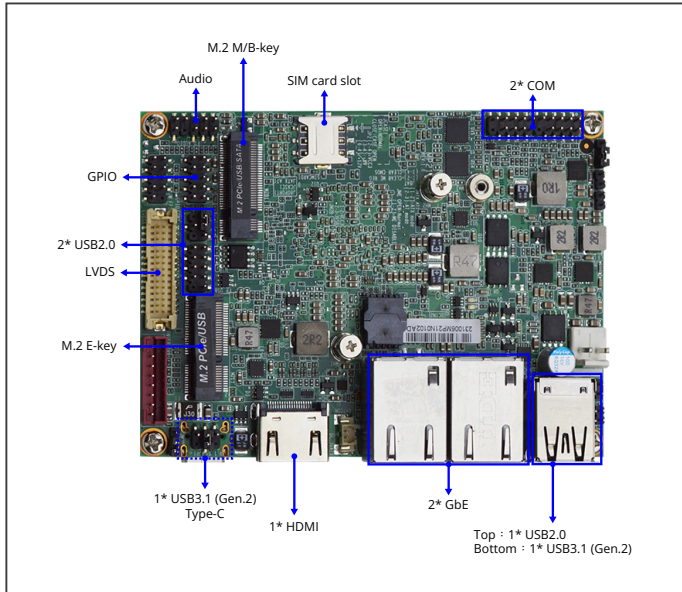


MP21

PICO-ITX with Intel® Atom® x6000E series, Celeron® N series (formerly Elkhart Lake)



Specifications

| SYSTEM | |
|-----------------------------|--|
| FORM FACTOR | PICO-ITX |
| CPU | Onboard Intel® Atom® x6000E series Processors (formerly Elkhart Lake) Intel® Processor N6210 *For additional compatible CPUs, please contact regional sales |
| CPU TDP | 6.5W |
| CHIPSET | Integrated with Intel® SoC |
| MEMORY TYPE | Onboard LPDDR4x 3200 up to 4GB *For additional spec, please contact regional sales |
| BIOS | UEFI |
| WAKE ON LAN | Yes |
| WATCHDOG TIMER | 255 Levels |
| SECURITY | Intel® PTT (Integrated TPM) |
| RTC BATTERY | Lithium Battery 3V/200mAh |
| DIMENSION (L X W) | 100mm x 72mm (3.94" x 2.84") |
| OS SUPPORT | Windows® 10 (64bit), Windows® 11 (64bit) Linux |
| POWER | |
| POWER REQUIREMENT | DC 12V |
| POWER SUPPLY TYPE | AT/ATX mode |
| CONNECTOR | Internal 2-pin header type |
| DISPLAY | |
| CONTROLLER | Intel® UHD Graphics |
| LVDS/eDP/MIPI-DSI | 1 x 24 Bit Dual Channel LVDS, up to 1920 x 1080 @60Hz, co-lay eDP |
| DISPLAY INTERFACE | 1 x HDMI 2.0b, up to 4K x 2K @60Hz |
| MULTIPLE DISPLAY | Support 2 Displays |
| AUDIO | |
| CODEC | Realtek ALC897 |
| AUDIO INTERFACE | 1 x Internal header |
| Speaker | — |
| EXTERNAL I/O | |
| ETHERNET | 2 x Realtek RTL8119I, 10/100/1000Base-T |
| USB | 1 x USB3.1 Gen 2 1 x USB3.1 Gen 2 Type-C 1 x USB2.0 |
| SERIAL PORT | — |
| VIDEO | 1 x HDMI 2.0b |
| INTERNAL I/O | |
| USB | 2 x USB2.0 |
| SERIAL PORT | 2 x RS232/422/485 |
| VIDEO | 1 x 24 Bit Dual Channel LVDS, up to 1920 x 1080 @60Hz, co-lay eDP |
| AUDIO | 1 x Internal header |
| GPIO | 8-Bit |
| SMBUS | — |
| I2C | — |
| FAN | — |
| SIM | 1 x Nano SIM Card |
| FRONT PANEL | PWR LED Power Button |
| OTHERS | — |
| STORAGE | |
| SATA | — |
| MINI PCI-E/MSATA | — |
| M.2 | — |
| eMMC | eMMC 64GB (optional) |
| EXPANSION | |
| M.2 | 1 x E-Key 2230 (USB2.0/PCIe Gen.3 x1) 1 x B-Key 2242/3042/3052 (SATA/PCIe Gen.3 x1/USB3.1) support 4G/5G/LTE or NVME for storage (Only available on compatible B/M-key M.2 storage) |
| OTHERS | — |
| ENVIRONMENT & CERTIFICATION | |
| OPERATING TEMPERATURE | -20°C ~ 60°C (-4°F ~ 140°F) |
| STORAGE TEMPERATURE | -20°C ~ 85°C (-4°F ~ 185°F) |
| OPERATING HUMIDITY | 10% ~ 90% relative humidity, non-condensing |
| CERTIFICATION | Meet CE/FCC Class A |

