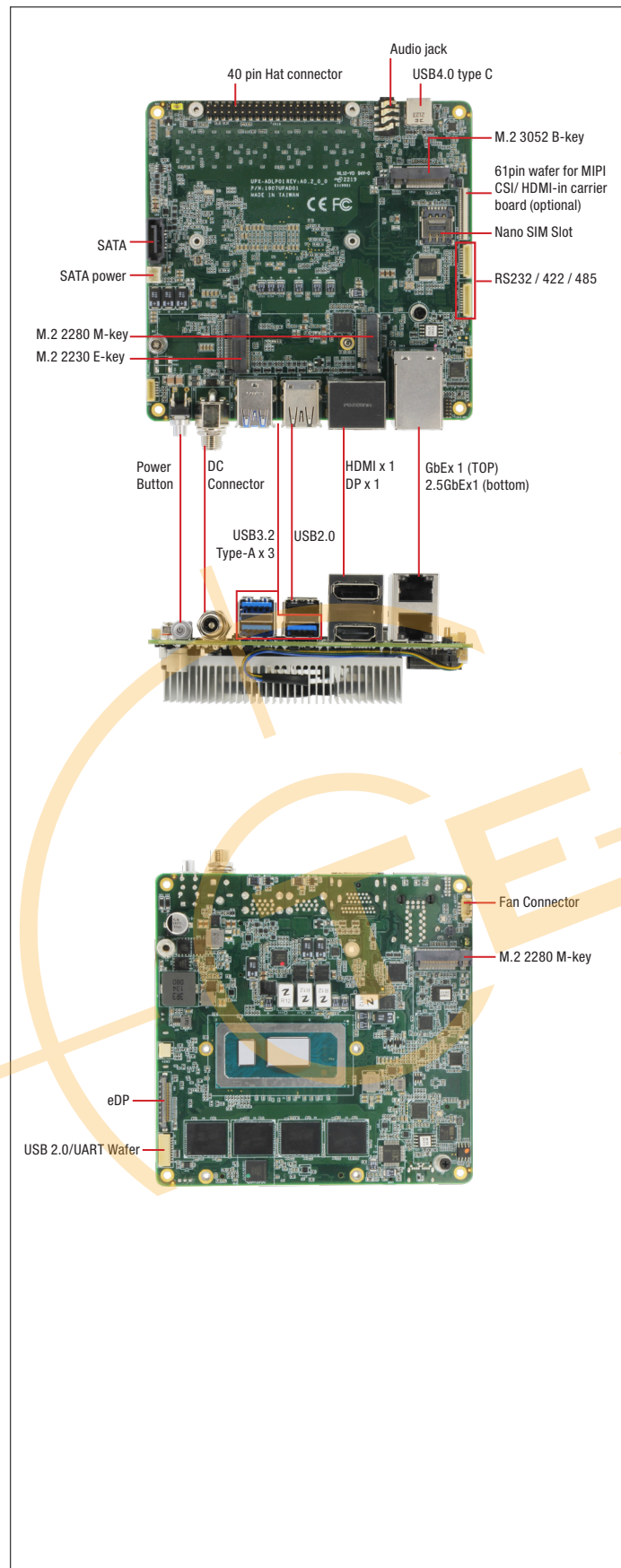


# UP Xtreme i12

UP Xtreme i12 Developer Board with 12th/13th Generation Intel® Core™ i7/i5/i3/Celeron® Processor SoC



## Features

- 12th/13th Gen Intel® Core™ i7/i5/i3/Celeron® Processor SoC
- Onboard Dual Channel LPDDR5, up to 32GB
- 4 Independent Displays up to 4K at 60Ghz
- M.2 2280 M-Key x 2 (PCIe Gen 4 [x4])
- M.2 3052 B-Key (5G)
- Intel® Wi-Fi 6E AX210 Support
- TPM 2.0
- 40-pin HAT Connector
- USB 4.0 (Type-C)
- LAN x 2 (2.5GbE x 1, GbE x 1)
- Support for MIPI CSI/HDMI-in via 61-pin wafer (optional for 13th Gen SKUs)

