Quick Start Guide

UP Xtreme Edge Compute enabling kit

Powerful, Industrial, AI-Proof and expandable UP Xtreme Edge is an ultra-low voltage Edge Compute -- 26 Watt only powered by Intel 8th Core CPU

What’s in your kit?

1x UP Xtreme Edge

1x power adapter

Ubuntu 18.04 & OpenVINO™ Toolkit

1x EU power cord & 1x US power code

You will need the followings, not included:

- A monitor with either HDMI or DisplayPort
- USB keyboard and mouse
- Ethernet cable (or optional WiFi, purchased separately)

1

Connect

Connect all needed hardware
2 Power on

a. Make sure to connect monitor before powering up — if the system is powered up before connecting a monitor, you may need to power cycle the system to see the display.

b. Connect power supply to the system and plug in power supply to an outlet.

Caution: this is a high-performance system and may get hot during operation.

3 Log in

Log into your Ubuntu 18.04 OS

After the booting, please follow the system instruction to set up language, time zone, user name, password etc.

If you have proxy settings set them now: (System Settings > Network > Network Proxy).

4 Get Started

To start IoT development, you can download any other IoT development platforms on line.

To start AI development: Open the “Getting Started” icon on the Desktop. It will open a browser to software.intel.com/up-squared-ai-vision-dev-kit/get-started. Follow the instructions there.

Optional accessories:

- AI hardware accelerator
  UP AI Core XM 2280

- WiFi Bluetooth Connectivity
  M.2 Intel® AC-9260 WiFi Kit (802.11ac, bluetooth 5.0)

- LTE Connectivity
  mPCIe Quectel 4G LTE CAT4 Global module EG-25G
### China RoHS Requirement

#### Hazardous and Toxic Materials List

<table>
<thead>
<tr>
<th>Component Name</th>
<th>Hazardous or Toxic Materials or Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lead (Pb)</td>
</tr>
<tr>
<td>PCB and Components</td>
<td>X</td>
</tr>
<tr>
<td>Wires &amp; Connectors for Ext. Connections</td>
<td>X</td>
</tr>
<tr>
<td>Chassis</td>
<td>O</td>
</tr>
<tr>
<td>CPU &amp; RAM</td>
<td>X</td>
</tr>
<tr>
<td>HDD Drive</td>
<td>X</td>
</tr>
<tr>
<td>LCD Module</td>
<td>X</td>
</tr>
<tr>
<td>Optical Drive</td>
<td>X</td>
</tr>
<tr>
<td>Touch Control Module</td>
<td>X</td>
</tr>
<tr>
<td>PSU</td>
<td>X</td>
</tr>
<tr>
<td>Battery</td>
<td>X</td>
</tr>
</tbody>
</table>

This form is prepared in compliance with the provisions of SJ/T 11364.

O: The level of toxic or hazardous materials present in this component and its parts is below the limit specified by GB/T 26572.

X: The level of toxic or hazardous materials present in this component and its parts is below the limit specified by GB/T 26572, but is still in compliance with EU Directive 2011/65/EU (RoHS 2).

Notes:
1. The Environment Friendly Use Period indicated by labelling on this product is applicable only to use under normal conditions.
2. Individual components including the CPU, RAM/memory, HDD, optical drive, and PSU are optional.
3. LCD Module and Touch Control Module only applies to certain products which feature these components.

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### Product Specification

<table>
<thead>
<tr>
<th>System</th>
<th>UP Xtreme</th>
</tr>
</thead>
<tbody>
<tr>
<td>SoC</td>
<td>Intel® Core™ i7-8665UE (up to 4.4 GHz)</td>
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<tr>
<td></td>
<td>Intel® Core™ i7-8565U (up to 4.60 GHz)</td>
</tr>
<tr>
<td></td>
<td>Intel® Core™ i5-8365UE (up to 4.1 GHz)</td>
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<tr>
<td></td>
<td>Intel® Core™ i3-8145UE (up to 3.9 GHz)</td>
</tr>
<tr>
<td></td>
<td>Intel® Celeron 4305UE (up to 2.0 GHz)</td>
</tr>
<tr>
<td># of Cores</td>
<td>i3-8145UE/ Celeron 4305UE-Duo Core</td>
</tr>
<tr>
<td></td>
<td>i7-8665UE/i7-8565U/i5-8365UE-Quad Core</td>
</tr>
<tr>
<td>Graphics</td>
<td>Intel® UHD Graphics 610-Celeron 4305UE</td>
</tr>
<tr>
<td></td>
<td>Intel® UHD Graphics 620</td>
</tr>
<tr>
<td>VPU</td>
<td>optional (via M.2 2280, mPCIe, 100-pin)</td>
</tr>
<tr>
<td>FPGA</td>
<td>Intel® FPGA Altera MAX 5</td>
</tr>
<tr>
<td>MCU</td>
<td>STM32</td>
</tr>
<tr>
<td>System memory</td>
<td>4GB DDR4</td>
</tr>
<tr>
<td></td>
<td>8GB DDR4</td>
</tr>
<tr>
<td>Storage capacity</td>
<td>64GB</td>
</tr>
<tr>
<td>Power requirement</td>
<td>12~60VDC-IN (lockable connector)</td>
</tr>
</tbody>
</table>
Safety Precaution

Please read the following safety instructions carefully. It is advised that you keep this manual for future references.

1. All cautions and warnings on the device should be noted.
2. Make sure the power source matches the power rating of the device.
3. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
4. Always completely disconnect the power before working on the system's hardware.
5. No connections should be made when the system is powered with a sudden rush of power as it may damage sensitive electronic components.
6. If the device is not to be used for a long time, disconnect it from the power supply to avoid damage by transient over-voltage.
7. Always disconnect this device from any power supply before cleaning.
8. While cleaning, use a damp cloth instead of liquid or spray detergents.
9. Make sure the device is installed near a power outlet and is easily accessible.
10. Keep this device away from humidity.
11. Place the device on a solid surface during installation to prevent it from falling.
12. Do not cover the openings on the device. This is to ensure optimal heat dissipation.
13. Keep an eye for high temperatures when the system is running.
14. Do not touch the heat sink or heat spreader when the system is running.
15. Never pour any liquid into the openings. This could cause fire or electric shock.
16. As most electronic components are sensitive to static electrical charge, be sure to ground yourself when installing internal components to prevent static charge. Use a grounding wrist strap and contain all electronic components in any static-shielded containers.
17. If any of the following situations arise, please contact our service personnel:
   I. Damaged power cord or plug
   II. Liquid intrusion through the device
   III. Exposure to moisture
   IV. Device is not working as expected or in a manner as described in this manual
   V. The device is dropped or damaged
   VI. Any obvious signs of damage displayed on the device
18. Do not leave this device in an uncontrolled environment with temperatures beyond 70 °C. The device’s permitted storage temperatures are (-40°C ~ 80°C) in order to prevent damage.

FCC Statement

This device complies with Part 15 FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received including interference that may cause undesired operation.

Caution: There is a danger of explosion if the battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer’s instructions and your local government’s recycling or disposal directives.

Attention: Il y a un risque d’explosion si la batterie est remplacée de façon incorrecte. Ne la remplacer qu’avec le même modèle ou équivalent recommandé par le constructeur. Recycler les batteries usées en accord avec les instructions du fabricant et les directives gouvernementales de recyclage.

Regulatory