Intel® i210IT, supports WOL/PXE<br>1x Intel® i226IT (2.5G), supports WOL/PXE |
|                           | Connector                       | 2 x RJ-45   |
| <b>Audio</b>              | Codec                           | Realtek® ALC897<br>AMP 3W   |
| <b>Storage</b>            | SATA port                       | 1 x SATA Gen 3.0 (6Gb/s)  |
| <b>Rear I/O</b>           | HDMI                            | 1   |
|                           | Display Port                    | 1   |
|                           | USB3.2                          | 2x Gen2 (10 Gb/s) & 2x Gen1(5 Gb/s)   |
|                           | Ethernet                        | 2 (1G; 2.5G)  |
| <b>Internal Connector</b> | Serial Port                     | 6 (2 x RS-232/422/485, 4x RS-232)   |
|                           | USB2.0                          | 2   |
|                           | 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   |
|                           | SMBus Header                    | 1   |
|                           | I <sup>2</sup> C Header         | 1   |
|                           | GPIO Header                     | 1 (8-bit)   |
| Power Connector           | 1 x 4-pin Power Connector       |   |

### Specifications

|                         |                           |   |
|-------------------------|---------------------------|---|
| <b>Watchdog Timer</b>   | H/W                       | YES   |
| <b>Security</b>         | TPM                       | 1 x SPI TPM header; Intel® PTT  |
|                         | Platform Integrity        | Intel® OS Guard; Intel® Boot Guard  |
| <b>Power</b>            | Power Type                | DC power input  |
|                         | Voltage                   | 9V-36V  |
| <b>Operating System</b> | Microsoft Windows         | Windows® 10 (64bit)/Windows® 10 IoT Enterprise/<br>Windows® 11 IoT Enterprise |
|                         | Linux                     | Ubuntu, RedHat Enterprise, Fedora Workstation                                 |
| <b>Environment</b>      | Operating Temperature     | -20~ 70°C   |
|                         | Non Operating Temperature | -40~ 85°C   |
|                         | Relative Humidity         | 10%~95%   |
| <b>Dimension</b>        | Form Factor               | 3.5", 146 x 105 mm  |
| <b>Certification</b>    | Safety                    | CB, BSMI, CE-LVD  |
|                         | EMC                       | CE, FCC, VCCI, BSMI, RCM  |
|                         | Green                     | GA (RoHS)   |

### Block Diagram



## Order Information

| Model name   | Part number | Description                       |
|--------------|-------------|-----------------------------------|
| X7835RE-IM-A | 90ME09E*    | X7835RE,DDR5 SO DIMM,DUAL LAN, 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.

Our company network supports you worldwide with offices in Germany, Austria, Switzerland, the UK and the USA.  
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