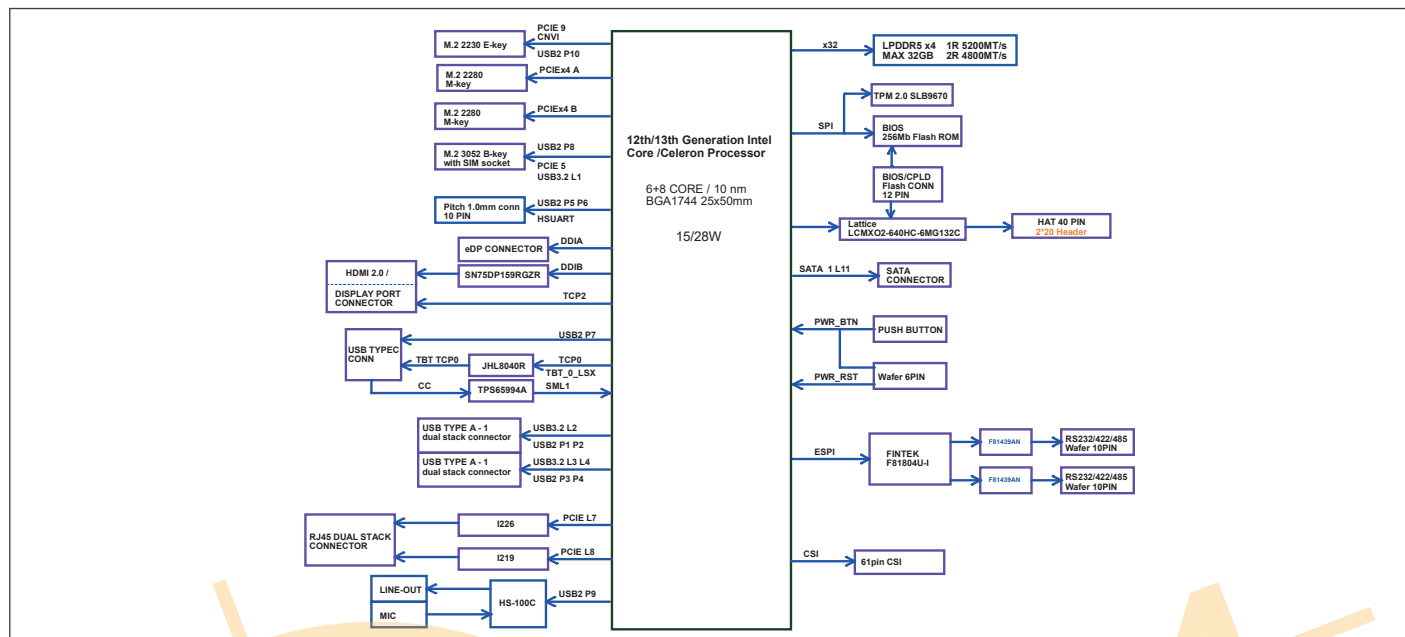


## Specifications

| System                      |                                                                                                                                                                                                                                                                                                                                                      |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Processor                   | 12th Gen Intel® Core™ Processor SoC<br>Intel® Core™ i7-1270PE<br>Intel® Core™ i7-1260P<br>Intel® Core™ i5-1250PE<br>Intel® Core™ i5-1240P<br>Intel® Core™ i3-1220PE<br>Intel® Celeron® Processor 7305E<br>13th Gen Intel® Core™ Processor SoC<br>Intel® Core™ i7-1370PE<br>Intel® Core™ i7-1360P<br>Intel® Core™ i5-1340PE<br>Intel® Core™ i3-1320PE |
| Graphics                    | Intel® Iris® Xe graphics                                                                                                                                                                                                                                                                                                                             |
| Memory                      | Up to 32GB onboard LPDDR5                                                                                                                                                                                                                                                                                                                            |
| Storage                     | M.2 2280 M-Key x 2 (PCIe Gen 4.0 [x4]), SATA 6Gb/s x 1                                                                                                                                                                                                                                                                                               |
| I/O                         | HDMI 2.0b x 1<br>DP 1.4a x 1<br>DP 1.4a x 1 (via USB Type-C)<br>eDP 1.4b x 1<br>Audio Jack x 1 (Mic-in+Line-out)<br>RS-232/422/485 10-pin header x 2                                                                                                                                                                                                 |
| Camera                      | MIPI CSI camera via 61pin wafer w/carrier board (optional for 13th Gen)<br>HDMI-in via 61pin wafer w/carrier board (optional for 13th Gen)                                                                                                                                                                                                           |
| USB                         | USB 2.0 x 2 (from 10 pin header x 1)<br>USB 2.0 (Type-A) x 1<br>USB 3.2 Gen 2 (Type-A) x 3<br>USB 4.0 (Type-C) x 1                                                                                                                                                                                                                                   |
| Expansion                   | 40-pin GPIO x 1<br>M.2 2230 E-Key x 1<br>M.2 2280 M-Key x 2 (PCIe Gen 4.0 [x4])<br>SATA 6Gb/s x 1<br>M.2 3052 B-Key x 1<br>Nano SIM Slot x 1                                                                                                                                                                                                         |
| Display Interface           | HDMI 2.0b x 1, DP 1.4a x 1, DP 1.4a x 1 (via USB Type-C), eDP 1.4b x 1                                                                                                                                                                                                                                                                               |
| Ethernet                    | Intel® I226-IT x 1 (TSN), Intel® I219 x 1 (vPRO)                                                                                                                                                                                                                                                                                                     |
| Security                    | Onboard TPM 2.0                                                                                                                                                                                                                                                                                                                                      |
| RTC                         | Yes                                                                                                                                                                                                                                                                                                                                                  |
| OS Support                  | Windows® 10 Enterprise 2021 LTSC, Ubuntu 22.04, Yocto 4.0                                                                                                                                                                                                                                                                                            |
