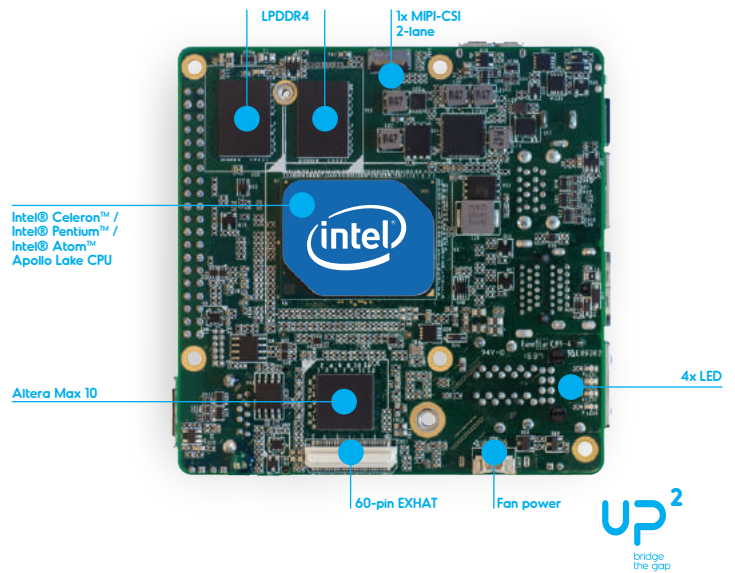
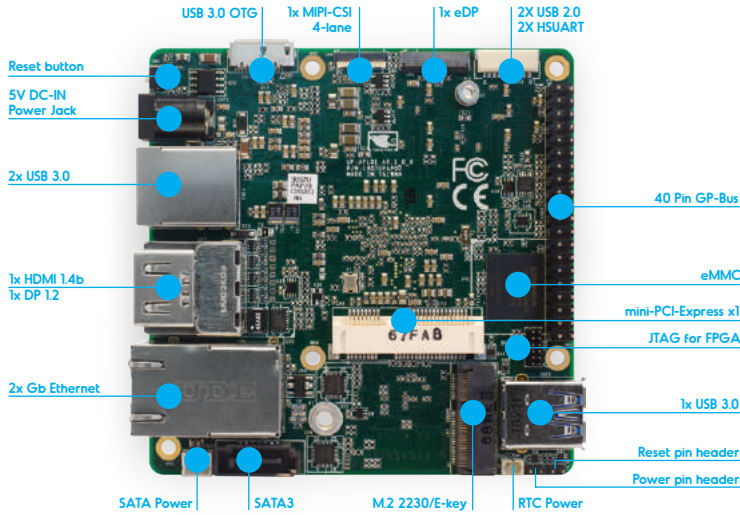


The World's Fastest x86 Maker Board



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, Ubinlinux, 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!