Features

- LPDDR4x 4GB onboard memory
- 1 x HDMI 2.0b, 1 x LVDS/eDP
- 2 x GbE
- 1 x USB 3.1 Gen2, 1 x USB3.1 Gen2 Type-C, 3 x USB2.0
- 1 x M.2 B-key (SATA/PCIe 3.0x1/USB3.1 interface) support NVME
- 1 x M.2 E-key (USB2.0/PCIe 3.0x1 interface)
- 2 x COM(RS232/422/485), 1 x GPIO
- Support RVP, OCP, and OVP design

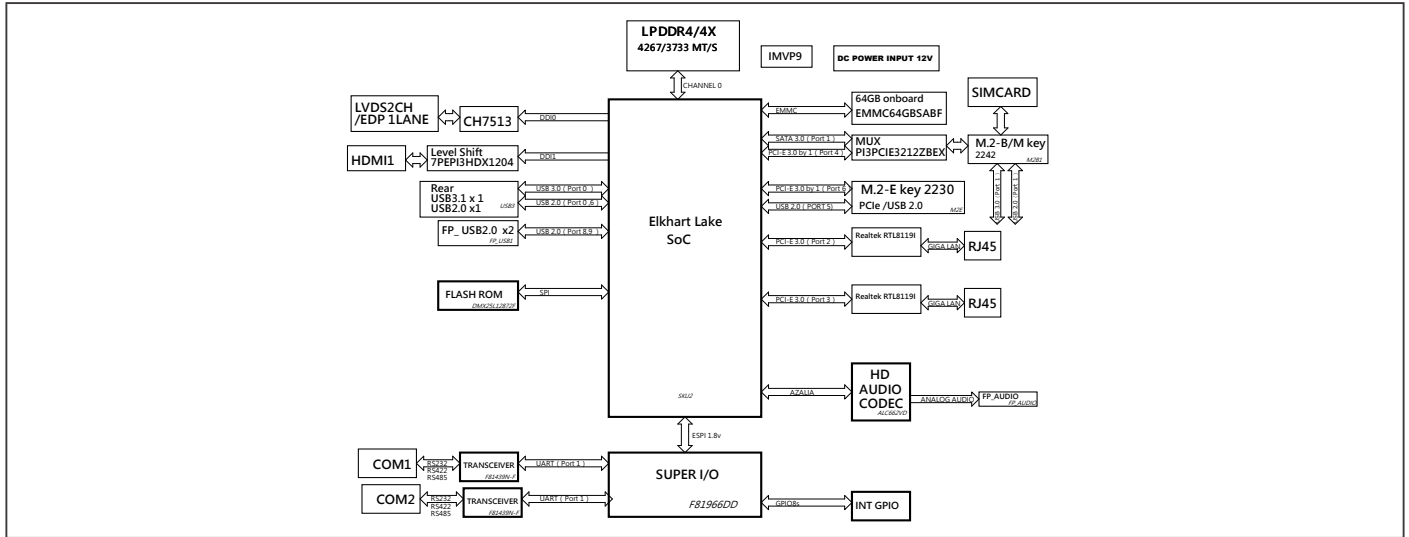
Applications

- Intelligent Home
- Digital Signage
- IOT Solution

Packing List

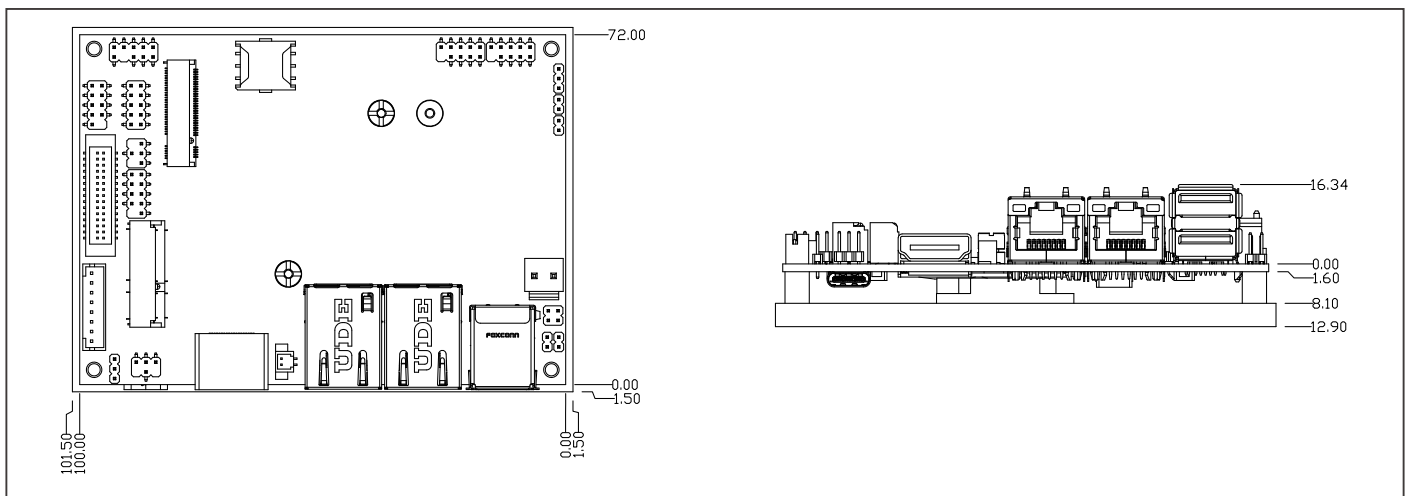
| Part Number | Description | QTY per Board |
|-------------------|---------------------------------|---------------|
| | MP21 Motherboard | 1 |
| F05-JMP01-F | Flat Hearsink (assembled) | 1 |
| HCS400MHT02S-F | CPU Heatsink (assembled) | 1 |
| G01-COM-H2M22-1F | COM cable (pitch2.0mm, L=220mm) | 2 |
| G01-PWDCJK-2P20-F | Lockable DC cable (L=200mm) | 1 |

Block Diagram



Dimension

Unit: mm



Ordering Information

| Part Number | MP21-62100 | MP21-62104 |
|----------------|--|--|
| CPU | Intel® Processor N6210 | Intel® Processor N6210 |
| DISPLAY | 1 x HDMI 1 x LVDS, co-lay eDP | 1 x HDMI 1 x LVDS, co-lay eDP |
| LAN | 2 x GbE | 2 x GbE |
| USB | 1 x USB 3.1 Gen2 1 x USB3.1 Gen2 Type-C 3 x USB2.0 | 1 x USB 3.1 Gen2 1 x USB3.1 Gen2 Type-C 3 x USB2.0 |
| RS-232/422/485 | 2 | 2 |
| STORAGE | — | — |
| EXPANSION SLOT | 1 x M.2 E-key 2230 1 x M.2 B-key 2242/3042/3052 | 1 x M.2 E-key 2230 1 x M.2 B-key 2242/3042/3052 |
| TPM | — | — |
| eMMC | — | eMMC 64GB |
| POWER | 12V | 12V |
| OPERATING TEMP | 0°C ~ 60°C | 0°C ~ 60°C |