

## Features

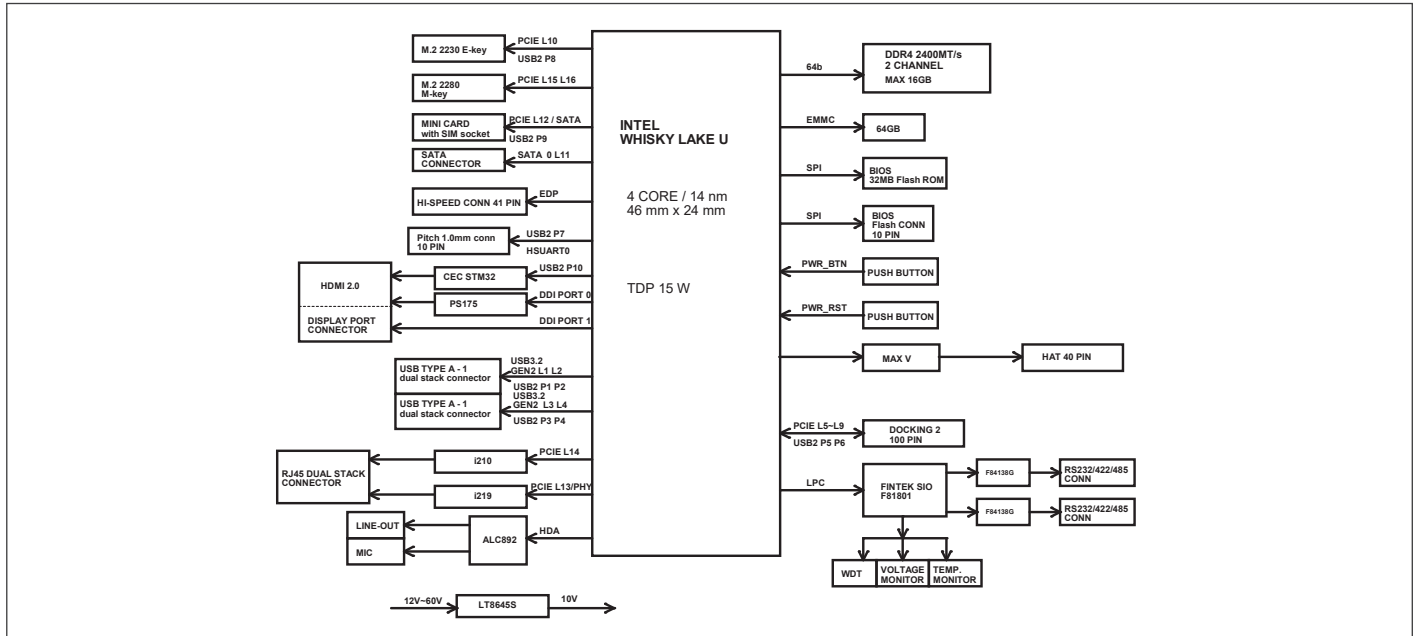
- 8th Gen Intel® Core™/Celeron® Processor SoC
- Onboard DDR4 memory, Max 16GB
- eMMC 64GB
- 40-Pin HAT Connector
- 100-pin docking connector
- SATA 6Gb/s x 3
- Mini Card slot x 1
- M.2 2280 M-Key x 1
- M.2 2230 E-Key x 1
- Audio Jack x 1 (line out + Mic)
- Lockable DC Connector



