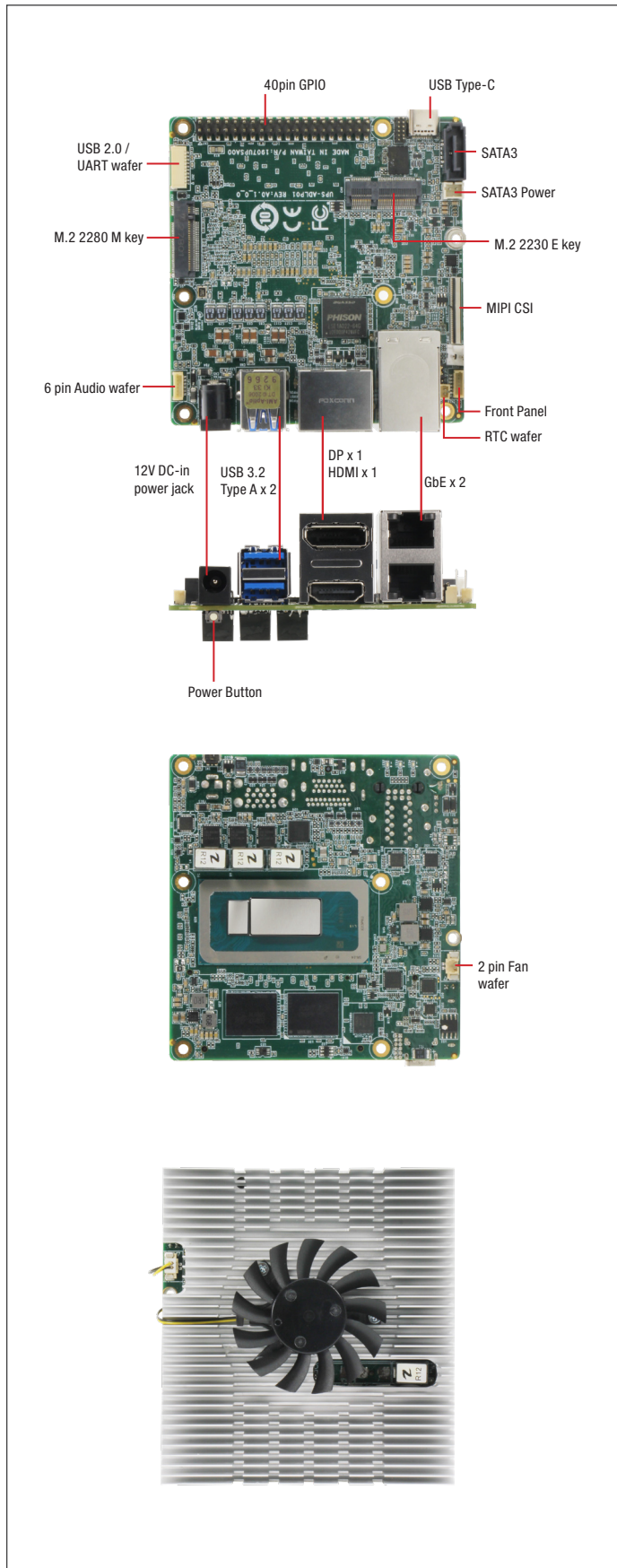


UP Squared i12 Developer Board with 12th/13th Generation Intel® Core™ i7/i5/i3/Celeron® Processor SoC



