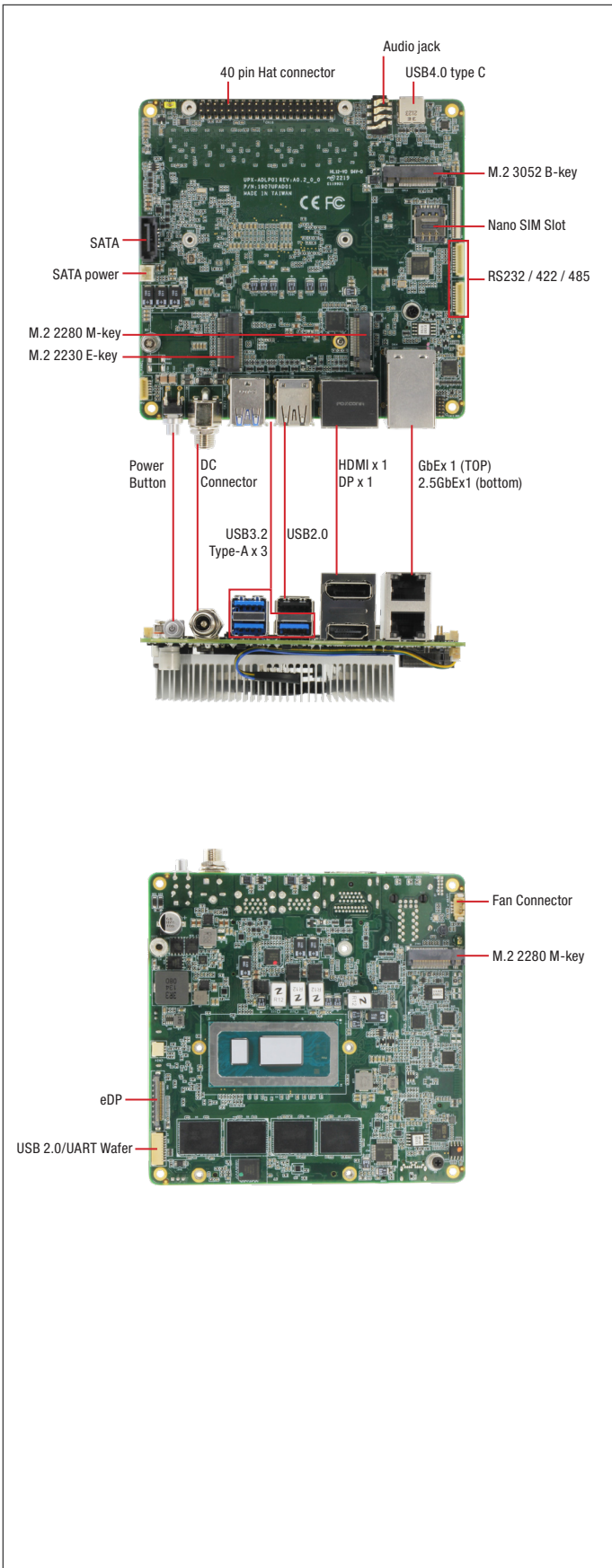


UP Xtreme i12 developer board with 12th generation Intel® Core™ i7/i5/i3/Celeron® Processor SoC (Alder Lake-P)



