

Features

- Onboard LPDDR5x, up to 64GB
- Onboard NVMe, up to 256GB
- USB 2.0 x 8, USB 3.2 (10Gbps) x 4
- PCIe Gen 4 [x8] x 1, PCIe Gen 3 [x1] x 4, PCIe Gen 3 [x4] x 1 (2 lanes co-lay with SATA; BOM option)
- Intel® Ethernet Controller I226, 2.5GbE x 2
- COM-HPC Mini, 3.74" x 2.76" (95mm x 70mm)



Specifications

System	
Form Factor	COM-HPC R1.2 Mini
CPU	Intel® Core™ Ultra Processors: Intel® Core™ Ultra 7 Processor 255H (16C/16T, 2.0GHz, 28W) Intel® Core™ Ultra 5 Processor 225H (14C/14T, 1.7GHz, 28W) Intel® Core™ Ultra 7 Processor 155H (16C/22T, 1.4 GHz, 28W) Intel® Core™ Ultra 5 Processor 125H (14C/18T, 1.2 GHz, 28W)
Chipset	SoC
Memory	Onboard LPDDR5x, up to 64GB
Onboard Storage	Onboard NVMe, up to 256GB
BIOS	AMI UEFI
Wake on LAN	Yes
Watchdog Timer	255 Levels
Dimension	3.74" x 2.76" (95mm x 70mm)
Security	dTPM / fTPM
Power	
Power Requirement	+12V for ATX / AT
Power Type	AT/ATX
Power Consumption (Typical)	Intel® Core™ Ultra 7 265H , 4.13 @+12V
Display	
Graphics Controller	Series 1 CPU SKU: Intel® Arc™ graphics Series 2 CPU SKU: Intel® Arc™ 140T/130T GPU
Video Output	DDI1: DP/HDMI, up to 3840x2160 DDI2: DP/HDMI, up to 3840x2160 eDP: up to 3840 x 2160
I/O	
Ethernet	Intel® Ethernet Controller I226 2.5GbE x 2
Audio	High Definition Audio Interface
USB Port	USB 3.2 (10Gbps) x 4 USB 2.0 x 8
Serial Port	4-Wire UART x 2 (Tx/Rx/RTS/CTS)
HDD Interface	Option: SATA 6Gb/s x 2, via PCIe lane 6 and lane 7 *BIOS and BOM change required to enable SATA
Expansion	PCIe 4.0 [x8] x 1 PCIe 3.0 [x1] x 4 PCIe 3.0 [x4] x 1 (lanes 6 and 7 co-lay with SATA)
GPIO	12-bit
SMBus/I2C	I2C x 2, SMBus x 1

Environment	
Operating Temperature	-4°F ~ 158°F (-20°C ~ 70°C)
Storage Temperature	-40°F ~ 185°F (-40°C ~ 85°C)
Operating Humidity	0% ~ 90% relative humidity, non-condensing
EMC	CE/FCC Class A
OS Support	Windows 11 Ubuntu 24.04/Kernel 6.11
Weight	0.17lb (0.08kg)

