

INTEL ICE LAKE-D XEON PROCESSORS

conga-HPC/sILH



COM-HPC®

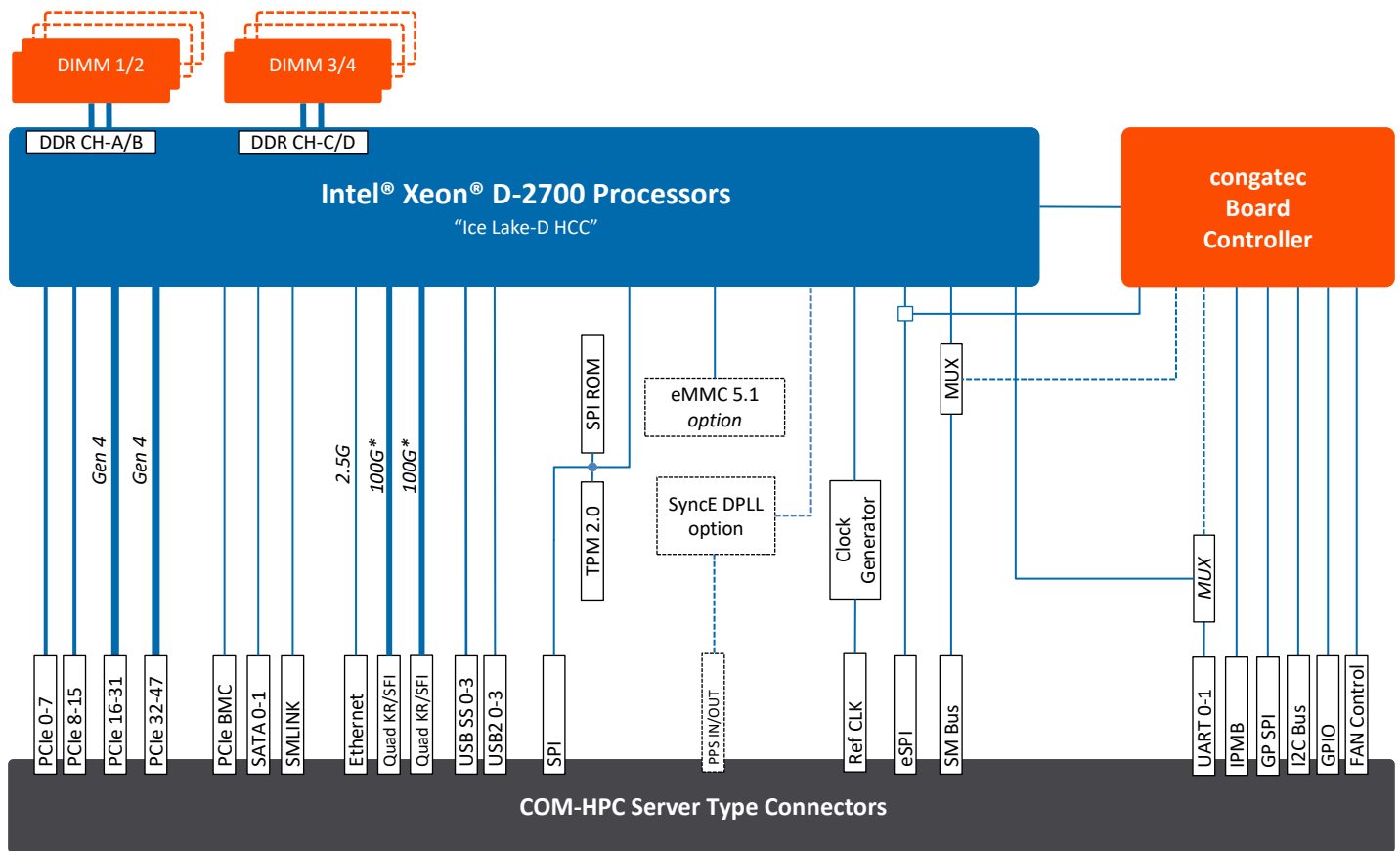
- Industrial Use Condition with Extended Temperature Options
- 48 PCIe Express Lanes
- AI Capabilities with Intel® DL boost
- Real Time Capable Platform
- Supporting up to 1TB DDR4 2933MT/s Memory*

