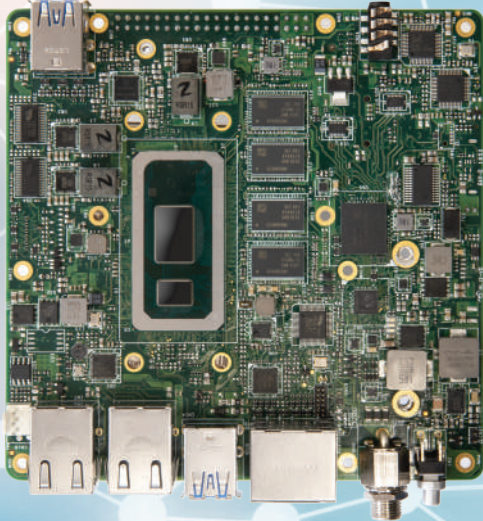




Xtreme

bridge  
the gap

specification



# UP Xtreme

The ultimate ultra-low voltage embedded board powered by Intel® 8th generation Core™ CPU. A powerful, industrial, expandable, AI proof, production-ready computing platform.



UP Xtreme-- the first Intel® Core™ platform from the UP family. With a measure of just 120mm x 122mm, UP Xtreme delivers a comprehensive set of features and I/O which allows you to reach astonishing performance rates of up to 4.4GHz and turbo clock frequency in just 15W.

With UP Xtreme we have consolidated the best I/O features from previous UP boards. The 40-pin GP-bus from UP board, mPCIe M.2 expansion from UP Squared and 100 pin expansion from UP Core Plus have all been utilized.

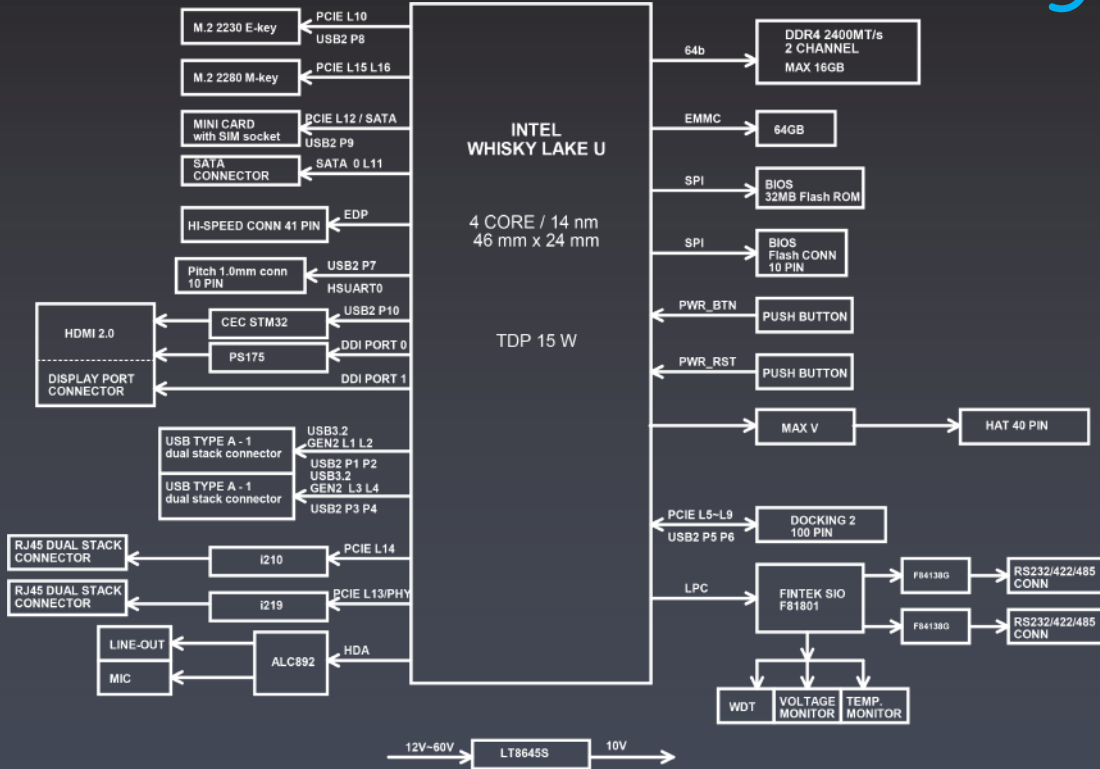
Powered by Intel® 8th Core™ processors (code name: Whiskey Lake), UP Xtreme is aimed at industrial, IoT, automation, robotics industries and much more.

The addition of a 12-60V-power input, a lockable power connector and TSN networking chip has enabled UP Xtreme to be expandable as well as industrial. UPscaling any application that needs more CPU power, memory capacity and rich I/O's is all possible thanks to the extreme performance of UP Xtreme. Dubbed as the Ferrari of the UP family, the power of UP Xtreme goes up to 4.4 Ghz, ensuring that you'll never have to complain of having low CPU power. You'll also never feel that it's not smart enough as it is capable of expanding up to 6x Intel® Movidius™ Myriad X VPU. It boasts optional connectivity via WiFi, Bluetooth, LTE and LoRA. The possibilities are stretched to the extreme.

