

INTEL ICE LAKE-D XEON PROCESSORS

conga-HPC/sILH



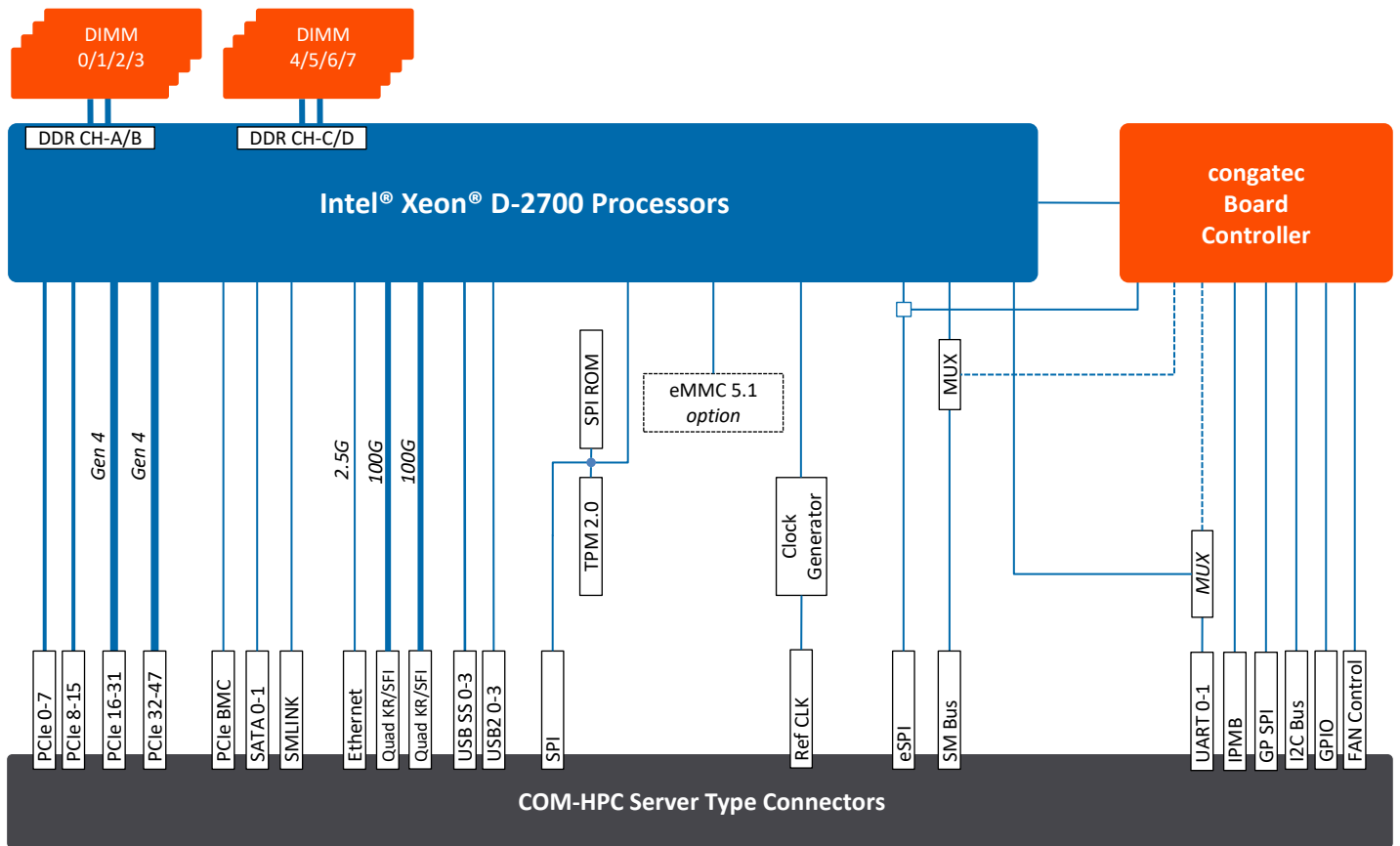
COM+HPC®

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

| | | | | | | | |
|----------------------------------|--|--------------------------------------|----------------------------------|------------------------------------|--------------|---------------------------|------------------------------|
| Form Factor | COM-HPC, Size D/E (160 x 160/200 mm), Server Connector Pinout | | | | | | |
| CPU | Processor | Cores/Threads | Base Frequency/max. Turbo | TDP | Cache | Ethernet Bandwidth | Intel Use Condition |
| | 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 | 4/8x DIMM sockets for DDR4 memory modules Max. capacity = 1TB | | | | | | |
| | Memory Type | DIMM Capacity | Max. DIMM Speed | | | | |
| | RDIMM | 8GB – 64GB | 2933 MT/s | | | | |
| | LRDIMM | 64GB – 128GB | 2933 MT/s | | | | |
| | VLP RDIMM | 8GB – 64GB | 2400 MT/s | | | | |
| | UDIMM (ECC) | 8GB – 32GB | 2666 MT/s | | | | |
| | UDIMM (Non-ECC) | 4GB – 32GB | 2666 MT/s | | | | |
| Ethernet | 1x 2.5GbE TSN Ethernet 2x 40G / 4x 25G / 8x 10G/2.5G/1G/100M lanes Maximum total bandwidth 100Gb* | | | | | | |
