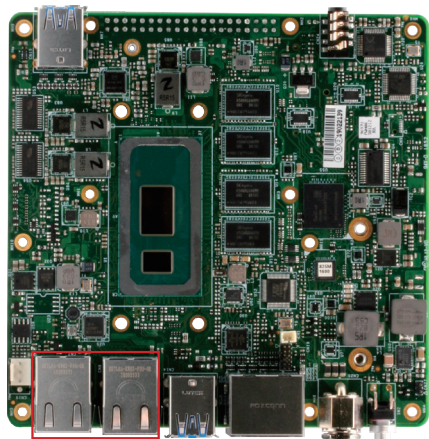
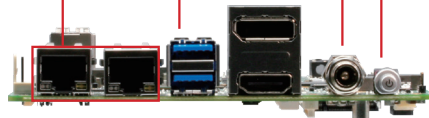


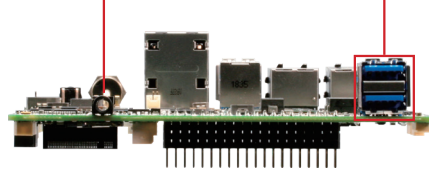
UP Xtreme developer board with Intel® WHL-U Core™ i7/i5/i3/Celeron® Processor SoC



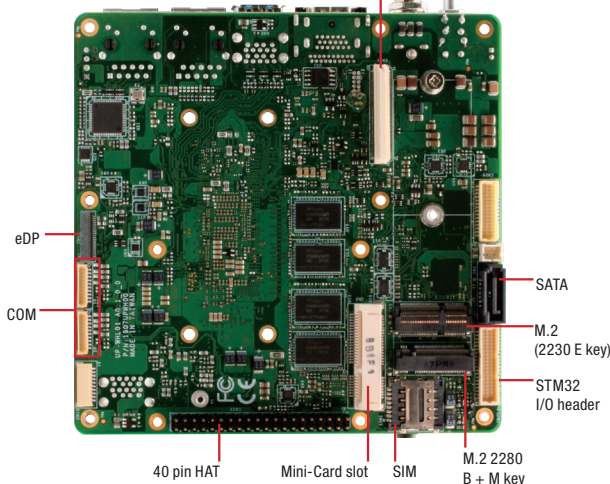
LAN x 2
USB 3.0 x 2
HDMI & DP
Locable 12-60 DC in
Power Button



Audio Jack (Line out + MIC)
USB 3.0 x 2



100 pin docking connector



eDP
COM
40 pin HAT
Mini-Card slot
SIM
M.2 2280 B + M key
SATA
M.2 (2230 E key)
STM32 I/O header