## Features

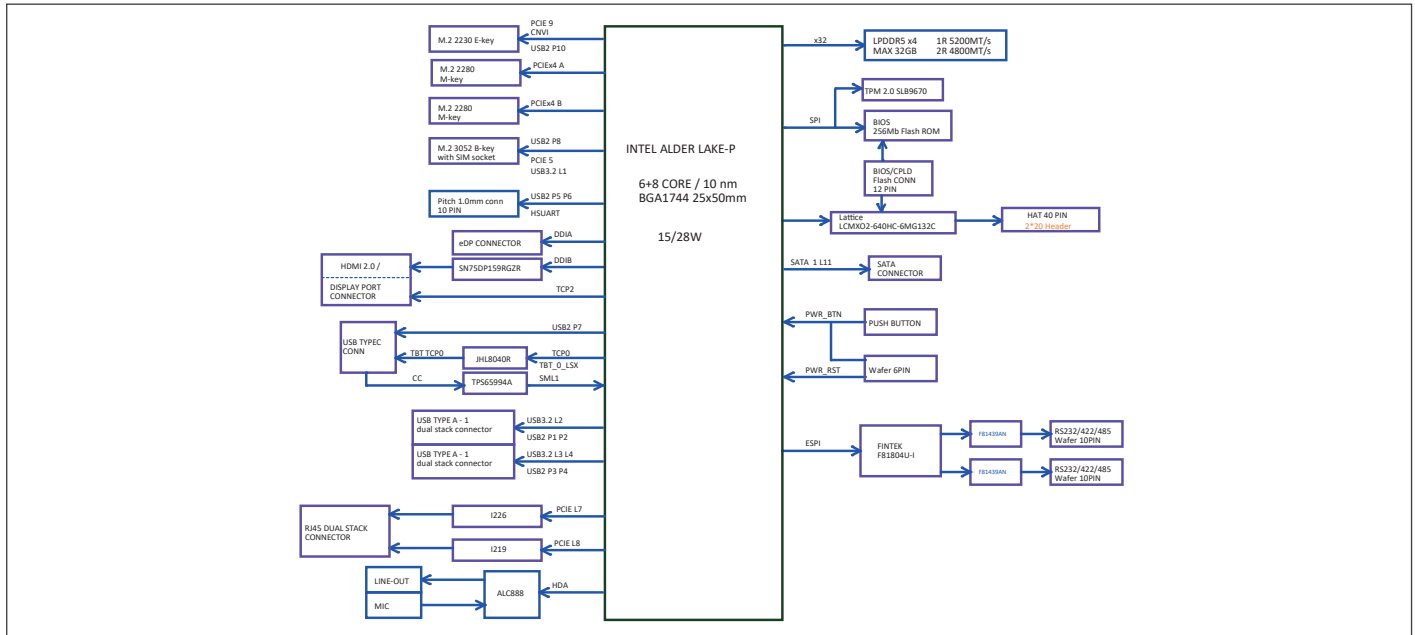
- 12th generation Intel® Core™ i7/i5/i3/Celeron® Processor SoC
- On board Dual Channel LPDDR5 up to 32GB
- Support 4 independent Displays up to 4K at 60Ghz
- Support 2 x M.2 2280 KEY M (PCIe Gen4)
- Support 5G via M.2 3052
- Support Intel AX210 WiFi 6
- TPM2.0
- 40pin HAT connector
- USB4.0 type C
- Up to 2.5Gbps LAN speed



