ADLINK
LEADING EDGE COMPUTING

COM-HPC Mini Dev Kit
Intel® Meteor Lake

COM-HPC Mini Dev Kit with
Intel® Core™ Ultra 5 125H/125U Processors



Features

- Powered by Intel® Core™ Ultra 5 processors with advanced AI acceleration
- Features COM-HPC-mMTL for compact and high-performance applications
- Bundled with COM-HPC R1.2 Type Mini carrier board in standard ATX form factor
- Support industrial-grade design with 10-year longevity
- Compatible with Windows® 11/10 and Ubuntu for embedded solutions

Specifications

Core System	SoC	Processor	Cores/Threads	Cache	TDP
		Intel® Core™ Ultra 5 125H	4P+8E+2LP-E/18T	18MB	28W
		Intel® Core™ Ultra 5 125U	2P+8E+2LP-E/14T	12MB	15W
	Architecture	X86			
	Memory	16GB LPDDR5x, dual-channel memory, up to 7467 MT/s (onboard memory)			
	Embedded BIOS	AMI UEFI with CMOS backup in 32MB SPI BIOS			
	IoT Security	TPM 2.0, Intel® AES-NI, Secure Key, Execute Disable Bit, OS Guard, and Boot Guard			
Graphics	GPU Core	Intel® Xe Low Power Graphics			
	Video Decoding	AV1, HEVC (8/10-bit), H.264, VP9, VP8, MPEG-2, VC-1, MJPEG			
	Video Encoding	AV1, HEVC (8/10-bit), H.264, VP9, VP8, MJPEG			
	Multi-Display	Quad Independent Display			
Audio	Chipset	Integrated on SoC			
	Codec	Realtek ALC888S			

Note: “Build option” indicates an alternative BOM configuration to support additional or alternative functions that are not available on the standard product. Be aware that these “build option” part numbers will need to be newly created and this will result in production lead times.

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Specifications

Ethernet	LAN	Intel i226 controller with 10/100/1000/2500M speed
Connectors /Headers	Display	1x eDP port (internal) 1x DP port (rear)
	USB	2x USB4 Type C (rear) 2x USB3.2 gen2 Type A (rear) 2x USB2.0 Type A (rear) 2x USB 2.0 w/ 1 pin header (internal)
	Network	2x RJ45 Note: NBASE-T_1 is muxed with PCIe lane7/SATA port 0; the default is NBASE-T_1.
	Audio	3x jacks (Mic-in/Line-in/Line-out)
	SATA	2x SATA3.0 (optional)
	Buttons	1x power button 1x reset button 1x sleep button
	Expansion Slots	1x PCIex8 slot Note: An add-on card is required for 2 PCIe x4 signals 1x PCIex4 slot Note: PCIe lane 6 is muxed with SATA port 1, while PCIe lane 7 is muxed with SATA port 0 and NBASE-T port 1. By default, PCIe lane 6 and NBASE-T port 1 are enabled. 1x M.2 M-key connector (PCIe lane 4-7)
	FAN	1x CPU fan header (4-pin, from module) 2x system FAN headers (4-pin, from SIO)
	GPIO	1x 12-bit GPIO connector
	Serial	2x COM port box headers (10-pin, from module) 2x COM port box headers (10-pin, from SIO)
	Management Buses	1x SMBus header 2x I²C headers 1x eSPI header
	Secondary BIOS	1x secondary SPI flash socket (optional)
LEDs	POST LED	Onboard I/O expander for BIOS POST code via I²C bus
Power	Standard Input	AT mode 12V±5%; Vin 8-20V (single power rail)
	Connector	ATX 24+4pin
Operating Systems	Windows	Windows 11 IoT Enterprise LTSC, Windows 10 IoT Enterprise LTSC
	Linux	Ubuntu 24.04 LTS

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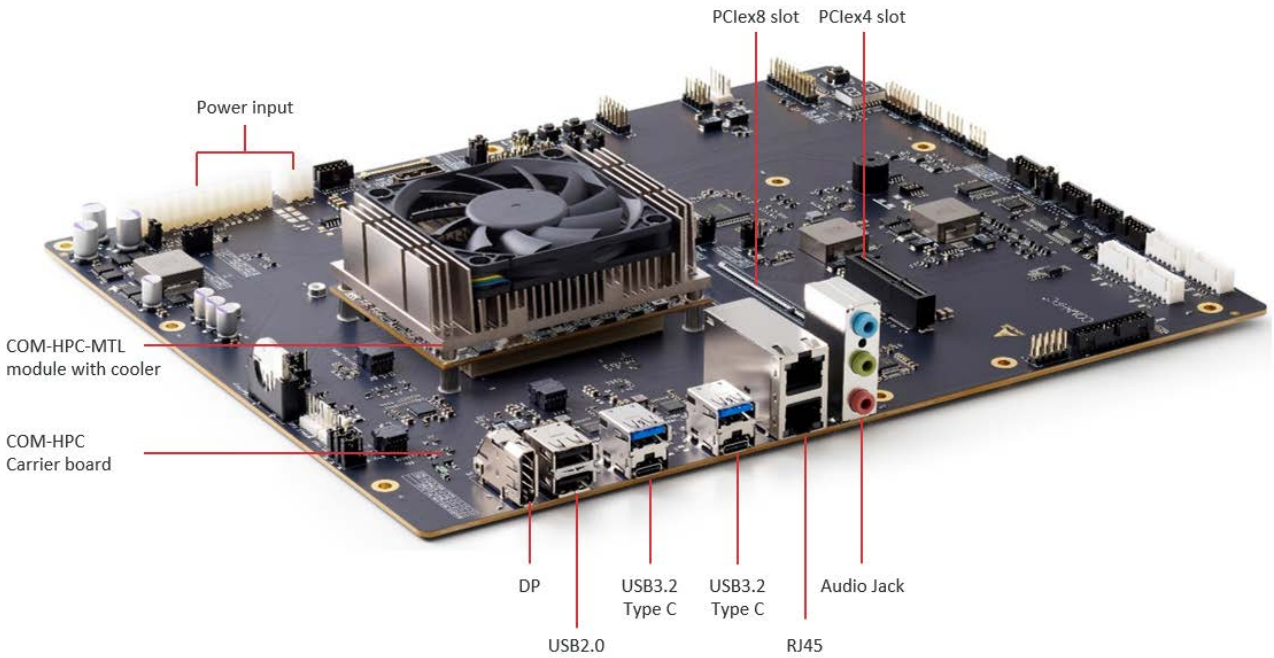
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Ordering Information

Module	
COM-HPC-mMTL-125H-16G-Kit	COM-HPC Mini Dev Kit with COM-HPC-mMTL-125H-16G, with carrier, THSF, and accessories
COM-HPC-mMTL-125U-16G-Kit	COM-HPC Mini Dev Kit with COM-HPC-mMTL-125U-16G, with carrier, THSF, and accessories

Note: For certain processor or memory capacity SKUs not listed, please contact our ADLINK representative.

Mechanical Layout



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