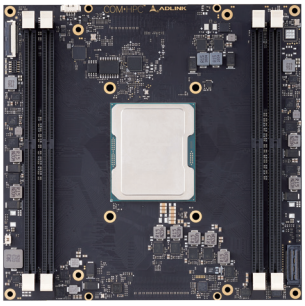
COM-HPC-sIDH/R

Server Type COM-HPC Size D Module
based on New Gen Intel® Xeon® D SoC



Features

- Up to 20 cores, AVX-512 VNNI
- Up to 256GB DDR4 RDIMM at max. 3200MT/s
- 32 PCIe Gen4 lanes, 16 PCIe Gen3 lanes
- Up to 8x 10G-KR
- Dedicated PCIe and IPMB for remote management
- Extreme Rugged operating temperature range (optional, selected SKU)

Specifications

Core System	SoC	New Gen Intel® Xeon® D-2700 processor (formerly "Ice Lake-D HCC")

Xeon® D-2896TER	2.0/3.2GHz	30MB	110W (10C, eTEMP)
Xeon® D-2899NT	2.2/3.1GHz	30MB	135W (22C)
Xeon® D-2796TE	2.0/3.1GHz	30MB	118W (20C, eTEMP)
Xeon® D-2775TE	2.0/3.1GHz	25MB	100W (16C, eTEMP)
Xeon® D-2752TER	1.8/2.8GHz	20MB	77W (12C, eTEMP)
Xeon® D-2733NT	2.1/3.2GHz	15MB	80W (8C, QAT)
Xeon® D-2712T	1.9/3.0GHz	15MB	65W (4C)

Note: Additional non-IOTG SKUs are supported by project basis.

Supports: Intel® VT (including VT-x, VT-d, VT-x with extended page tables), Intel® HT Technology, Intel® SSE4.2, Intel® 64 Architecture, Intel® Turbo Boost Technology 2.0, Intel® AVX512-VNNI, Intel® TSX-NI, Intel® Platform Protection Technology with Intel® TXT, Execute Disable Bit, Intel® Data Protection Technology with Intel® Secure Key, Intel® AES-NI
Note: Availability of features may vary between processor SKUs.

Memory	Four DIMM sockets Up to 256GB (4x 64GB) DDR4 RDIMM memory, up to 3200MT/s Up to 512GB (4x 128GB) DDR4 LRDIMM memory (TBC)
Embedded BIOS	AMI UEFI with CMOS backup in 32MB SPI BIOS
Cache	Xeon® D-2896TER/D-2899NT/D-2796TE: 30MB Xeon® D-2775TE: 25MB Xeon® D-2752TER: 20MB Xeon® D-2733NT / D-2712T: 15MB
Expansion Busses	48 PCIe lanes 8 PCIe lanes 0-7 (J1): configurable to x8, x4, x2 8 PCIe lanes 8-15 (J1): configurable to x8, x4, x2 16 PCIe lanes 16-31 (J2): configurable to x16, x8, x4 16 PCIe lanes 32-47 (J2): configurable to x16, x8, x4 Note: PCIe lanes 0-15, USB 3.0, SATA, NBASE-T and PCIe_BMC source from HSIO. The available total raw bandwidth is equivalent to PCIe x16 Gen3 SMBus (system), 2x I²C (user)

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

Core System	SEMA Board Controller	Supports: Voltage/current monitoring, power sequence debug support, AT mode control, logistics and forensic information, genral purpose I^2C, UART, GPIO, watchdog timer, fan control
	Module Management Controller	Supports: IPMB (in conjunction with carrier BMC for remote management applications) by build option
	Debug Headers	40-pin multipurpose flat cable connector for use with DB40-HPC debug module providing BIOS POST code LED, MMC/EC access, SPI BIOS flashing, power testpoints, debug LEDs
Ethernet KR	MAC	Intel® Ethernet Controller integrated in SoC
	Interface	Up to 8x 10GBASE-KR (dependent on SoC SKU) PHY on carrier is required for optical fiber, copper applications 8x 10G configurable to multiple 25G, 40G, or higher (dependent on FW support, TBC)
NBASE-T Ethernet	Intel® MAC/PHY	Intel® Ethernet Connection I225 Series (I225-IT supports TSN by build option, TBC)
	Interface	2.5GbE and 1000/100/10 Mbit/s Ethernet connection
Remote Management Dedicated Interface	PCIe_BMC	Dedicated PCIe for carrier BMC, mainly used for KVM (carrier BMC emulates graphics card)
	IPMB	Offered by MMC, dedicated connection between carrier BMC and module MMC, build option
Multi I/O and Storage	USB	4x USB 3.0/2.0/1.1 (USB 0,1,2,3)
	SATA	2x SATA (SATA 0, 1), build option in place of PCIe_BMC (TBC)
	Serial	2x UART ports with console redirection
	GPIO	12x GPIO (GPI with interrupt, TBC)
	On-board Storage	eMMC 5.1 (build option, TBC)
TPM	Chipset	Infineon
	Type	TPM 2.0 (SPI based)
Power	Standard Input	AT: 12V±5%
	Management	ACPI 5.0 compliant
	Power States	TBC
Mechanical and Environmental	Form Factor	PICMG COM-HPC: Rev 1.0 Server Type
	Dimension	Size D: 160 mm x 160 mm
	Operating Temperature	Standard: 0°C to 60°C (storage: -20°C to 80°C) Extreme Rugged: -40°C to 85°C (storage: -40°C to 85°C, build option, selected SKUs, TBC)
	Humidity	5-90% RH operating, non-condensing 5-95% RH storage (and operating with conformal coating)
	Shock and Vibration	IEC 60068-2-64 and IEC-60068-2-27 MIL-STD-202F, Method 213B, Table 213-I, Condition A and Method 214A, Table 214-I, Condition D (TBC)
	HALT	Thermal Stress, Vibration Stress, Thermal Shock and Combined Test
Operating Systems	Standard Support	Windows 10 IoT Enterprise LTSC, Windows Server 20H1 Yocto project based Linux 64-bit, VxWorks (TBC)