Form Factor

COM-HPC, Size D (160 x 160mm), Server Connector Pinout

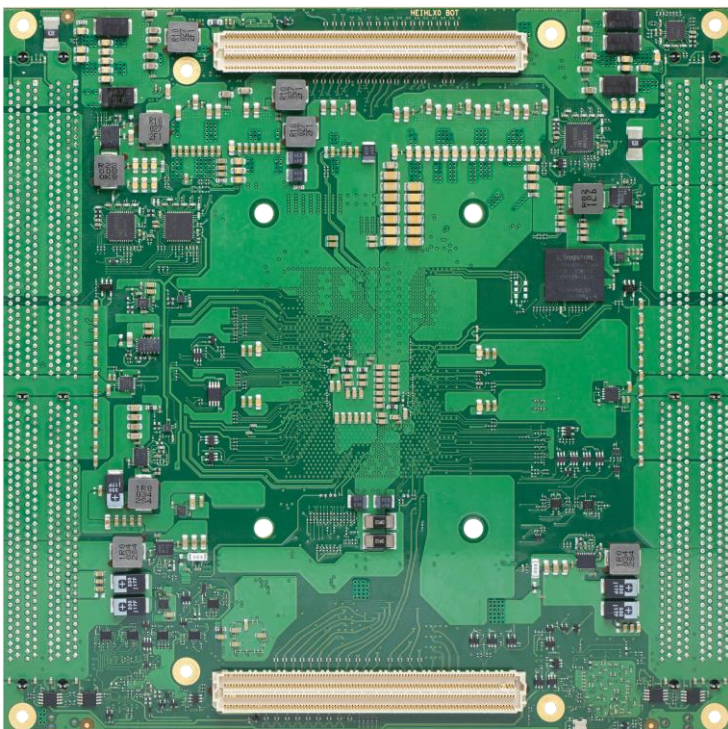
CPU	Processor	Cores/ Threads	Base Frequency/max. Turbo	TDP	Cache	Ethernet Bandwidth	Intel Use Condition
	Xeon® D-2899NT	22C/44T	2.2GHz/3.1GHz	135W	30MB	100G	Industrial (Commercial Temp)
	Xeon® D-2796TE	20C/40T	2.0Ghz/3.1Ghz	118W	30MB	100G	Industrial (Extended Temp)
	Xeon® D-2775TE	16C/32T	2.0Ghz/3.1Ghz	100W	25MB	100G	Industrial (Extended Temp)
	Xeon® D-2752TER	12C/24T	1.8Ghz/2.8Ghz	77W	20MB	50G	Industrial (Extended Temp)
	Xeon® D-2733NT	8C/16T	2.1Ghz/3.2Ghz	80W	15MB	50G	Industrial (Commercial Temp)
	Xeon® D-2712T	4C/8T	1.9Ghz/3.0Ghz	65W	15MB	50G	Industrial (Commercial Temp)
Chipset	Integrated in SoC						
DRAM	4x DIMM sockets for DDR4 memory modules Max. capacity = 512GB (1TB*) ECC and i-temp variants available						
	Memory Type	DIMM Capacity		Max. DIMM Speed			
	LRDIMM	128GB		2933 MT/s			
	RDIMM	16GB – 64GB		2933 MT/s			
	UDIMM	16GB – 32GB		2933 MT/s			
	VLP RDIMM	16GB – 32GB		2400 MT/s			
Ethernet	1x 2.5GbE TSN Ethernet KR/SFI Ethernet Maximum Total Bandwidth up to 100G 50G SKUs: 1x50G 2x25G 5x10G 4x10G 4x10G+4x2.5G 4x10G+4x1G 100G SKUs: 1x100G 2x100G (fail-over) 4x25G 8x10G ITU-T SyncE and IEEE1588 PTP option						
I/O Interfaces	32x PCIe Gen4 16x PCIe Gen3 4x USB 3.0 4x USB 2.0 2x SATA III (6Gb/s) 2x UART 12x GPIO 2x SMBus 2x I2C						
congatec Board controller	Multi-stage Watchdog non-volatile User Data Storage Manufacturing and Board Information Board Statistics I²C bus (fast mode, 400 kHz, multi-master) Power Loss Control Hardware Health Monitoring POST Code redirection						
Embedded BIOS Feature	AMI Aptio® UEFI firmware 64 Mbyte serial SPI with congatec Embedded BIOS feature OEM Logo OEM CMOS Defaults Flash Update						
Security	Trusted Platform Module (TPM 2.0)						
Power Management	ACPI 5.0 with battery support						
Operating Systems	Microsoft® Windows 10 Microsoft® Windows 10 IoT Enterprise Microsoft® Windows IoT 10 Core Linux Android Yocto RTS Hypervisor						
Temperature Range	Commercial: Extended:	Operating Temperature: 0 to +60°C Operating Temperature: -40 to +80°C		Storage Temperature: -20 to +80°C Storage Temperature: -40 to +80°C			
Humidity	Operating: Storage	10 to 90% r. H. non cond. 5 to 95% r. H. non cond.					
Size	160 x 160 mm² (optional 160 x 200 mm²)						