## Specifications

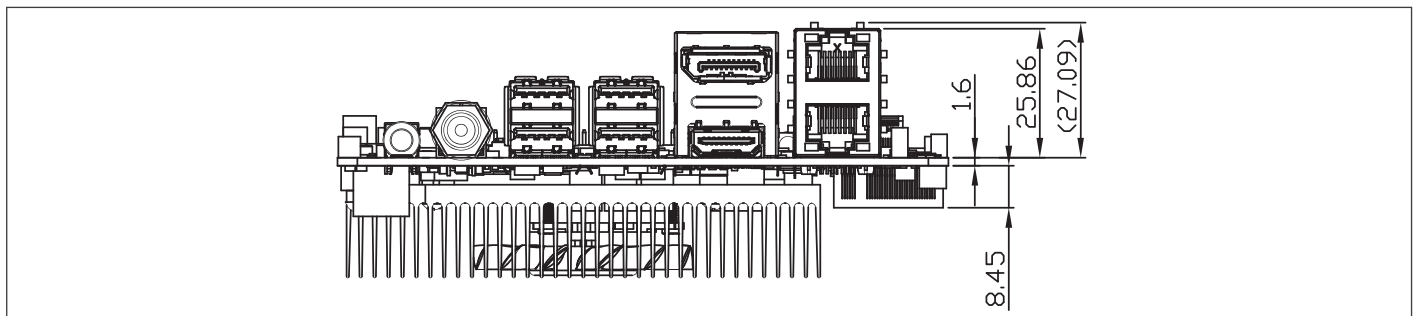
| System                      |  |
|-----------------------------|--|
| Processor                   | 12th Gen Intel® Core™ Processor SoC<br>Core i7-1270PE<br>Core i5-1250PE<br>Core i3-1220PE<br>Celeron® 7305E  |
| Graphics                    | Intel® Iris® Xe graphics   |
| Memory                      | Up to 32GB on board LPDDR5 4800MHz (Dual Channel)  |
| Storage                     | M.2 2280 (PCIe Gen4.0 x 4) M-key x 2<br>SATA3 x 1  |
| I/O                         | 10-pin USB 2.0 x 2 / HSUART x 1<br>4pin Fan Connector x1<br>6pin Front Panel Header x 1<br>10-pin RS232/422/485 Pin Header x 2<br>DC Connector x 1<br>Power Button/LED x 1<br>Audio Jack x 1 ( Mic-in, Line out)<br>RJ45 x 2 |
| Camera                      | —  |
| USB                         | USB 2.0 x 2 ( from wafer x 1), USB2.0 Type A x 1<br>USB 3.2 Gen 2 Type A x 3<br>USB4.0 Type C x 1  |
| Expansion                   | 40 pin GPIO x 1<br>M.2 2230 E-key x 1<br>M.2 2280 (PCIe Gen4.0 x 4) M-key x 2<br>SATA3 x 1<br>M.2 3052 B-key x 1<br>Nano SIM slot x 1  |
| Display Interface           | HDMI 2.0b x 1<br>DP 1.4a x 1<br>DP 1.4b via USB type C x 1<br>eDP1.4b x 1  |
| Ethernet                    | Intel® i226IT (TSN) x 1, Intel® i219 (vPRO) x 1  |
| Security                    | TPM 2.0  |
| RTC                         | Yes  |
| OS Support                  | Windows® 10 Enterprise 2021 LTSC<br>Ubuntu 22.04<br>Yocto (TBD)  |
| Power Requirement           |  |
| Power                       | 12-36V DC input (AT/ATX mode)  |
| POWER SUPPLY TYPE           | Lockable   |
| POWER CONSUMPTION (TYPICAL) | Intel® Core™ i7-1270PE, LPDDR5 4800MHz 16GB, 5.86A@+ 12V (Typical)<br>Intel® Core™ i7-1270PE, LPDDR5 4800MHz 16GB, 8.05A@+ 12V (Max)   |
| Mechanical                  |  |
| Dimension                   | 120.35 x 122.5 mm  |
| Net Weight                  | 389gm  |
| Gross Weight                | 604gm  |
| Environment                 |  |
| Operating Temperature       | With Heatsink: 32°F ~ 140°F (0°C ~ 60°) / 0.5 airflow  |
| Operation Humidity          | 0% ~ 90% relative humidity, non-condensing   |
| MTBF                        | 362,068 Hours  |
| Certification               | CE/FCC Class A, RoHS Compliant, REACH  |