Features

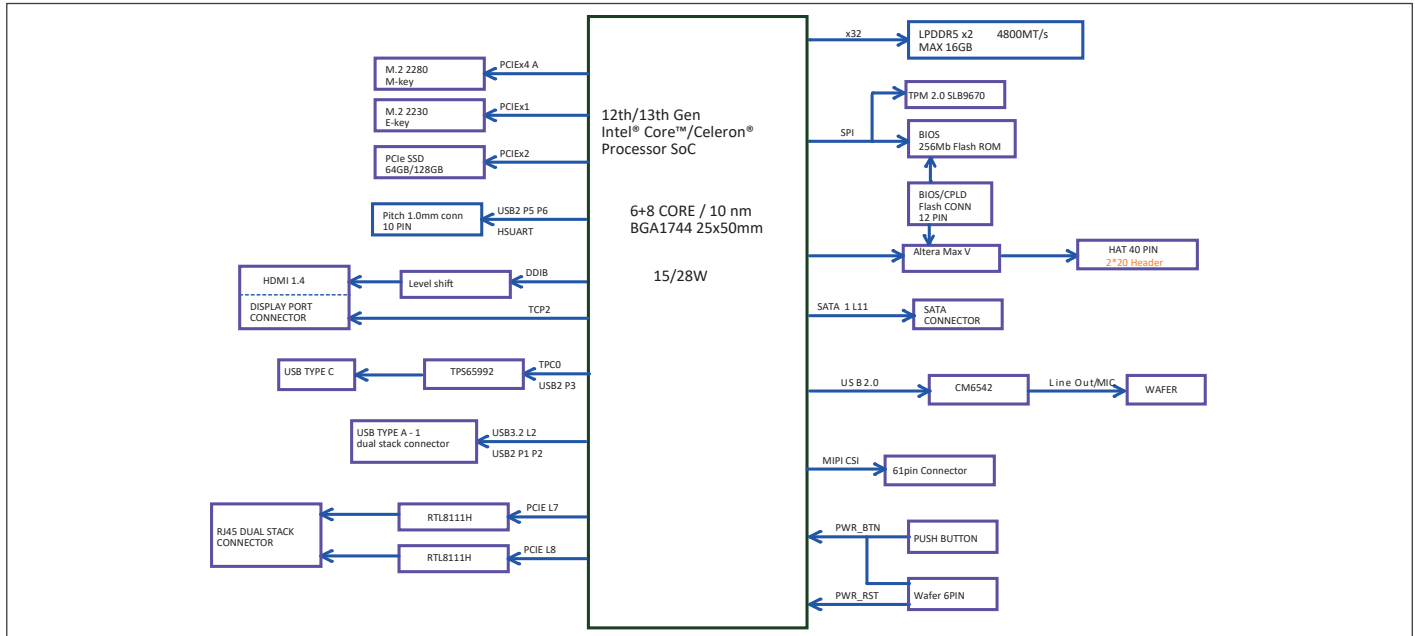
- 12th/13th Generation Intel® Core™ i7/i5/i3/Celeron® Processor SoC
- Up to 16GB Onboard LPDDR5
- Up to 128GB Onboard SSD
- M.2 2230 E-Key/M.2 2280 M-Key/SATA 6Gb/s x 1
- 1GbE x 2
- HDMI 1.4b/DP 1.2 Connector x 1, DP 1.4a via USB Type-C x 1
- USB 3.2 Gen 2 (Type-A) x 2, USB 3.2 Gen 2 (Type-C) x 1, 10-pin USB 2.0 x 2/UART x 1
- Audio Jack x 1 (Line out + Mic in)
- 40-pin GPIO x 1
- 12V DC-in
- TPM 2.0



Specifications

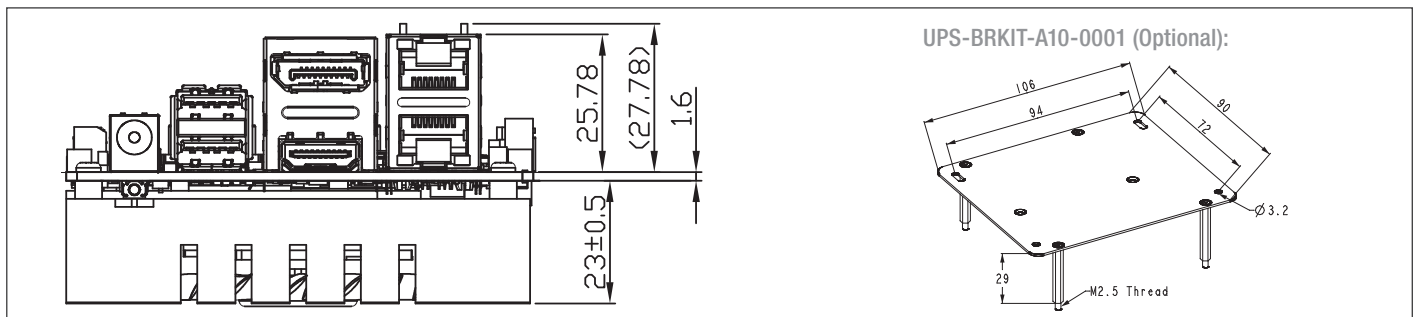
System	
Processor	12th Gen Intel® Core™ Processor SoC Intel® Core i7-1270PE Intel® Core i7-1260P Intel® Core i5-1250PE Intel® Core i5-1240P Intel® Core i3-1220PE Intel® Celeron® 7305E 13th Gen Intel® Core™ Processor SoC Intel® Core™ i7-1370PE Intel® Core™ i7-1360P Intel® Core™ i5-1340PE Intel® Core™ i3-1320PE
Graphics	Intel® UHD Graphics
Memory	Up to 16GB Onboard LPDDR5
Storage	Up to 128GB Onboard SSD M.2 2280 M-Key NVMe x 1 (PCIe Gen 4.0 [x4]) SATA 6Gb/s x 1
I/O	HDMI 1.4b/DP 1.2 STACK Connector x 1 DP 1.4a x 1 (via USB Type-C) 6-pin Audio Wafer x 1 (Line out + MIC in) 6-pin Front Panel x 1 2-pin Fan Wafer x 1 (12V) 2-pin RTC Battery Wafer x 1
Camera	MIPI CSI camera via 61pin wafer w/carrier board HDMI-in via 61pin wafer w/carrier board
USB	10-pin USB 2.0 x 2/UART x 1 USB 3.2 Gen 2 (Type-A) x 2 USB 3.2 Gen 2 (Type-C for DP 1.4) x 1
Expansion	40-pin GPIO x 1 M.2 2230 E-Key x 1 (CNVI & PCIe Gen 3.0 [x1]) M.2 2280 M-Key NVMe x 1 (PCIe Gen 4.0 [x4]) SATA 6Gb/s x 1
Display Interface	HDMI 1.4b/DP 1.2 STACK Connector x 1 DP 1.4a x 1 (via USB Type-C)
Ethernet	1GbE RJ45 x 2 (Dual Stacked) (Realtek 8111H CG)
Security	Onboard TPM 2.0
RTC	Yes
OS Support	Windows®10 IoT Enterprise LTSC 2021, Ubuntu 22.04, Yocto 4.0
Power Requirement	
Power	12V DC-in
Power Supply Type	AT/ATX (AT as default)
Power Consumption (Typical)	26W~39W
Mechanical	
Dimension	3.37" x 3.54" (85.6mm x 90mm)
Net Weight	0.59 lbs (0.27kg)
Gross Weight	0.84 lbs (0.38kg)
Environment	
Operating Temperature	32°F ~ 140°F (0°C ~ 60°C) / 0.5 airflow
Operation Humidity	0% ~ 90% relative humidity, non-condensing
MTBF	522,716 Hours
Certification	CE/FCC Class A, RoHS Compliant, REACH