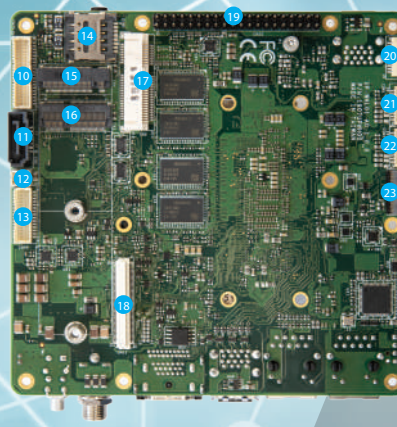
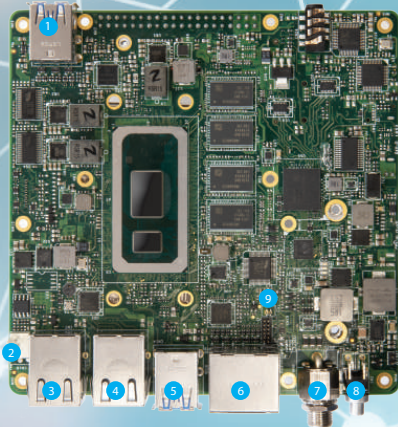
## SPECIFICATIONS

CPU	Intel® 8th gen Dual/Quad Core Ultra Low Power 15W i3-8145UE (up to 3.9 Ghz), i5-8365UE (up to 4.1 Ghz) i7-8665UE (up to 4.4 Ghz), Celeron 4305UE	COM Ports	Fintech F81801, 2x RS232/422/485
Memory	Onboard Dual Channel DDR4 memory, Max 16GB	Expansion HAT (40pin)	By MAX5: 28xGPIO, 2xSPI, 2x I2C, 1x ADC, 1x I2S, 1x UART, 3V3, 5V, GND
Graphics	Intel® UHD Graphics 620 1x eDP with Backlight control Header 1 x HDMI/DP STACK Connector	Docking Connector (100pin)	1. 12V, GND 2. 3xPCIe x1 3. 2x PCIe x1 or USB3.0 5. 2xUSB2.0
Storage	1x SATA Connector with power connector	Power	12~60V DC-IN (lockable connector) 1x Power Button / LED
Expansion Slot	1. Minicard (1x PCIe x1 (option mSATA), 1x USB2.0) with SIM 1x M.2 (2230 E Key) (1x PCIe x1, 1x USB2.0), 1x M.2 2280 B/M Key (2 x PCIe / 2xSATA)	Form Factor	120 mm x 122 mm
Ethernet	Core i7/Core i5 - 1x LAN (Intel® i210-AT), 1x LAN(Intel® i219-LM)   Core i3/Celeron - 1x LAN (Intel® i210-AT), 1x LAN(Intel® i219-V)	Operating Temperature	0 - 60°C
Audio	ALC887 for Audio Out/Mic In, I2S	Operating Humidity	0% ~ 90% relative humidity, non-condensing
USB	4x USB3.0, 2x USB2.0	Certification	CE, FCC
		OS Support	Win 10, Linux (Ubuntu, Yocto), Android

# block diagram



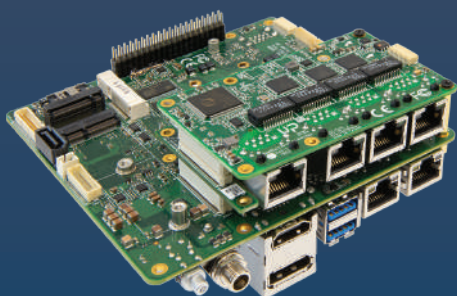
- 1) 2x USB 3.0
- 2) CPU FAN
- 3) Gbps Ethernet port RJ-45 (i210)
- 4) Gbps Ethernet port RJ-45 (i219)
- 5) 2x USB 3.0
- 6) HDMI + Display Port
- 7) Lockable 12~60V DC-IN
- 8) Power button
- 9) RTC Battery
- 10) STM32 I/O Header
- 11) SATA
- 12) SATA Power



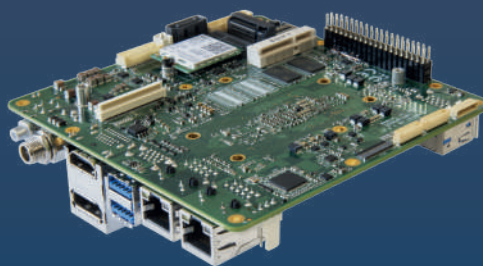
- 13) STM32 I/O Header
- 14) SIM Card slot
- 15) M2 2280 M Key
- (compatible with M2 2280 B+M Key Module)
- 16) M2 2230 E Key
- 17) Minicard 1x PCIe x1
- 18) 100-pin docking connector
- 19) 40-pin HAT Connector
- 20) USB 2.0 header + HUART
- 21) 10-pin RS232/422/485 header
- 22) 10-pin RS232/422/485 header
- 23) eDP Header

## Artificial Intelligence on the edge

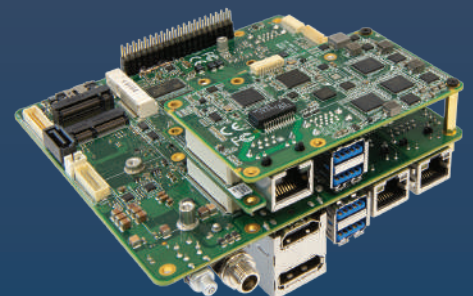
Expand your UP Xtreme board for fit your exact needs



NetPlus



Intel® 9260 WiFi Kit



Vision Plus X