



# UP Squared 6000 Edge Computing Kit User Guide

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**UP Squared 6000 Edge Computing Kit**



Up to 1.7x improvement in single-thread performance and up to 2x performance for 3D graphics compared with previous-generation Intel processors.

I/O interfaces include 1x USB 3.2 Type-C (OTG support), 2x USB 3.2 Type-A, 1x Micro USB (debug port), 2x COM ports, 2x SATA 3.0, 1x full sized Mini-Card slot (via USB 2.0), 1x M.2 2230 E key, 1x M.2 2280 M key, 1x M.2 3052 B key with micro-SIM card slot, 1x HDMI 2.0b, 1x DP 1.2, Audio jack line I/O, 1x 40-pin HAT PSE header, 1x 40-pin HAT header, 4x GbE

## Product Information

The UP Squared 6000 Edge Computing Kit is a high-performance system that offers up to 1.7x improvement in single-thread performance and up to 2x performance for 3D graphics compared with previous-generation Intel processors. It has various I/O interfaces, including USB 3.2 Type-C (OTG support), USB 3.2 Type-A, Micro USB (debug port), COM ports, SATA 3.0, full-sized Mini-Card slot (via USB 2.0), M.2 2230 E key, M.2 2280 M key, M.2 3052 B key with micro-SIM card slot, HDMI 2.0b, DP 1.2, Audio jack line I/O, 40-pin HAT PSE header, 40-pin HAT header, and 4x GbE.

The kit includes the UP Squared 6000 system with Ubuntu 20.04 and a 12V6A (72W) power supply with US and EU power cords. It has a Quad Core SoC with optional VPU via M.2 2280 and has 8GB system memory via 2 Channel LPDDR4 and a storage capacity of 64GB via 2x SATA / 1x M.2 2280. The power requirement is a DC-IN (12V) lockable power connector with AT/ATX (default AT mode) power supply type and typical power consumption of 62W. Optional expansion modules are available for the UP Squared 6000 Edge Computing Kit, such as the M.2 2230 WiFi Kit and the UP AI Core XM 2280.

## Product Usage Instructions

1. Connect the Ethernet cable to the kit.
2. Connect the monitor to the kit.
3. Connect the USB devices to the kit.

4. Connect the power supply to the kit.
5. Could you turn on the system by powering it up? The system will automatically boot into the Ubuntu 20.04 OS.
6. Log in to the Ubuntu 20.04 OS using the following credentials: username: devkit password: devkit
7. If proxy settings are required, set them from System Settings > Network > Network Proxy.

It is important to note that this is a high-performance system and may get hot during operation. To avoid damage by transient over-voltage, disconnect the kit from the power supply if it will not be used for a long time. When installing internal components, ground yourself in any static-shielded containers. If you encounter any issues, contact customer service.

## WHAT 'S IN YOUR KIT?



### You will need to have the following:

- A monitor with HDMI or DP, and respective cables.
- USB keyboard and mouse.
- Ethernet cable or WiFi module (optional, to be installed manually).
- UP AI Core XM 2280 M.2 module (optional for UPN-EDGE-EHLX- 4RE-A10-0864-FDK, to be installed manually).

UPN-EDGE-EHLX4RE-A10-FDKAI comes with XM 2280 installed (2x Intel® Movidius™ Myriad™ X)

## GET READY



- The UP Squared 6000 Edge Computing Kit comes with passive cooling, RTC battery, onboard RAM and eMMC.
- The system comes with Ubuntu 20.04 Desktop including the Intel® Edge Insights for Vision software package.
- Please follow these steps carefully before connecting cables and powering ON the system.

## CONNECT HARDWARE



## SETUP DETAILS

1. Connect the monitor with the system powered down.
2. Power up the system. The system will turn on automatically and boot into the OS.

3. Log in to the Ubuntu 20.04 OS with the following credentials:

- **username:** devkit
- **password:** devkit
- If proxy settings are required, you can set them from:
- System Settings > Network > Network Proxy

4. Get Started with Intel® Edge Insights for Vision

- <https://www.intel.com/content/www/us/en/developer/articles/training/devkit-gsg21.html>

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

## Expand your UP Squared

Expand your UP Squared 6000 Edge Computing Kit to fit your exact needs



- M.2 2230 WiFi Kit with UP Squared 6000
  - Intel® Wireless-AC 9260
  - (802.11ac, Bluetooth® 5.0)



- UP AI Core XM 2280 with UP Squared 6000
  - AI hardware accelerator with 2x Intel® Movidius™
  - Myriad™ X

## Product Specifications

<b>System</b>	UP Squared 6000 Edge Computing Kit
<b>SoC</b>	Intel Atom® x6425RE 1.90GHz
<b># of Cores</b>	Quad Core
<b>Graphics</b>	Intel® UHD Graphics
<b>VPU</b>	Optional (via M.2 2280)
<b>System memory</b>	8GB via 2 Channel LPDDR4
<b>Storage capacity</b>	64GB
	Optional (via 2x SATA / 1x M.2 2280)
<b>Power Requirement</b>	DC-IN (12V) lockable power connector
<b>Power Supply Type</b>	AT/ATX (default AT mode)
<b>Power Consumption(Typical)</b>	62W

## Safety Precaution

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

1. Take note of all cautions and warnings on the device.
2. Make sure the power source matches the power rating of the device.
3. Position the power cord so that people do not 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. Do not make any connections while the device is powered on.
  - A sudden rush of power may damage sensitive electronic components.

6. If you plan to not use the device 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 chassis. 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 in any static-shielded containers.
17. If any of the following situations arise, please contact our service personnel:
  1. Damaged power cord or power supply
  2. Liquid intrusion through the device
  3. Exposure to moisture
  4. Device is not working as expected or in a manners as described in this quick start guide
  5. The device is dropped or damaged
  6. Any obvious signs of signs of damage on the device
18. Do not operate the device in an uncontrolled environment temperatures beyond 60 °C.
19. Store the device between -40°C to 80°C to prevent damage.

## **China RoHS Requirements**



Component Name	Hazardous or Toxic Materials or Elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr(VI))	Polybrominated biphenyls (PBBs)	Polybrominated diphenyl ethers (PBDEs)
PCB and Components	0	0	0	0	0	0
Wires & Connectors for Ext. Connections	0	0	0	0	0	0
CPU & RAM	0	0	0	0	0	0
<p>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 the component exceed the limits specified by GB/T 26572, but is still in compliance with EU Directive 2011/65/EU (RoHS 2).</p> <p><b>Notes:</b></p> <ol style="list-style-type: none"> <li>1. The Environment Friendly Use Period indicated by labeling on this product is applicable only to use under normal conditions.</li> <li>2. Individual components including the CPU, RAM/memory, HDD, optical, and PSU are optional.</li> <li>3. LCD Module and Touch Control Module only applies to certain products which feature these components.</li> </ol>						

## FCC Statement

This device complies with Part FCC Rules. Operation is subject to the following two conditions:

1. this device may not cause harmful interference.
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. replaced 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.

## Regulatory



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- [www.up-board.org](http://www.up-board.org)
- [www.up-shop.org](http://www.up-shop.org)



- [www.up-community.org](http://www.up-community.org)

## QUESTIONS?


REACH US HERE



## UP Community

- <https://www.up-community.org>

## Documents / Resources

	<a href="#">UP Squared 6000 Edge Computing Kit</a> [pdf] User Guide Squared 6000 Edge Computing Kit, Squared 6000, Edge Computing Kit, Computing Kit, Kit
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## References

- [intel Get Started with Intel®-Based Developer Kit Preinstalled with Edge...](#)