



11th Gen Intel® Core™ Processors

# conga-HPC/cTLH

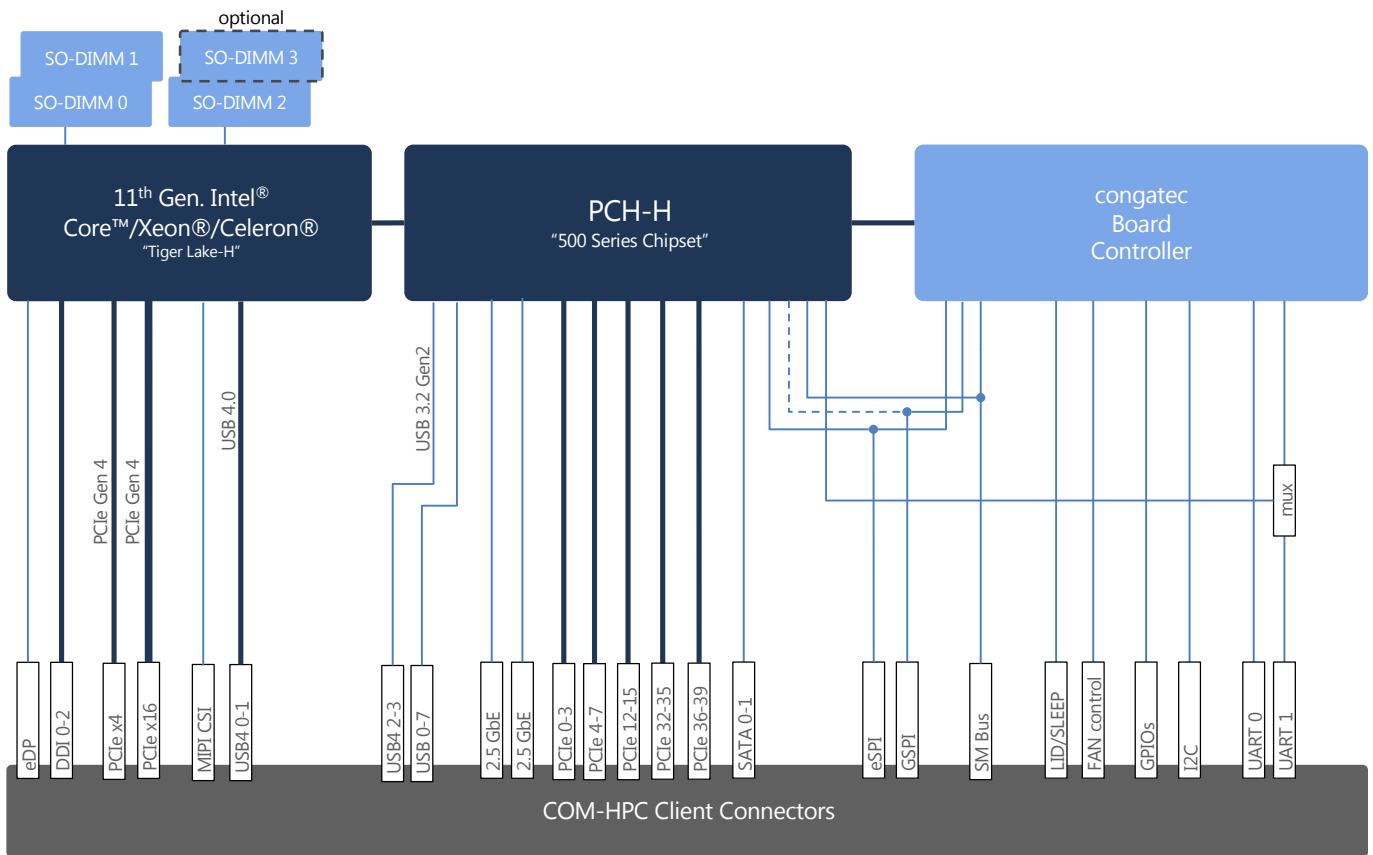


## COM-HPC®

- Embedded/Industrial use condition
- Extended temperature options available
- PCI Express Gen 4 | USB 4.0
- AI/DL Instruction Sets including VNNI
- Up to 128 Gbyte DDR4-3200 MT/s
- Integrated Xe (Gen 12) graphics with 32 EU

