

## UP Squared Pro

The ultimate Edge solution - Unleash the future of industrial automation and AI vision with 5G connectivity to shorten the deployment process and take your solutions to the **PRO** level.



### UP<sup>2</sup> Pro - intelligent industry, powered by Intel.

After the success of UP<sup>2</sup>, an official Intel AI & IoT platform, now we give you the UP<sup>2</sup> Pro.

UP<sup>2</sup> Pro is built for industrial use with multiple serial ports, multiple LAN ports, 5G support, and various M.2 expansion slots. UP<sup>2</sup> Pro also enables the next generation industrial automation and AI solutions, users can easily add on AI accelerators, powered by extension capabilities to Intel® Movidius™ Myriad™ X or the upcoming Intel Movidius™ chip.

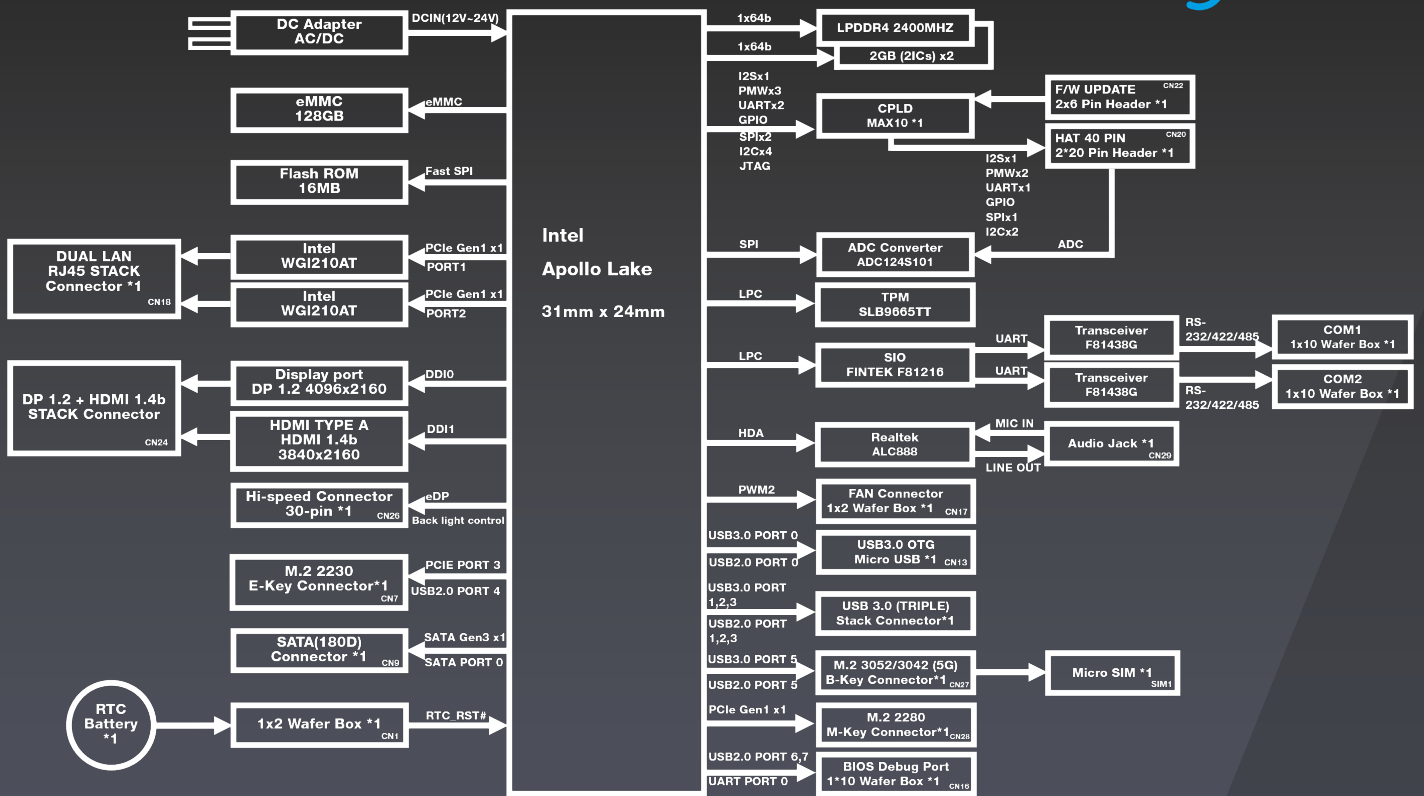
UP<sup>2</sup> Pro embedded with 40-pin HAT expansion and versatile I/O (SATA3, M.2 2230 E key, M.2 2280 M key, M.2 3052 B Key) to allow for seamless integration. UP<sup>2</sup> Pro is ready to connect for 5G, AI accelerator, WiFi, Bluetooth.