- Applications -



Drones



Education



Robotics





















Media Center

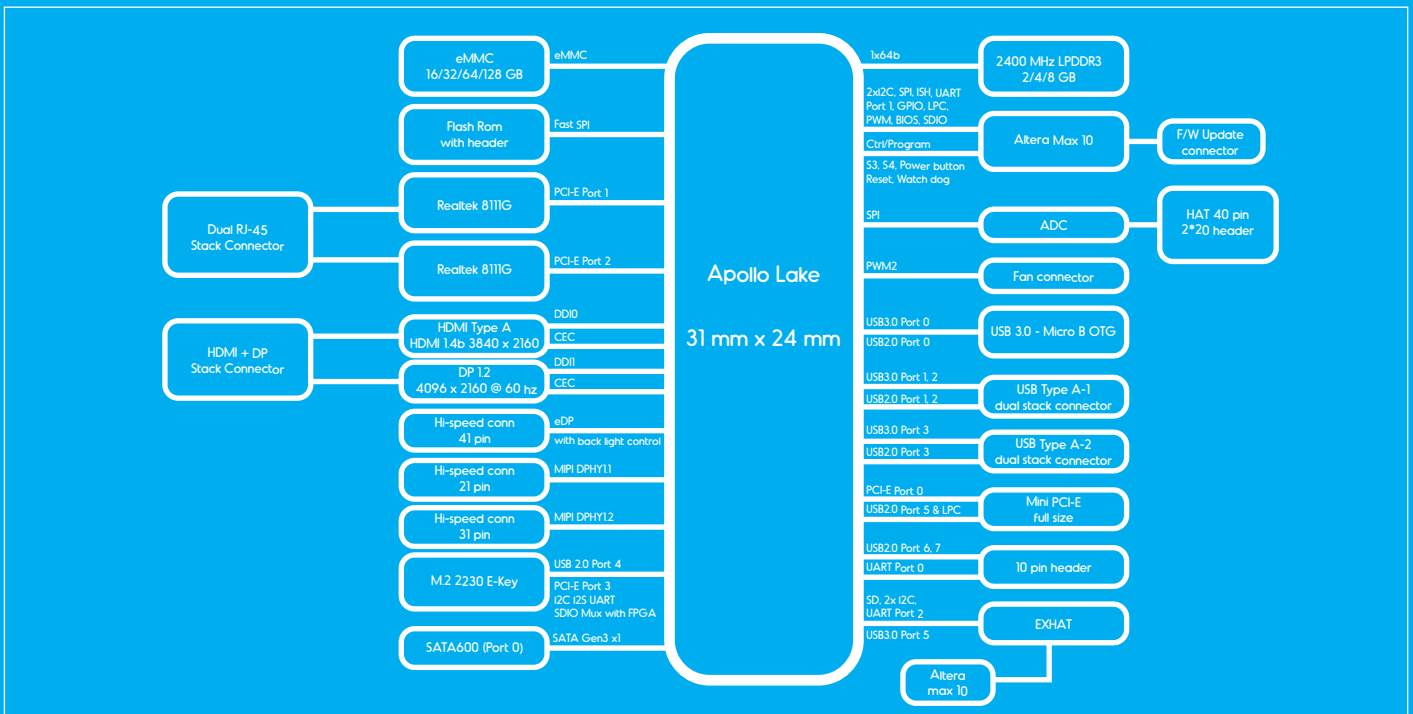


Internet of Things



Home Automation

        	<p>SOC Intel® Celeron™ N3350 (up to 2.4 GHz) Intel® Pentium™ N4200 (up to 2.5 GHz) Intel® Atom™ E3940 (up to 1.8GHz)</p> <p>Graphics Intel® Gen 9 HD, supporting 4K Codec Decode and Encode for HEVC4, H.264, VP8</p> <p>Video & Audio HDMI 1.4b x1 4K @ 30 hz + DP 1.2 1x 4K @ 60 hz I2S audio port</p> <p>Camera interface CSI 2-lane + CSI 4-lane</p> <p>Display interface eDP</p> <p>Power 5V DC-in @ 4A-6A</p> <p>Operating humidity 10%~80%RH non-condensing</p> <p>Operating Temperature 32-140°F / 0~60°C</p> <p>Altera MAX 10 FPGA 2KLE --Celeron/ Pentium 4KLE -- ATOM</p>	        	<p>Memory 2GB (single channel) LPDDR4 4GB/8GB (dual channel) LPDDR4)</p> <p>Storage Capacity 32 GB / 64 GB / 128 GB eMMC</p> <p>USB 3x UB3.0 (Type A) + 1x USB 3.0 OTG (Micro B) 2x USB2.0+2 X UART (Tx/Rx) debug port (pin header)</p> <p>Ethernet 2x Gb Ethernet (full speed) RJ-45</p> <p>RTC Yes</p> <p>Expansion 40 pin General Purpose bus 60 pin EXHAT 1xmini-PCIe , M.2 2230, SATA3</p> <p>Compatible Operating system Microsoft Windows 10 (full), Windows IOT Core, Linux (ubilinux, Ubuntu, Yocto), Android Marshmallow</p> <p>Dimensions 3.37" x 3.54" / 85.60 mm x 90 mm</p> <p>Certificate CE/FCC Class A, RoHS complaint, REACH</p>
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UP - Pinout

2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40
1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33	35	37	39
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40

1	2	3	4	5
3V3	5V	GPIO0/ I2C1_SDA	5V	GPIO1/ I2C1_SCL
6	7	8	9	10
Ground	GPIO2/ ADC_in1	GPIO15/ UART_TXD	Ground	GPIO16/ UART_RXD
11	12	13	14	15
GPIO3/ UART_RTS/ SPI_2_FS1*/ ADC_in2	GPIO17/ I2S_BCLK/ SPI_2_FS0*	GPIO4/ ADC_in3	Ground	GPIO5/ ADC_in4
16	17	18	19	20
GPIO18	3V3	GPIO19	GPIO6/ SPI_1_TXD	Ground
21	22	23	24	25
GPIO7/ SPI_1_RXD	GPIO20	GPIO8/ SPI_1_CLK	GPIO21/ SPI_1_FS0	Ground
26	27	28	29	30
GPIO22/ SPI_1_FS1	GPIO9/ I2C0_SDA	GPIO23/ I2C0_SCL	GPIO10	Ground
31	32	33	34	35
GPIO11	GPIO24/ PWM0	GPIO12/ PWM1	Ground	GPIO13/ I2S_WS_SYNC/ SPI_2_RXD*
36	37	38	39	40
GPIO25/ UART_CTS/ SPI_2_FS2*	GPIO14	GPIO26/ I2S_SDI/ SPI_2_TXD*	Ground	GPIO27/ I2S_SDO/ SPI_2_CLK*

* 2nd SPI and ADC will be available only with E3940 SoC

Part number :	Intel® Celeron™ N3350 - 2 GB + 32 GB eMMC	UPS-APLP4-A20-0864	Intel® Pentium™ N4200 - 8 GB + 64 GB eMMC
	UPS-APLC2-A20-0232		
	UPS-APLC2-A20-0432		
	UPS-APLP4-A20-0432		

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