Form Factor	COM-HPC Size B, 120 x 120 mm   Client connector pinout					
CPU	Processor	Cores/ Threads	Base Frequency/max. Turbo	TDP	Graphics	Intel Use Condition
	i7-11850HE	8C/16T	2.6GHz / 4.7GHz	45W/35W	Intel® UHD 32	General Embedded
	i5-11500HE	6C/12T	2.6GHz / 4.5GHz	45W/35W	Intel® UHD 32	General Embedded
	i3-11100HE	4C/8T	2.4GHz / 4.4GHz	45W/35W	Intel® UHD 16	General Embedded
	6600HE	2C/2T	2.6GHz	35W	Intel® UHD 16	General Embedded
	W-11865MRE	8C/16T	2.6GHz / 4.7GHz	45W/35W	Intel® UHD 32	Industrial
	W-11555MRE	6C/12T	2.6GHz / 4.5GHz	45W/35W	Intel® UHD 32	Industrial
	W-11155MRE	4C/8T	2.4GHz / 4.4GHz	45W/35W	Intel® UHD 16	Industrial
	W-11865MLE	8C/16T	1.5GHz / 4.5GHz	25W	Intel® UHD 32	Industrial
	W-11555MLE	6C/12T	1.9GHz / 4.4GHz	25W	Intel® UHD 32	Industrial
	W-11155MLE	4C/8T	1.8GHz / 3.1GHz	25W	Intel® UHD 16	Industrial
Chipset	RM590E   QM580E   HM570E					
DRAM	Up to 4 SO-DIMM sockets for DDR4 ECC memory modules up to 32 GByte each (128 GByte total) with 3200 MT/s					
Graphics	Integrated Xe (Gen 12) graphics engine with up to 32 EU (Execution Units)   Supporting 4 independent display units (4x 4k/2x 8K)   Enhanced media (AV1/12b) with up to 2 VDBox   Next Gen IPU6 (Image Processing Unit) with DPHY2.1   DP 1.4					
Display	3x DP/DP++   1x eDP/LVDS					
Ethernet	2x 2.5 GbE TSN Ethernet					
I/O Interfaces	4x PCIe Gen4   PEG support x16 (PCIe Gen4) 20x PCIe Gen3 2x USB 4.0   2x USB 3.2   8x USB 2.0 2x SATA III (6Gb/s)   eSPI   2x UART   12x GPIO I2C   4x MIPI-CSI					
Audio	1x I2S   2x Soundwire					
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   32 Mbyte serial SPI with congatec Embedded BIOS feature   OEM Logo   OEM CMOS default settings   LCD Control   Display Auto Detection   Backlight Control   Flash Update					
Security	Trusted Platform Module (TPM 2.0)					
Power Management	ACPI 6.0 with battery support					
Operating Systems	Microsoft® Windows 10   Microsoft® Windows 10 IoT Enterprise   Linux   Yocto   RTS Hypervisor					
Temperature Range	Commercial:	Operating Temperature: 0 to +60°C		Storage Temperature: -20 to +80°C		
	Industrial:	Operating Temperature: -40 to +85°C		Storage Temperature: -40 to +85°C		
Humidity	Operating:	10 to 90% r. H. non cond.				
	Storage:	5 to 95% r. H. non cond.				
Size	120 x 120 mm²					