| <b>Power Requirement</b>    |                                                                                                                                                                                                                                                                                                                                                      |
| Power                       | 12-36V DC-in (Lockable plug)                                                                                                                                                                                                                                                                                                                         |
| Power Supply Type           | AT/ATX (ATX as default)                                                                                                                                                                                                                                                                                                                              |
| 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)                                                                                                                                                                                                                 |
| <b>Mechanical</b>           |                                                                                                                                                                                                                                                                                                                                                      |
| Dimension                   | 4.74" x 4.82" (120.35mm x 122.5mm)                                                                                                                                                                                                                                                                                                                   |
| Net Weight                  | 0.88lb (0.4kg)                                                                                                                                                                                                                                                                                                                                       |
| Gross Weight                | 1.32lb (0.6kg)                                                                                                                                                                                                                                                                                                                                       |
| <b>Environment</b>          |                                                                                                                                                                                                                                                                                                                                                      |
| Operating Temperature       | 32°F ~ 140°F (0°C ~ 60°C) / 0.5 airflow, WITAS1 -4°F ~ 140 °F (-20°C ~ 60°C)                                                                                                                                                                                                                                                                         |
| Operation Humidity          | 0% ~ 90% relative humidity, non-condensing                                                                                                                                                                                                                                                                                                           |
| MTBF                        | 362,068 Hours                                                                                                                                                                                                                                                                                                                                        |
| Certification               | CE/FCC Class A, RoHS Compliant, REACH                                                                                                                                                                                                                                                                                                                |

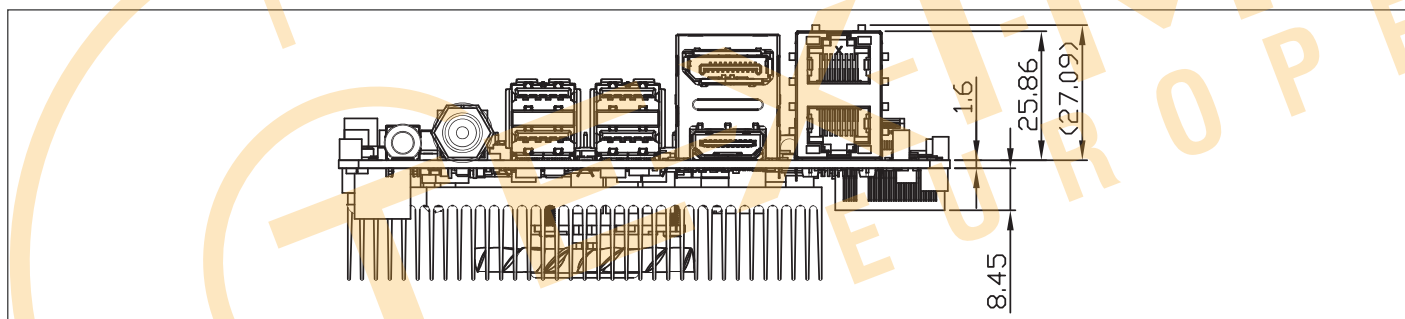


## Block Diagram



## Dimension

Unit: mm



## Packing List

- UP Xtreme i12 with active heatsink

## 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.NGWS.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        |
| 170X000799         | (TF)POWER CORD.3P-125V 10A 180D.1.8M.USA.FANJET.YP12/YC-12                                                   |
| 170X000800         | (TF)POWER CORD.3P-250V 10A 180D.1.8M.VDE.FAN-JET.YP-22/YC-12                                                 |
| 170X000803         | (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) |
| UPCR-CAMB-A10-0001 | MIPI CSI Camera RVP Converter kit for UP Squared Pro 7000/UP Squared i12.REV.A1.0                            |
| UPCR-HDMI-A10-0001 | HDMI IN carrier board for UPS i12, UPN 7000, UPX i12.REV.A1.0                                                |

