UP² (UP Squared) is world’s fastest maker board with the high performance and low power consumption features of Intel® Celeron™, Pentium™ and Atom™ Processors (codename Apollo Lake).

The internal GPU is the new Intel Gen 9 HD with 12 / 18 Execution Units, supporting 4K Codec Decode and Encode for HEVC4, H.264 and VP8. Thanks to the Vector Units Image Processing Unit and Precision Timing Management to synchronize CPU with I/O, improved determinism (cache QoS, Intel Virtualization Technology), all the graphic processing is effortless to UP² (UP Squared).

UP² (UP Squared) comes with 2GB/4GB/8GB LPDDR4 and 32GB/64GB/128GB eMMC. A 40-pin GP-bus provides the freedom for makers to build up their module. Additionally, there is a 60-pin EXHAT for embedded applications. This allows for the exploration of more possibilities. The expansion capabilities of UP² (UP Squared) goes much further than this. Native mini-PCI-e, M.2 2230 and SATA3 are all built in on the board. What more could one desire?

The board supports Windows 10, Windows IoT Core, Ubilinux, Ubuntu, Yocto and Android Marshmallow. It’s really UP to you to decide which operating system is best for your application. Now, all you need is an UP² (UP Squared) to begin your project!
**SOC**
- Intel® Celeron™ N3350 (up to 2.4 GHz)
- Intel® Pentium™ N4200 (up to 2.5 GHz)
- Intel® Atom™ x5-E3940 / x7-E3950

**Graphics**
- Intel® Gen 9 HD, supporting 4K Codec Decode and Encode for HEVC, H.264, VP8

**Video & Audio**
- HDMI 1.4a x 1, 4K @ 30 Hz + DP 1.2 4K @ 60 Hz
- I2S audio port

**Camera interface**
- MIPI-CIS 2-line (2MP) + MIPI-CIS 4-line (8MP)

**Display interface**
- eDP

**Expansion**
- 2 x USB3.0 (Type A) + 1 x USB 3.0 OTG (Micro B)
- 2 x USB2.0 (2x UART (Tx/Rx) debug port (pin header))

**Network**
- 2x Gb Ethernet (full speed, Realtek 8111G) / RJ-45

**RTC**
- Yes

**Operating System**
- 40 pin General purpose bus + 4-channel 12-bit A/D Converter (500 kspst to 1 Msps)
- 60 pin EXHAT
- 1xmini-PCIe (full-size, auto switch to m-SATA)
- M.2 2230, SATA3

**Dimensions**
- 3.37" x 3.54" / 85.60 mm × 90 mm

**Compatibility**
- Microsoft Windows 10 (full), Windows IOT Core, Linux (ubilinux, Ubuntu, Yocto), Android Marshmallow

**Certification**
- CE/FCC Class A, RoHS compliant, REACH

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**Memory**
- 2GB/4GB/8GB LPDDR4

**Storage Capacity**
- 32 GB / 64 GB / 128 GB eMMC

**USB**
- 3x USB3.0 (Type A) + 1x USB 3.0 OTG (Micro B)
- 2x USB2.0 (2x UART (Tx/Rx) debug port (pin header))

**Ethernet**
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**GPIOs**
- GPIO14
- GPIO11
- GPIO27/ I2S_SDO/ SPI_2_CLK*
- GPIO5/ ADC*_in4
- GPIO10/ UART_RXD
- GPIO4/ ADC*_in1
- GPIO23/ I2C0_SCL
- GPIO24/ PWM1
- GPIO12/ PWM0
- GPIO13/ UART_RXD/ SPI_2_FSO*
- GPIO17/ I2C1_SDA
- GPIO16/ UART_TXD
- GPIO18/ I2C0_SDA
- GPIO22/ SPI_1_FSO
- GPIO21/ SPI_1_RXD
- GPIO19/ I2C0_SDA
- GPIO20/ SPI_1_FSO
- GPIO12/ I2C0_SCL
- GPIO15/ UART_TXD
- GPIO17/ I2C0_SCL
- GPIO26/ I2S_SDO/ SPI_2_TDX*

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