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Ordering Information

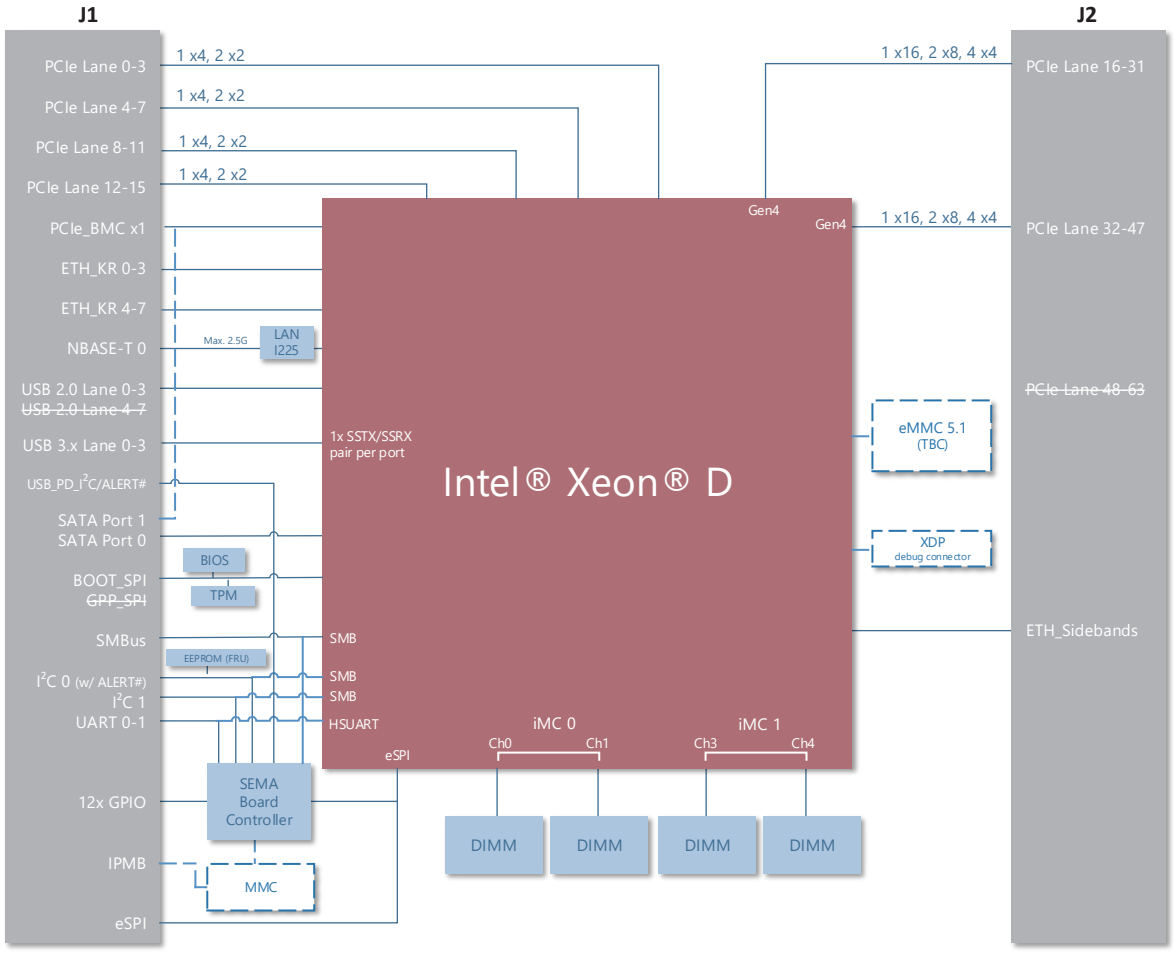
Modules	
COM-HPC-sIDH-D-2896TER	Server Type COM-HPC Size D module with Intel® Xeon® D-2896TER
COM-HPC-sIDH-D-2796TE	Server Type COM-HPC Size D module with Intel® Xeon® D-2796TE
COM-HPC-sIDH-D-2775TE	Server Type COM-HPC Size D module with Intel® Xeon® D-2775TE
COM-HPC-sIDH-D-2752TER	Server Type COM-HPC Size D module with Intel® Xeon® D-2752TER

*For processor SKUs not listed, please contact your ADLINK representative for availability.

Accessories	
Active Heatsinks	
THSF-sIDHTL-B	High profile heatsink with Fan for COM-HPC-sIDH with threaded standoffs for bottom mounting

Starter Kit	
COM-HPC Server Starter Kit	Starter kit for COM-HPC Server

Functional Diagram



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