## Block Diagram



## Dimension

Unit: mm



## Ordering Information

| Part Number         | CPU                  | Core | LAN   | Memory | USB  | RS-232/422/485 | Expansion Slot  | Display                          | Power  | Operation Temp           |
|---------------------|----------------------|------|---|--------|--|----------------|---|----------------------------------|--------|--------------------------|
| UPX-ADLP17-A10-1600 | Intel Core i7-1270PE | 4    | GbE x 2 (Intel i226 IT up to 2.5Gbps, Intel i219 up to 1Gbps) | 16GB   | USB 3.2 Gen 2 Type A x 3<br>USB 2.0 Type A x 1<br>USB 2.0 x 2 via wafer<br>USB4.0 Type C x 1 | 2              | M.2 2280 M key x 2, M.2 2230 E key x 1<br>M.2 3052 B key x 1, 40pin HAT x 1, SATA 3 x 1 | HDMI, DP, eDP, DP via USB type C | 12-36V | 32°F ~140°F (0°C ~ 60°C) |
| UPX-ADLP15-A10-1600 | Intel Core i5-1250PE | 4    | GbE x 2 (Intel i226 IT up to 2.5Gbps, Intel i219 up to 1Gbps) | 16GB   | USB 3.2 Gen 2 Type A x 3<br>USB 2.0 Type A x 1<br>USB 2.0 x 2 via wafer<br>USB4.0 Type C x 1 | 2              | M.2 2280 M key x 2, M.2 2230 E key x 1<br>M.2 3052 B key x 1, 40pin HAT x 1, SATA 3 x 1 | HDMI, DP, eDP, DP via USB type C | 12-36V | 32°F ~140°F (0°C ~ 60°C) |
| UPX-ADLP13-A10-0800 | Intel Core i3-1220PE | 2    | GbE x 2 (Intel i226 IT up to 2.5Gbps, Intel i219 up to 1Gbps) | 8GB    | USB 3.2 Gen 2 Type A x 3<br>USB 2.0 Type A x 1<br>USB 2.0 x 2 via wafer<br>USB4.0 Type C x 1 | 2              | M.2 2280 M key x 2, M.2 2230 E key x 1<br>M.2 3052 B key x 1, 40pin HAT x 1, SATA 3 x 1 | HDMI, DP, eDP, DP via USB type C | 12-36V | 32°F ~140°F (0°C ~ 60°C) |
| UPX-ADLP12-A10-0800 | Intel Celeron® 7305E | 2    | GbE x 2 (Intel i226 IT up to 2.5Gbps, Intel i219 up to 1Gbps) | 8GB    | USB 3.2 Gen 2 Type A x 3<br>USB 2.0 Type A x 1<br>USB 2.0 x 2 via wafer<br>USB4.0 Type C x 1 | 2              | M.2 2280 M key x 2, M.2 2230 E key x 1<br>M.2 3052 B key x 1, 40pin HAT x 1, SATA 3 x 1 | HDMI, DP, eDP, DP via USB type C | 12-36V | 32°F ~140°F (0°C ~ 60°C) |

## Optional Accessories

| Part Number | Description  |
|-------------|--|
| 9741364A00  | Wireless LAN Kit M.2 2230 802.11ac/a/b/g/n + BT4.0,2T2R,with 2 sets of cable & antenna (Enli,QCNFA364A)    |
| 9651926001  | (TF)M.2 2230 WiFi Kit.802.11ac.2.4G/5G,W/BT Intel.9260.NG.WG.NV.958867 w/2 cable & antenna                 |
| 1702150155  | Power Cable.15P SATA(F).2P 2.0mm, Housing(PH).15cm   |
| 1700070200  | SATA CABLE.7P 180D(F) w/lock.to 7P 90D(F) w/o, lock SATA.20cm  |
| 1255X00071  | (TF)AC/DC Adapter.Input 100V~240V.output DC 19V.120W.6.32A.DC JACK w/Lock.FSP.FSP120-ABAN3/9NA1208548      |
| 1702031802  | (TF)POWER CORD.3P-125V 10A 180D.1.8M.U.S.A.FAN.JET.YP12/YC-12  |
| 1702031803  | (TF)POWER CORD.3P-250V 10A 180D.1.8M.V.D.E.FAN-JET.YP-22/YC-12   |
| 170203180E  | (TF)Power cord.3P.125V/7A.1.8M.PSE YP12/YC12 Certificat  |
| 9651210000  | Wireless LAN Kit M.2 2230 802.11ac/a/b/g/n + BT5.2,2.4G/5G/6G,with 2 sets of cable & antenna (Intel AX210) |

## Packing List

- UP Xtreme i12 with active heatsink