# conga-HPC/cTLH | Block Diagram



## conga-HPC/cTLH | Modules Order Information



Article	PN	Description
conga-HPC/cTLH-i7-11850HE	050800	COM-HPC Size B module based on Intel® Core™ i7-11850HE 8-core processor with 2.6GHz up to 4.7GHz turbo boost, 24MB Intel® Smart Cache, Intel® UHD Graphics with 32EU and dual channel DDR4 3200 MT/s memory interface.   Chipset QM580E   Intel® Tiger Lake-H   Commercial temperature range
conga-HPC/cTLH-i5-11500HE	050801	COM-HPC Size B module based on Intel® Core™ i5-11500HE 6-core processor with 2.6GHz up to 4.5GHz turbo boost, 12MB Intel® Smart Cache, Intel® UHD Graphics with 32EU and dual channel DDR4 3200 MT/s memory interface.   Chipset QM580E   Intel® Tiger Lake-H   Commercial temperature range
conga-HPC/cTLH-i3-11100HE	050802	COM-HPC Size B module based on Intel® Core™ i3-11100HE 4-core processor with 2.4GHz up to 4.4GHz turbo boost, 8MB Intel® Smart Cache, Intel® UHD Graphics with 16EU and dual channel DDR4 3200 MT/s memory interface.   Chipset HM570E   Intel® Tiger Lake-H   Commercial temperature range
conga-HPC/cTLH-6600HE	050803	COM-HPC Size B module based on Intel® Celeron 6600HE 2-core processor with 2.6GHz base frequency, 8MB Intel® Smart Cache, Intel® UHD Graphics with 16EU and dual channel DDR4 3200 MT/s memory interface.   Chipset HM570E   Intel® Tiger Lake-H   Commercial temperature range
conga-HPC/cTLH-W-11865MRE	050810	COM-HPC Size B module based on Intel® Xeon® W-11865MRE 8-core processor with 2.6GHz up to 4.7GHz turbo boost, 24MB Intel® Smart Cache, Intel® UHD Graphics with 32EU and dual channel DDR4 3200 MT/s memory interface.   Chipset RM590E   Intel® Tiger Lake-H   Industrial temperature range
conga-HPC/cTLH-W-11555MRE	050811	COM-HPC Size B module based on Intel® Xeon® W-11555MRE 6-core processor with 2.6GHz up to 4.5GHz turbo boost, 12MB Intel® Smart Cache, Intel® UHD Graphics with 32EU and dual channel DDR4 3200 MT/s memory interface.   Chipset RM590E   Intel® Tiger Lake-H   Industrial temperature range
conga-HPC/cTLH-W-11155MRE	050812	COM-HPC Size B module based on Intel® Xeon® W-11155MRE 4-core processor with 2.4GHz up to 4.4GHz turbo boost, 8MB Intel® Smart Cache, Intel® UHD Graphics with 16EU and dual channel DDR4 3200 MT/s memory interface.   Chipset RM590E   Intel® Tiger Lake-H   Industrial temperature range
conga-HPC/cTLH-W-11865MLE	050813	COM-HPC Size B module based on Intel® Xeon® W-11865MLE 8-core processor with 1.5GHz up to 4.5GHz turbo boost, 24MB Intel® Smart Cache, Intel® UHD Graphics with 32EU and dual channel DDR4 3200 MT/s memory interface.   Chipset RM590E   Intel® Tiger Lake-H   Commercial temperature range
conga-HPC/cTLH-W-11555MLE	050814	COM-HPC Size B module based on Intel® Xeon® W-11555MLE 6-core processor with 1.9GHz up to 4.4GHz turbo boost, 12MB Intel® Smart Cache, Intel® UHD Graphics with 32EU and dual channel DDR4 3200 MT/s memory interface.   Chipset RM590E   Intel® Tiger Lake-H   Commercial temperature range
conga-HPC/cTLH-W-11155MLE	050815	COM-HPC Size B module based on Intel® Xeon® W-11155MLE 4-core processor with 1.8GHz up to 3.1GHz turbo boost, 8MB Intel® Smart Cache, Intel® UHD Graphics with 16EU and dual channel DDR4 3200 MT/s memory interface.   Chipset RM590E   Intel® Tiger Lake-H   Commercial temperature range

## conga-HPC/cTLH | Accessories Order Information



Article	PN	Description
conga-HPC/cTLH-CSA-HP-B	050850	Standard active cooling solution for high performance COM-HPC module conga-HPC/cTLH with integrated heatpipe, 29mm height and integrated 12V fan. All standoffs are with 2.7mm bore hole.
conga-HPC/cTLH-CSA-HP-T	050851	Standard active cooling solution for high performance COM-HPC module conga-HPC/cTLH with integrated heatpipe, 29mm height and integrated 12V fan. All standoffs are M2.5mm thread.
conga-HPC/cTLH-CSP-HP-B	050852	Standard passive cooling solution for high performance COM-HPC module conga-HPC/cTLH with integrated heatpipe, 29mm height. All standoffs are with 2.7mm bore hole.
conga-HPC/cTLH-CSP-HP-T	050853	Standard passive cooling solution for high performance COM-HPC module conga-HPC/cTLH with integrated heatpipe, 29mm height. All standoffs are with M2.5mm thread.
conga-HPC/cTLH-HSP-HP-B	050854	Standard heatspreader for high performance COM-HPC module conga-HPC/cTLH with integrated heatpipe, 13mm height. All standoffs are with 2.7mm bore hole.
conga-HPC/cTLH-HSP-HP-T	050855	Standard heatspreader solution for high performance COM-HPC module conga-HPC/cTLH with integrated heatpipe, 13mm height. All standoffs are with M2.5mm thread.
conga-HPC/EVAL-Client	065600	Evaluation Carrier Board for COM-HPC Client type Modules.