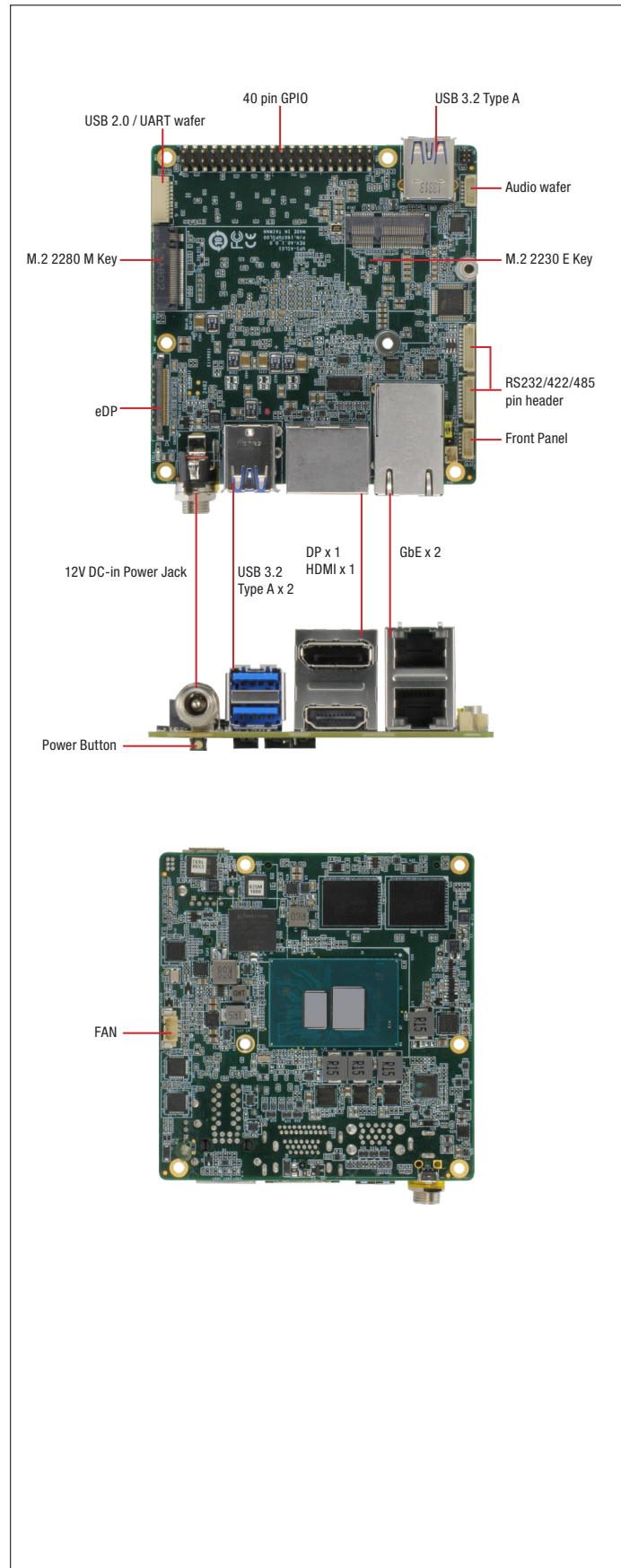


UP Squared TWL

PRELIMINARY


UP Squared TWL Developer Board with Intel® Processor N-series SoC



Features

- Intel® Processor N-series SoC
- Onboard LPDDR5 Memory up to 16GB
- Onboard eMMC Storage up to 128GB
- Gb Ethernet (full speed) RJ-45 x 2
- USB 3.2 Type A x 3
- 40 pin GPIO x 1
- DP 1.2 / HDMI 2.0b / eDP 1.3
- RS232/422/485 x 2
- M.2 2230 E-Key x 1
- M.2 2280 M-Key x 1
- TPM 2.0
- 12V DC-in