Features

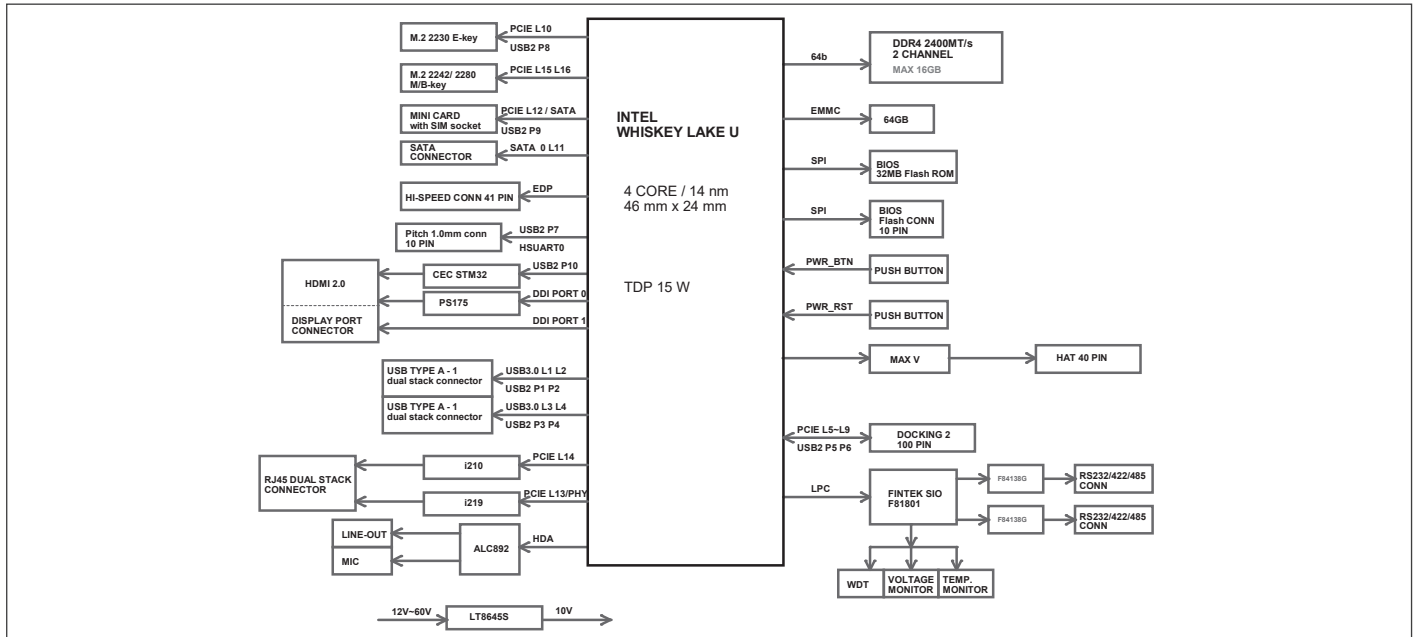
- Intel® WHL-U Core i7/i5/i3/Celeron® Processor SoC
- Onboard Single Dual Channel DDR4 memory, Max 16GB
- eMMC 64GB
- 40Pin HAT Connector
- 100pin docking connector
- SATA 6.0Gb/s x 3
- Mini-card slot x 1
- M.2 2280 B+M key x 1
- M.2 2230 Ekey x 1
- Audio Jack x 1 (line out + Mic)
- Lockable DC connector