## Specifications

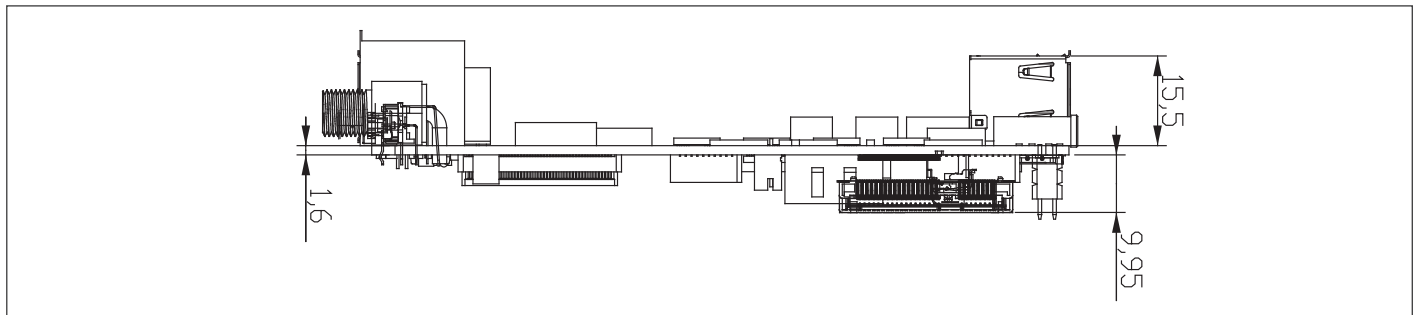
System	
Processor	8th Gen Intel® Core™ Processor SoC Intel® Core™ i7-8665UE Intel® Core™ i5-8365UE Intel® Core™ i3-8145UE Intel® Celeron® Processor 4305UE
Graphics	Intel® UHD Graphics
Memory	Up to 16GB onboard DDR4 Single Channel: 4GB Dual Channel: 8GB, 16GB
Storage	64GB onboard eMMC M.2 2280 M-key x 1 SATA III x 1 Mini Card mSATA x 1
I/O	HDMI 2.0 x 1 DP 1.2 x 1 eDP x 1 STM32 connector x 1 Audio Jack x 1 (Mic-in+Line-out) RS-232/422 10-pin header x 2
Camera	—
USB	USB 3.2 Gen 1 x 4
Expansion	40-pin GPIO x 1 M.2 2230 E-Key x 1 M.2 2280 M-key x 1 SATA III x 1 mPCIe slot x 1 100-pin connector x 1
Display Interface	HDMI 2.0 x 1 DP 1.2 x 1 eDP x 1 CEC support with STM32 on HDMI x 1
Ethernet	i7/i5 SKU LAN (i210-AT) x 1, LAN (i219-LM) x 1 i3/Celeron® LAN (i210-AT) x 1, LAN (i219-V) x 1
Security	—
RTC	Yes
OS Support	Microsoft Windows 10 Linux Ubuntu 22.04 Linux Yocto 3.1
<b>Power Requirement</b>	
Power	12V - 60V DC-in (Lockable plug)
Power Supply Type	—
Power Consumption (Typical)	31.8W
<b>Mechanical</b>	
Dimension	4.8" x 4.72" (122mm x 120mm)
Net Weight	0.66 lbs (0.30kg)
Gross Weight	1.10 lbs (0.50kg)
<b>Environment</b>	
Operating Temperature	32°F ~ 140°F (0°C ~ 60°) / 0.5 airflow
Operation Humidity	0% ~ 90% relative humidity, non-condensing
MTBF	350,049 Hours
Certification	CE/FCC Class A, RoHS Compliant, REACH

## Block Diagram



## Dimension

Unit: mm



## Packing List

- UPX-WHL01 with Heatsink + cooler

## Ordering Information

Part Number	CPU	MEMORY	STORAGE	HEATSINK
UPX-WHL01-A20-04064	Intel® Celeron® Processor 4305UE	4GB	64GB	FAN
UPX-WHL13-A20-08064	Intel® Core™ i3-8145UE	8GB	64GB	FAN
UPX-WHL15-A20-08064	Intel® Core™ i5-8365UE	8GB	64GB	FAN
UPX-WHL17-A20-16064	Intel® Core™ i7-8665UE	16GB	64GB	FAN

## Optional Accessories

Part Number	Description
125530065A	19Vdc/3.42A.65W power adapter
1702031830	(TF)Power Cable.YP-12 3P.YC-14 3P.183c.for USA
1702031831	(TF)Power Cable.YP-22 3P.YC-14 3P.183cm.for European
9741364A00	(TF).M.2 2230 Wireless.802.11 ac/a/b/g/n + BT 5.0.2T2R,Enlii QCNFA364A.w/2 sets of cable and antenna
9741159H00	(TF)Wireless LAN kit.IEEE 802.11.b/g/n.w/BT 4.0/3.0.(AzureWave.AWNB159H).w/cable.& antenna (mini card)
PER-TAIX2-A10-2280	AI Core XM 2280.M.2 2280 B+M key card.with Dual Myriad X.15 mm heat sink with FAN
UPCR-CPL3-A11-001	Connect Plus.i211-AT.for UP core Plus/UP Xtreme
UPCR-CPL3-A11-002	Connect Plus.i210-IT.for UP core Plus/UP Xtreme, A.1
UPCR-CAN1-A10-0001	UP CAN Bus Carrier Board with USB/UART interface for UP product line