conga-HPC/sILH | Block Diagram



* Maximum total bandwidth 100G depending on SKU

conga-HPC/sILH | Bottom Side View



conga-HPC/sILH | Order Information

Article	PN	Description
conga-HPC/sILH-D2796TE	050900	COM-HPC Size D module based on Intel® Xeon® D-2796TE 20-core processor with 2.0 GHz, 30MB cache and quad channel DDR4 2933 MT/s memory interface (formerly Ice Lake-D HCC). Industrial temperature range.
conga-HPC/sILH-D2775TE	050901	COM-HPC Size D module based on Intel® Xeon® D-2775TE 16-core processor with 2.0 GHz, 25MB cache and quad channel DDR4 2933 MT/s memory interface (formerly Ice Lake-D HCC). Industrial temperature range.
conga-HPC/sILH-D2752TER	050902	COM-HPC Size D module based on Intel® Xeon® D-2752TER 12-core processor with 1.8 GHz, 20MB cache and quad channel DDR4 2666 MT/s memory interface (formerly Ice Lake-D HCC). Industrial temperature range.
conga-HPC/sILH-D2733NT	050910	COM-HPC Size D module based on Intel® Xeon® D-2733NT 8-core processor with 2.1 GHz, 15MB cache and quad channel DDR4 2666 MT/s memory interface (formerly Ice Lake-D HCC). Commercial temperature range.
conga-HPC/sILH-D2712T	050911	COM-HPC Size D module based on Intel® Xeon® D-2712T 4-core processor with 1.9 GHz, 15MB cache and quad channel DDR4 2666 MT/s memory interface (formerly Ice Lake-D HCC). Commercial temperature range.
conga-HPC/sILH-D2796TE DPLL	050995	COM-HPC Size D module based on Intel® Xeon® D-2796TE 20-core processor with 2.0 GHz, 30MB cache and quad channel DDR4 2933 MT/s memory interface (formerly Ice Lake-D HCC). Industrial temperature range. With DPLL option for ITU-T Synchronous Ethernet (SyncE) and IEEE1588 PTP support.
conga-HPC/sILH-D2775TE DPLL	050996	COM-HPC Size D module based on Intel® Xeon® D-2775TE 16-core processor with 2.0 GHz, 25MB cache and quad channel DDR4 2933 MT/s memory interface (formerly Ice Lake-D HCC). Industrial temperature range. With DPLL option for ITU-T Synchronous Ethernet (SyncE) and IEEE1588 PTP support.
conga-HPC/sILH-D2899NT	050912	COM-HPC Size D module based on Intel® Xeon® D-2899NT 22-core processor with 2.2 GHz, 30MB cache and quad channel DDR4 3200 MT/s memory interface (formerly Ice Lake-D HCC Refresh). Commercial temperature range.
conga-HPC/sILH-CSA-HP-B	050950	Standard active cooling solution for COM-HPC Server modules conga-HPC/sILH with integrated heat pipes, 32.9mm overall cooling height and integrated 12V fan. Through hole mounting with bore hole standoffs Ø2.7mm.
conga-HPC/sILH-CSA-HP-T	050951	Standard active cooling solution for COM-HPC Server modules conga-HPC/sILH with integrated heat pipes, 32.9mm overall cooling height and integrated 12V fan. Threaded mounting with threaded standoffs M2.5.
conga-HPC/sILH-HSP-HP-B	050952	Standard heatspreader for COM-HPC Server modules conga-HPC/sILH with integrated heat pipes and 11mm overall cooling height. Through hole mounting with bore hole standoffs Ø2.7mm.
conga-HPC/sILH-HSP-HP-T	050953	Standard heatspreader for COM-HPC Server modules conga-HPC/sILH with integrated heat pipes and 11mm overall cooling height. Threaded mounting with threaded standoffs M2.5.
conga-HPC/sILH-HPA-B	050954	Heat pipe Adapter for COM-HPC Server modules conga-HPC/sILH. Suitable for standard 8 mm heat pipes to optimize heat distribution. Through hole mounting with bore hole standoffs Ø2.7mm.
conga-HPC/sILH-HPA-T	050955	Heat pipe Adapter for COM-HPC Server modules conga-HPC/sILH. Suitable for standard 8 mm heat pipes to optimize heat distribution. Threaded mounting with threaded standoffs M2.5.
conga-HPC/sILH-Retention Frame	050956	Retention frame for conga-HPC/sILH
conga-HPC/EVAL-Server	065500	conga-HPC/EVAL-Server
conga-HPC/LEK-C827-IM 4SFP28	065505	COM_HPC Mezzanine card with Intel C827-IM and 4xSFP28, 4x25G configuration
conga-HPC/LEK-C827-IM 8SFP+	065506	COM_HPC Mezzanine card with 2x Intel C827-IM and 8xSFP+, 8x10G configuration
conga-HPC/LEK-C827-IM 2QSFP28	065508	COM_HPC Mezzanine card with Intel C827-IM and 2xQSFP28, 2x100G, 8x10G (Breakout mode) configuration