Specifications

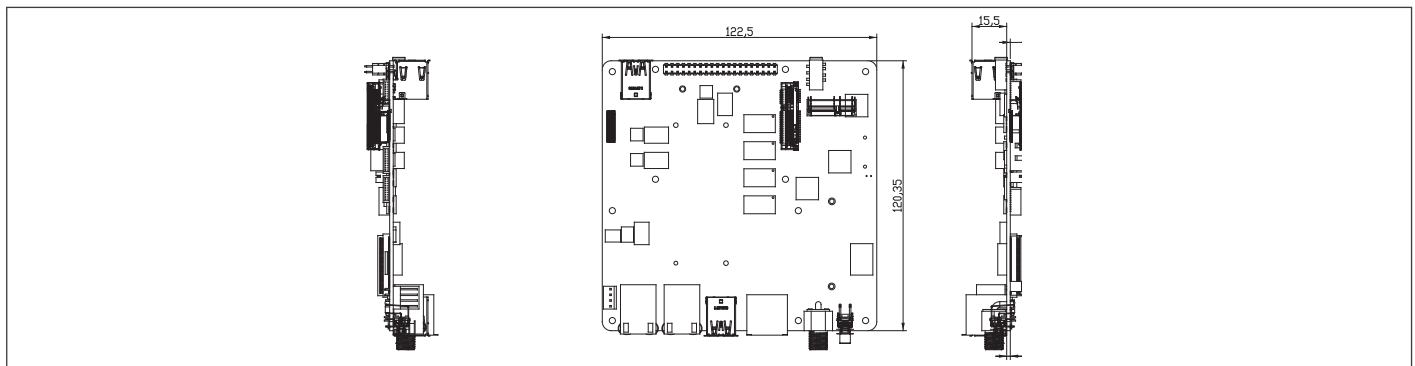
System	
Processor	8th generation Intel® Core i7/i5/i3/Celeron Processor SoC
Graphics	Intel® Graphics , GEN 9
I/O	RJ45 Ethernet Connector x 2 HDMI/DP STACK Connector x 1 USB 3.1 STACK Connector for 2 ports (Front) x 1 USB 3.1 STACK Connector for 2 ports (Rear) x 1 Power Button / LED x 1 Audio Jack (Line out + MIC) x 1 DC connector (Lockable) x 1 STM32 40pin connector x 1 eDP with Backlight control Header x 1 10 pin 1xUSB2.0 x 1 / HUART (TTL) x 1 SATA Connector with power connector (5V, GND) x 1 4 pin Fan connector x 1 Power Button header x 1 Reset Pin header x 1 M.2 2230 E Key x 1 M.2 2280 B+M Key x 1 40 pin HAT connector x 1 mPCIe slot x 1 10 pin RS232/422/485 pin header x 2 100pin connector x 1
Camera	—
USB	USB 3.1 STACK Connector for 2 ports (Front) x 1 USB 3.1 STACK Connector for 2 ports (Rear) x 1
Expansion	M.2 2230 E Key x 1 M.2 2280 B+M Key x 1 mPCIe slot x 1 100pin connector x 1
RTC	RTC battery, CR2032 x 1
Power	12V - 60VDC (+-5%)
Dimension	122 x 120 mm
Memory	Onboard max up to 16GB DDR4
Storage	SATA3 (6Gb/s) x 3: a. SATA connector x 1 b. M.2 2280 SATA option (auto detect) x 1 c. minicard mSATA option (auto detect) x 1
Display Interface	HDMI2.0 x 1 DP1.2 x 1 eDP x 1 CEC support with STM32 on HDMI x 1
Ethernet	Intel i210/i211(Default i210) x 1 i219LM PHY x 1
OS Support	Win 10 Linux Ubuntu 18.04 with Kernel 5.0 Linux Yocto 2.7 with Kernel 4.19
Operating Temperature	0 ~ 60°C (32 ~ 140°F)
Operation Humidity	0% ~ 90% relative humidity, non-condensing
Certification	CE/FCC

Block Diagram



Dimension

Unit: mm



Ordering Information

Part number	CPU	RAM	Storage	LAN	USB	RS-232/422/485	Expansion Slot	Power	Operation Temp.
UPX-WHL7-A20-16064	Core I7-8665UE	16GB	64GB	GbE x 2	USB3.0 x 4 USB2.0 x 1	2	Mini card x 1 M.2 2280 B + M key x 1 M.2 2230 E key x 1	12-60V	32°F ~140°F (0°C ~ 60°C)
UPX-WHL15-A20-08064	Core I5-8365UE	8GB	64GB	GbE x 2	USB3.0 x 4 USB2.0 x 1	2	Mini card x 1 M.2 2280 B + M key x 1 M.2 2230 E key x 1	12-60V	32°F ~140°F (0°C ~ 60°C)
UPX-WHL13-A20-08064	Core I3-8145UE	8GB	64GB	GbE x 2	USB3.0 x 4 USB2.0 x 1	2	Mini card x 1 M.2 2280 B + M key x 1 M.2 2230 E key x 1	12-60V	32°F ~140°F (0°C ~ 60°C)
UPX-WHL7CR-A20-04064	Celeron 4305UE	4GB	64GB	GbE x 2	USB3.0 x 4 USB2.0 x 1	2	Mini card x 1 M.2 2280 B + M key x 1 M.2 2230 E key x 1	12-60V	32°F ~140°F (0°C ~ 60°C)
UPX-WHL7C-A20-16064	Core I7-8565U	16GB	64GB	GbE x 2	USB3.0 x 4 USB2.0 x 1	2	Mini card x 1 M.2 2280 B + M key x 1 M.2 2230 E key x 1	12-60V	32°F ~140°F (0°C ~ 60°C)

Packing List

- UPX-WHL01 with Heatsink + cooler