## Ordering Information

| Part Number          | CPU                             | CORE  | MEMORY | HEATSINK |
|----------------------|---------------------------------|-------|--------|----------|
| UPX-ADLPCR-A10-0800  | Intel® Celeron® Processor 7305E | 1P+4E | 8GB    | FAN      |
| UPX-ADLP13-A10-0800  | Intel® Core™ i3-1220PE          | 4P+4E | 8GB    | FAN      |
| UPX-ADLP15-A10-1600  | Intel® Core™ i5-1250PE          | 4P+8E | 16GB   | FAN      |
| UPX-ADLP17-A10-1600  | Intel® Core™ i7-1270PE          | 4P+8E | 16GB   | FAN      |
| UPX-ADLP15C-A10-1600 | Intel® Core™ i5-1240P           | 4P+8E | 16GB   | FAN      |
| UPX-ADLP17C-A10-1600 | Intel® Core™ i7-1260P           | 4P+8E | 16GB   | FAN      |
| UPX-RAP13-A11-0800   | Intel® Core™ i3-1320PE          | 4P+4E | 8GB    | FAN      |
| UPX-RAP15-A11-1600   | Intel® Core™ i5-1340PE          | 4P+8E | 16GB   | FAN      |
| UPX-RAP17-A11-1600   | Intel® Core™ i7-1370PE          | 4P+8E | 16GB   | FAN      |
| UPX-RAP17C-A11-1600  | Intel® Core™ i7-1360P           | 4P+8E | 16GB   | FAN      |

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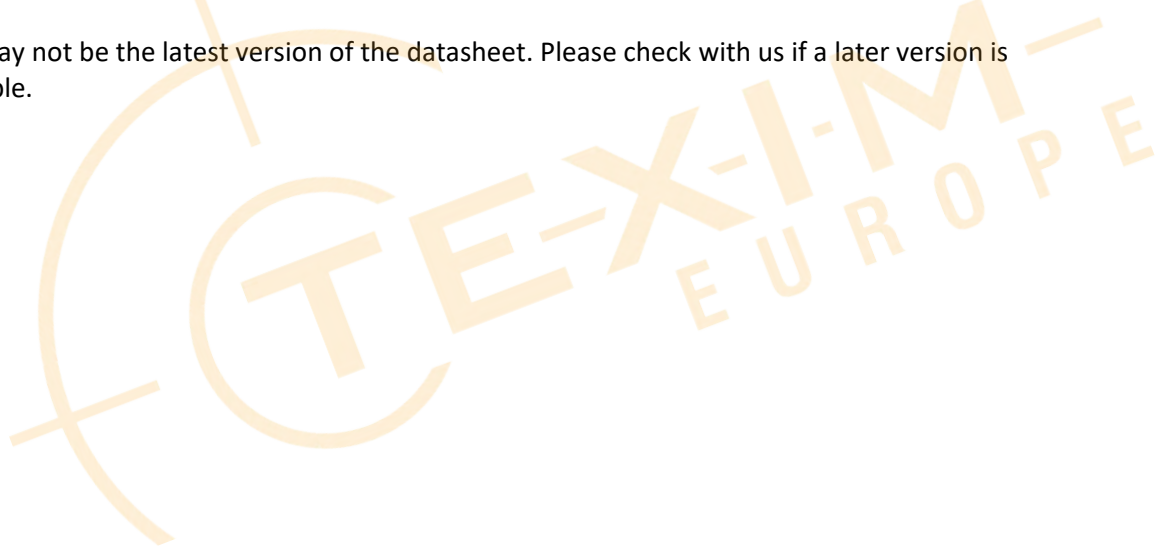
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Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time.

All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts.

Please contact us if you have any questions about the contents of the datasheet.

This may not be the latest version of the datasheet. Please check with us if a later version is available.





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