Specifications

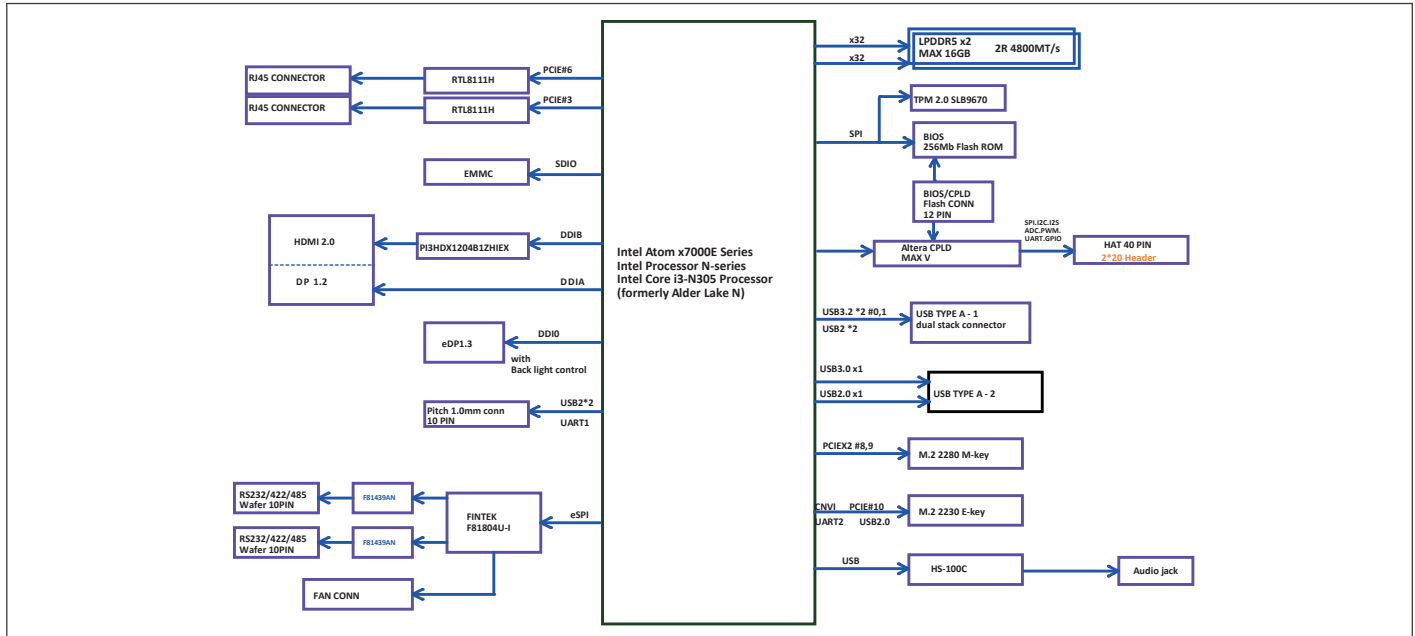
System	
Processor	Intel® Core™ i3-N355 Intel® Processor N250 Intel® Processor N150 (formerly Twin Lake)
Graphics	Intel® UHD Graphics for 12th Gen Intel® Processors
Memory	Up to 16GB LPDDR5
Storage	Up to 128GB eMMC
I/O	HDMI 2.0b x 1 DP 1.2 x 1 eDP 1.3 x 1 Audio wafer (Line out + MIC in) x 1 RS-232/422/485 via wafer x 2
Camera	—
USB	USB 2.0 x 2 (from 10 pin wafer x 1) USB 3.2 Gen 2 Type A x 3
Expansion	40 pin GPIO x 1 M.2 2230 E-Key x 1 (PCIe x1, USB2.0 x1) M.2 2280 M-key x 1 (PCIe x2)
Display Interface	HDMI 2.0b x 1 DP 1.2 x 1 eDP 1.3 x 1
Ethernet	Gb Ethernet (full speed) RJ-45 x 2
Security	Onboard TPM 2.0
RTC	Yes
OS Support	Microsoft Windows 10/11 Ubuntu 22.04 LTS Yocto 5.1
Power Requirement	
Power	12V DC-in
Power Supply Type	AT/ ATX (ATX as default)
Power Consumption (Typical)	15W~37W
Mechanical	
Dimension	3.37" x 3.54" (85.6 mm x 90 mm)
Net Weight	0.41 lbs (0.19kg)
Gross Weight	0.66 lbs (0.3kg)
Environment	
Operating Temperature	32°F ~ 140°F (0°C ~ 60°C) / 0.5 airflow, WiTAS1 -4°F ~ 158°F (-20°C ~ 70°C) with active cooler
Operation Humidity	0% ~ 90% relative humidity, non-condensing
MTBF	1,224,238
Certification	CE/FCC Class A, RoHS Compliant, REACH