With Intel processors, FPGAs and accelerators deliver power-efficient performance and specialized capabilities for new industrial use cases, like Automation, Robotics, Drones, Machine Vision, and Internet of Things.

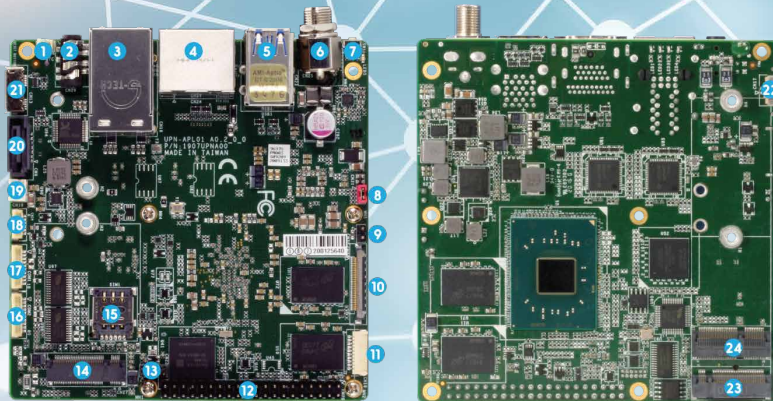
## SPECIFICATIONS

<b>CPU</b>	Intel® Celeron® Duo Core N3350 (up to 2.4 GHz) Intel® Pentium®Quad Core N4200 (up to 2.5 GHz) Intel Atom® Quad Core x7-E3950 Processor (up to 2.0 GHz)	<b>Display</b>	1 (HDMI 1.4b) 1x DP 12 (4K@60hz) 1x eDP
<b>Graphics</b>	Intel® HD Graphics 500 for Celeron® N3350 Intel® HD Graphics 505 for Pentium® N4200 / Intel Atom® x7-E3950	<b>COM Ports</b>	FINTEK F81216, 2x RS232/422/485
<b>FPGA</b>	Intel® FPGA Altera MAX 10	<b>UART</b>	2x UART (Tx/Rx) debug port (pin header)
<b>Memory</b>	2GB / 4GB / 8GB	<b>HDD interface</b>	1x SATA 3.0
<b>Storage</b>	32GB / 64GB	<b>SIM slot</b>	1x SIM slot
<b>Expansion Slot</b>	1x M.2 E key 2230 1x M.2 M key 2280 1x M.2 B key co-lay 3042/3052	<b>TPM</b>	Infineon TPM SLB9670 on board
<b>Ethernet</b>	2 x GbLAN (Intel i210 AT) support TSN	<b>Expansion HAT (40pin)</b>	GPIO, SPI, I2C, I2S, PWM, UART, 3V3, 5V, GND, GPIO
<b>Audio</b>	Audio Out/Mic In	<b>Power</b>	12V~24V DC-IN (lockable connector) 1x Power Button / LED
<b>USB</b>	3x USB 3.0 Type A 1x USB 3.0 OTG	<b>Dimension</b>	101.6 x 101.6mm (4" x 4")
		<b>Compatible OS</b>	Microsoft Windows 10 full version, Linux ( Ubuntu, Yocto )

# block diagram



- 1) RTC Battery Connector
- 2) Audio
- 3) LAN Dual Port
- 4) HDMI 1.4b + DP 1.2 Port
- 5) USB 3.0 Triple Port
- 6) DC Jack
- 7) PowerButton
- 8) Power Pin Header (12V)
- 9) Power Pin Header (24V)
- 10) eDP
- 11) USB Panel
- 12) 40-pin HAT connector



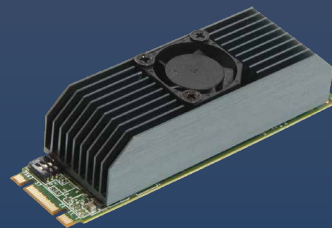
- 13) BIOS update
- 14) M2 B Key co-lay 3042/3052
- 15) SIM card
- 16) 10-pin RS232/422/485 header
- 17) 10-pin RS232/422/485 header
- 18) Power Pin-header (Power switch & reset)
- 19) SATA Power
- 20) SATA
- 21) USB 3.0 OTG
- 22) FAN
- 23) M.2 E Key 2230
- 24) M.2 M Key 2280

## Artificial Intelligence on the edge

Expand your UP Squared Pro board to fit your exact needs



**M.2 2230 WiFi kit**  
Intel® Wireless-AC 9260  
(802.11ac, Bluetooth 5.0)



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