conga-HPC/sILH | Order Information - DRAM

Article	PN	Description
DDR4-LRDIMM-3200 ECC (128GB)	069420	DDR4 ECC LRDIMM memory module with 3200 MT/s and 128GB RAM
DDR4-LRDIMM-3200 ECC (128GB)	069430	Industrial DDR4 ECC LRDIMM memory module with 3200 MT/s and 128GB RAM
DDR4-RDIMM-3200 ECC (16GB)	069200	DDR4 ECC RDIMM memory module with 3200 MT/s and 16GB RAM
DDR4-RDIMM-3200 ECC (16GB) / i-temp	069210	Industrial DDR4 ECC RDIMM memory module with 3200 MT/s and 16GB RAM
DDR4-RDIMM-3200 ECC (32GB)	069220	DDR4 ECC RDIMM memory module with 3200 MT/s and 32GB RAM
DDR4-RDIMM-3200 ECC (32GB) / i-temp	069230	Industrial DDR4 ECC RDIMM memory module with 3200 MT/s and 32GB RAM
DDR4-RDIMM-3200 ECC (64GB)	069240	DDR4 ECC RDIMM memory module with 3200 MT/s and 64GB RAM
DDR4-UDIMM-3200 (16GB)	069000	DDR4 UDIMM memory module with 3200 MT/s and 16GB RAM
DDR4-UDIMM-3200 (16GB)(ECC)	069003	DDR4 ECC UDIMM memory module with 3200 MT/s and 16GB RAM
DDR4-UDIMM-3200 (16GB) / i-temp	069002	Industrial DDR4 UDIMM memory module with 3200 MT/s and 16GB RAM
DDR4-UDIMM-3200 (16GB)(ECC) / i-temp	069004	Industrial DDR4 ECC UDIMM memory module with 3200 MT/s and 16GB RAM
DDR4-UDIMM-3200 (32GB)	069001	DDR4 UDIMM memory module with 3200 MT/s and 32GB RAM
DDR4-UDIMM-3200 (32GB)(ECC)	069006	DDR4 ECC UDIMM memory module with 3200 MT/s and 32GB RAM
DDR4-UDIMM-3200 (32GB) / i-temp	069005	Industrial DDR4 UDIMM memory module with 3200 MT/s and 32GB RAM
DDR4-UDIMM-3200 (32GB)(ECC) / i-temp	069007	Industrial DDR4 ECC UDIMM memory module with 3200 MT/s and 32GB RAM
VLP DDR4-RDIMM-3200 ECC (16GB)	069600	VLP DDR4 ECC RDIMM memory module with 3200 MT/s and 16GB RAM
VLP DDR4-RDIMM-3200 ECC (16GB) / i-temp	069610	Industrial ECC DDR4 VLP RDIMM memory module with 3200 MT/s and 16GB RAM
VLP DDR4-RDIMM-3200 ECC (32GB)	069620	VLP DDR4 ECC RDIMM memory module with 3200 MT/s and 32GB RAM

Mouser Electronics

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