UP Xtreme i12

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
  - Core i7-1270PE
  - Core i5-1250PE
  - Core i3-1220PE
  - 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
- SATA3 x 1

I/O
- 10-pin USB 2.0 x 2 / HSUART x 1
- 4pin Fan Connector x 1
- 6pin Front Panel Header x 1
- 10-pin RS232/422/485 Pin Header x 2
- DC Connector x 1
- Power Button/LED x 1
- Audio Jack x 1 (Mic-in, Line out)
- RJ45 x 2

Camera
- —

USB
- USB 2.0 x 2 (from wafer x 1), USB2.0 Type A x 1
- USB 3.2 Gen 2 Type A x 3
- USB4.0 Type C x 1

Expansion
- 40 pin GPIO x 1
- M.2 2280 M-key x 1
- M.2 2280 (PCIe Gen4.0 x 4) M-key x 2
- SATA3 x 1
- M.2 3052 B-key x 1
- Nano SIM slot x 1

Display Interface
- HDMI 2.0b x 1
- DP 1.4a x 1
- DP 1.4b via USB type C x 1
- 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
- Ubuntu 22.04
- 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)
- 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

Note: All specifications are subject to change without notice.
Block Diagram

Dimension
Unit: mm

Ordering Information

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9741364A00</td>
<td>Wireless LAN Kit M.2 2230 802.11ac/b/g/n + BT4.0, 2T2R, with 2 sets of cable &amp; antenna (Eni.QCNFA364)</td>
</tr>
<tr>
<td>9651926001</td>
<td>(TF) M.2 2230 WiFi Kit. 802.11ac/b/g/n/a. 2.4G/5G. Visible Intel 9260. NO. WS.NV.958867 w/2 cable &amp; antenna</td>
</tr>
<tr>
<td>1702100115</td>
<td>Power Cable 15P SATA(F). 2P 2.0mm. Housing (Pin1.15cm)</td>
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<tr>
<td>1700070200</td>
<td>SATA CABLE. 7P 180D(F) w/lock to 7P 900D(F) w/s, lock SATA 20cm</td>
</tr>
<tr>
<td>1255000710</td>
<td>TFT/DC/DC Adapter Input 100V~240V/Output DC 19V120W. 6.32A DC JACK er/lock. FSP. FSP120-60ABD2/9MA120584S</td>
</tr>
<tr>
<td>1702031802</td>
<td>(TF) POWER CORD. 3P 125V. 10A 180D. 1.8M. USE FANJET TP12/TP12</td>
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<tr>
<td>1702031803</td>
<td>(TF) POWER CORD. 3P 250V. 10A 180D. 1.8M. USE FANJET TP12/TP12</td>
</tr>
<tr>
<td>1702031804</td>
<td>(TF) Power cord. 3P 125V. 1.8M, USE FANJET TP12/TP12 Certificate</td>
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<tr>
<td>9651210000</td>
<td>Wireless LAN Kit M.2 2230 802.11ac/b/g/n + BT5.2.2.4G/5G/6G, with 2 sets of cable &amp; antenna (Intel AX210)</td>
</tr>
</tbody>
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Optional Accessories

Packing List
- UP Xtreme i12 with active heatsink

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