Block Diagram



Dimension

Unit: mm



Optional Accessories

Part Number	Description
1255X00088	(TF)AC/DC Adapter.100-240VAC.120W.12VDC/10A.W/O Lock.DC plug 2.1*5.5*12mm.FSP.FSP120-AHAN3/9NA1206756
170X000800	Power cord for EU.(TF)POWER CORD.3P-250V 10A 180D.1.8M.VDE.FAN-JET.YP-22/YC-12
170X000799	Power cord for US.(TF)POWER CORD.3P-125V 10A 180D.1.8M.USA.FANJET.YP12/YC-12
170203180J	Power cord for UK.(TF)Power Cord.3P.250V 10A.UK type.1830mm
170X000803	Power cord for Japan.(TF)Power cord.3P.125V/7A.1.8M.PSE YP12/YC12 Certificat
170X000815	Power cord for China.(TF)POWER CORD.3P(M).3P(F).1.8m.250V 10A 180D.CHINA.FAN-JET.YP-03/YC-12
170X000806	Power cord for Taiwan.(TF)Power Cord.3P-125V/7A.180D.1.8M.TWN/BSMI.FANJET.YP-12/YC-12
1709070500	SATA cable.(TF)SATA CABLE.7P Pitch 1.27mm.50cm
1702150155	SATA power cable(15cm).(TF)Power Cable.15P SATA(F).2P 2.0mm Housing(PH).15cm
1702150306	SATA power cable(30cm).(TF)Power Cable.15P SATA(F).2P 2.0mm Housing(PH).30cm
170010015G	UART to USB cable.(TF)USB Cable.10P 1.0mm Housing,USB A/F
9741364A00	(TF).M.2 2230 Wireless.802.11 ac/a/b/g/n + BT 5.0.2T2R.Enli QCNFA364A.w/2 sets of cable and antenna
9651926001	Wireless BT Kit (TF).M.2 2230 WiFi Kit.802.11ac.2.4G/5G,W/BT Intel.9260.NGWG.NV.958867w/2 cable & antenna
UPCR-CAN1-A10-0001	UP CAN BUS Carrier Board with USB/UART interface for UP product line
UPCR-CAMB-A10-0001	MIPI-CSI Camera RVP Converter Kit for UP Squared Pro 7000/UP Squared i12
UPCR-HDMI-A10-0001	HDMI IN carrier board for UPS i12, UPN 7000, UPX i12.REV.A1.0
UPS-BRKIT-A10-0001	Bracket KIT of board fixture for all UP series

Packing List

- UP Squared i12 with Active Heatsink

Ordering Information

Part Number	CPU	Core	Memory	Storage	Heatsink
UPS-ADLPCR-A10-0800	Intel® Celeron® 7305E	1P+4E	8GB	—	FAN
UPS-ADLP13-A10-0800	Intel® Core™ i3-1220PE	4P+4E	8GB	—	FAN
UPS-ADLP15-A10-0800	Intel® Core™ i5-1250PE	4P+8E	8GB	—	FAN
UPS-ADLP15-A10-08128	Intel® Core™ i5-1250PE	4P+8E	8GB	128GB	FAN
UPS-ADLP15C-A10-0800	Intel® Core™ i5-1240P	4P+8E	8GB	—	FAN
UPS-ADLP17-A10-0800	Intel® Core™ i7-1270PE	4P+8E	8GB	—	FAN
UPS-ADLP17-A10-16128	Intel® Core™ i7-1270PE	4P+8E	16GB	128GB	FAN
UPS-ADLP17C-A10-1600	Intel® Core™ i7-1260P	4P+8E	16GB	—	FAN
UPS-RAP13-A10-0800	Intel® Core™ i3-1320PE	4P+4E	8GB	—	FAN
UPS-RAP15-A10-0800	Intel® Core™ i5-1340PE	4P+8E	8GB	—	FAN
UPS-RAP17-A10-0800	Intel® Core™ i7-1370PE	4P+8E	8GB	—	FAN
UPS-RAP17C-A10-1600	Intel® Core™ i7-1360P	4P+8E	16GB	—	FAN