Packing List

- UP Squared TWL with heatsink

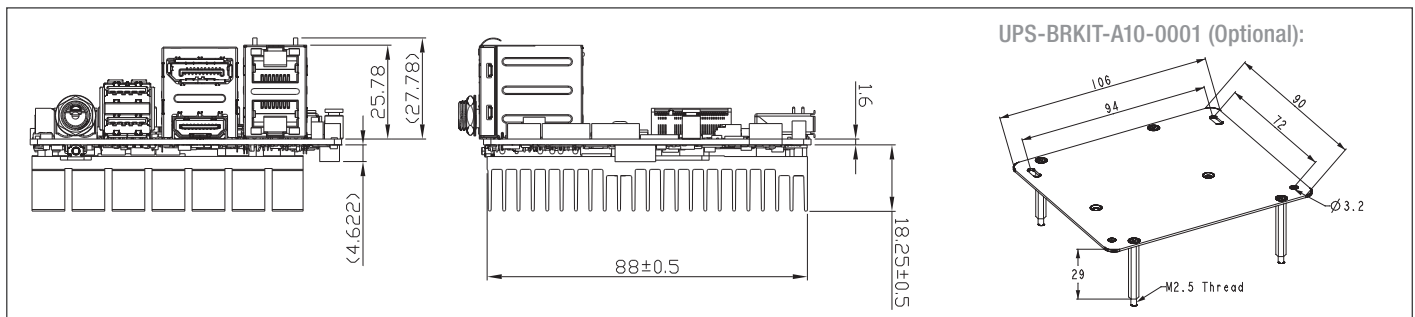


Block Diagram



Dimension

Unit: mm



Ordering Information

Part number	CPU	Memory	Storage
UPS-TWLN150-A10-0864	Intel® Processor N150	8GB	64GB

Optional Accessories

Part Number	Description
1255X00032	(TF)AC/DC Adapter.Input AC:100~240V.Output DC:12V.MAX 72W.6.0A.180D.W/ LOCK.EDAC. EA10681U(120)
170X000799	(TF)Power Cord. 3P. 125V. 10A. 180D. USA. 1. 8M. I-SHENG. SP305B/IS-14N SVT 18/3 60C CT-12 Black
170X000800	(TF)Power Cord. 3P. 250V. 10A. VDE. 1. 8M. I-SHENG. SP23/IS-14N H05VV-F 3G 0. 75 CT-12 Black
170X000815	(TF)Power Cord. 3P. 250V. 10A. 180D. CHINA. 1. 8M. I-SHENG. SP506A/IS-14N RVV 300/500V 3X0. 75 CT-12 Black
170X000806	(TF)Power Cord. 3P. 125V. 7A. 1. 8M. I-SHENG. U4NCB3T6B1218002. SP305B/IS-14N VCTF. Black. BSMI
170X000803	(TF)Power Cord.3P.125V/7A.PSE Certificate.1.8M.I-SHENG.U4NCB3P6C1218002.SP305B/IS-14N VCTF 0.75/3 Black 1.8M
170X000810	(TF)Power Cord.3P.250V.16A.Korea.1.8M.I-SHENG.SP23/IS-14N H05VV-F 3G 0.75 CT-12 Black
170X000805	(TF)Power Cord.3P.250V.10A.SWISS.1.8M.I-SHENG.SP-027C/IS-14N H05VV-F 3G 0.75mm CT-12 Black
1701100180	COM Cable
170010015G	UART to USB cable
9651210000	Wireless LAN Kit M.2 2230 802.11ax/ac/a/b/g/n + BT5.2,2.4G/5G/6G,with 2 sets of cable & antenna (Intel AX210)
9651885200	Wireless LAN Kit M.2 2230 802.11ax/ac/a/b/g/n + BT5.2,2T2R,with 2 sets of cable & antenna (Enli,ENL-8852CE)