| 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 I ² C 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 RTOS Hypervisor | | | | | | |
| Temperature Range | Commercial: | Operating Temperature: 0 to +60°C | | Storage Temperature: -20 to +80°C* | | | |
| | Industrial: | Operating Temperature: -40 to +80°C* | | Storage Temperature: -40 to +80°C* | | | |
| Humidity | Operating: | 10 to 90% r. H. non cond. | | | | | |
| | Storage | 5 to 95% r. H. non cond. | | | | | |
| Size | 160 x 200 mm ² (optional 160 x 160 mm ²) | | | | | | |

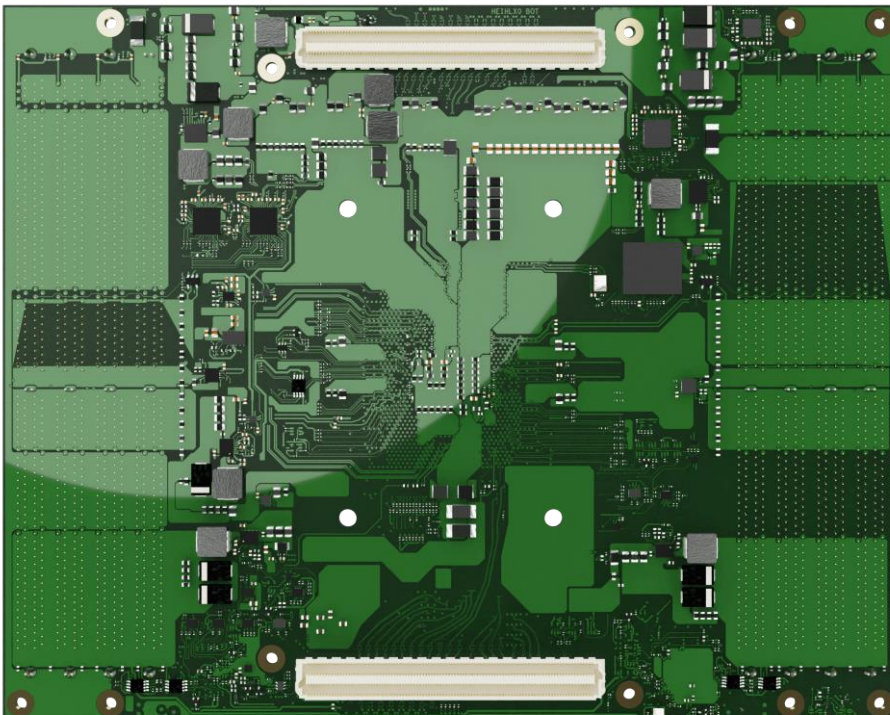
* Depending on CPU

conga-HPC/sILH | Block Diagram



* Maximum total bandwidth 100Gb*

conga-HPC/sILH | Bottom Side View



conga-HPC/sILH | Order Information

| Article | PN | Description |
|-------------------------|--------|---|
| conga-HPC/sILH-D2796TE | 050900 | COM-HPC Size E 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 E 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 E 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 E 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 E 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-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/EVAL-Server | 065500 | conga-HPC/EVAL-Server |