Packing List

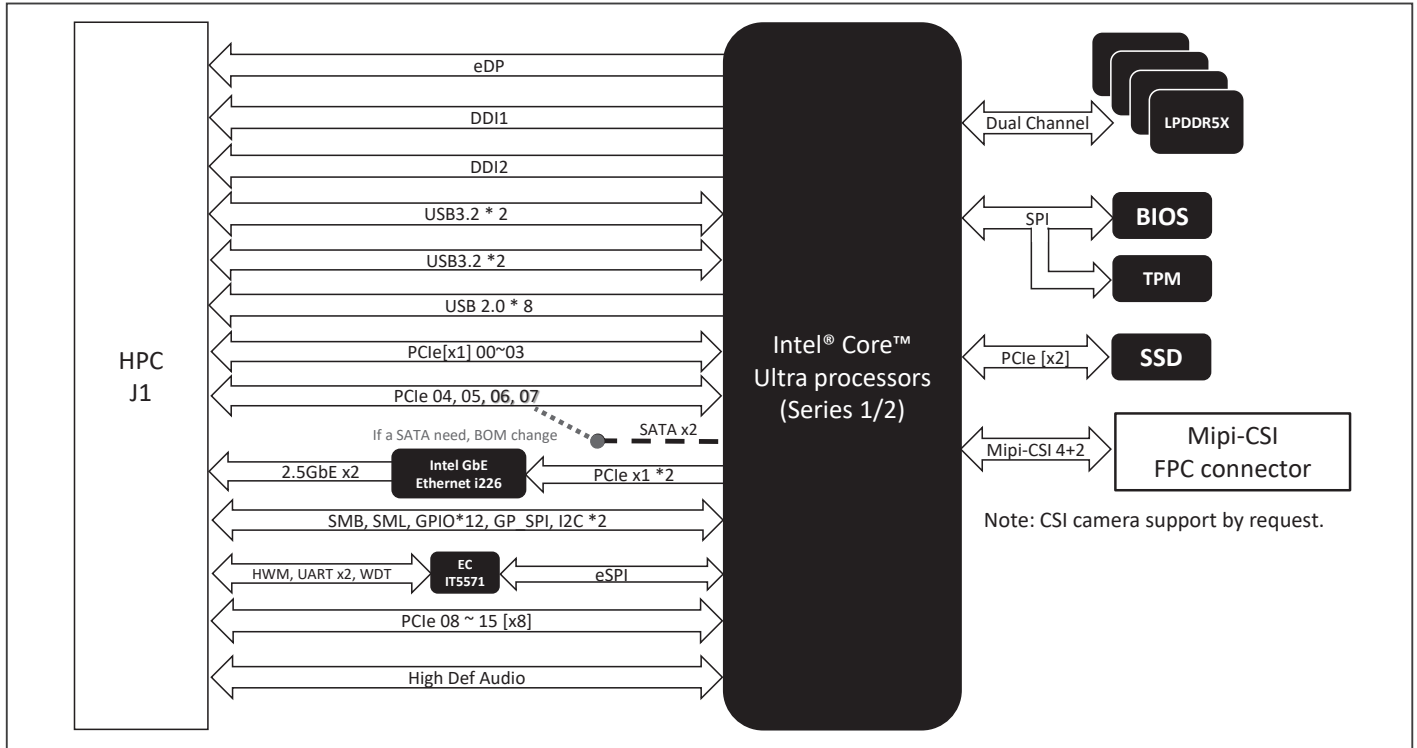
- HPC-ARHm

Optional Accessories

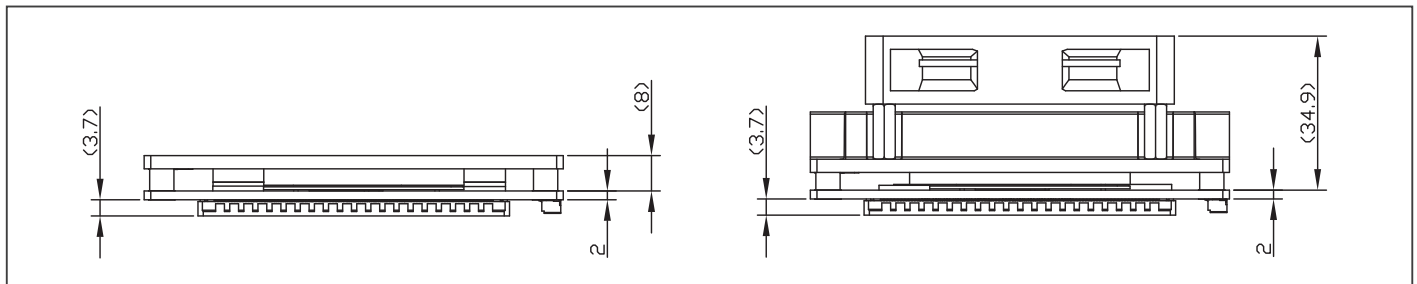
Part Number	Description
HPC-ARHm-FAN01	Cooler.95mm x 70mm x 45mm.4pin
HPC-ARHm-HSP01	Heat Spreader.95mm x 70mm x 8mm.Black
ECB-980A-A11-0002	COM HPC Carrier.Size mini.HDMI.DP.2GbE.8USB(TypeA).2SATA.PCIE.w/PER-T714.ATX



Block Diagram



Dimension Unit: mm



Ordering Information

Part Number	COM Express Type	CPU	Memory	ECC support	Display	Storage	LAN	USB	UART	Expansion	Power	Temperature	Others
HPC-ARHm-A10-0001	COM-HPC Mini	Intel® Core™ Ultra 7 Processor 255H	32GB Onboard LPDDR5x	—	eDP x 1, DDI x 2	256GB NVMe	Intel® I226-IT x 2	USB 3.2 Gen 2 x 4 USB 2.0 x 8	4-Wire UART x 2 (Tx/Rx/CTS/RTS)	PCIe 4.0[x8] PCIe 3.0[x1] x 4 PCIe 3.0[x4]	12V	-20°C ~ 70°C	GPIO 12-bit,I2C, SMBus
HPC-ARHm-A10-0002	COM-HPC Mini	Intel® Core™ Ultra 7 Processor 155H	64GB Onboard LPDDR5x	—	eDP x 1, DDI x 2	256GB NVMe	Intel® I226-IT x 2	USB 3.2 Gen 2 x 4 USB 2.0 x 8	4-Wire UART x 2 (Tx/Rx/CTS/RTS)	PCIe 4.0[x8] PCIe 3.0[x1] x 4 PCIe 3.0[x4]	12V	-20°C ~ 70°C	GPIO 12-bit,I2C, SMBus
HPC-ARHm-A10-0003	COM-HPC Mini	Intel® Core™ Ultra 5 Processor 225H	16GB Onboard LPDDR5x	—	eDP x 1, DDI x 2	128GB NVMe	Intel® I226-IT x 2	USB 3.2 Gen 2 x 4 USB 2.0 x 8	4-Wire UART x 2 (Tx/Rx/CTS/RTS)	PCIe 4.0[x8] PCIe 3.0[x1] x 4 PCIe 3.0[x4]	12V	-20°C ~ 70°C	GPIO 12-bit,I2C, SMBus
HPC-ARHm-A10-0004	COM-HPC Mini	Intel® Core™ Ultra 5 Processor 125H	16GB Onboard LPDDR5x	—	eDP x 1, DDI x 2	128GB NVMe	Intel® I226-IT x 2	USB 3.2 Gen 2 x 4 USB 2.0 x 8	4-Wire UART x 2 (Tx/Rx/CTS/RTS)	PCIe 4.0[x8] PCIe 3.0[x1] x 4 PCIe 3.0[x4]	12V	-20°C ~ 70°C	GPIO 12-bit,I2C, SMBus