

11TH GEN INTEL® CORE™ PROCESSORS

conga-HPC/cTLH

COM+HPC®

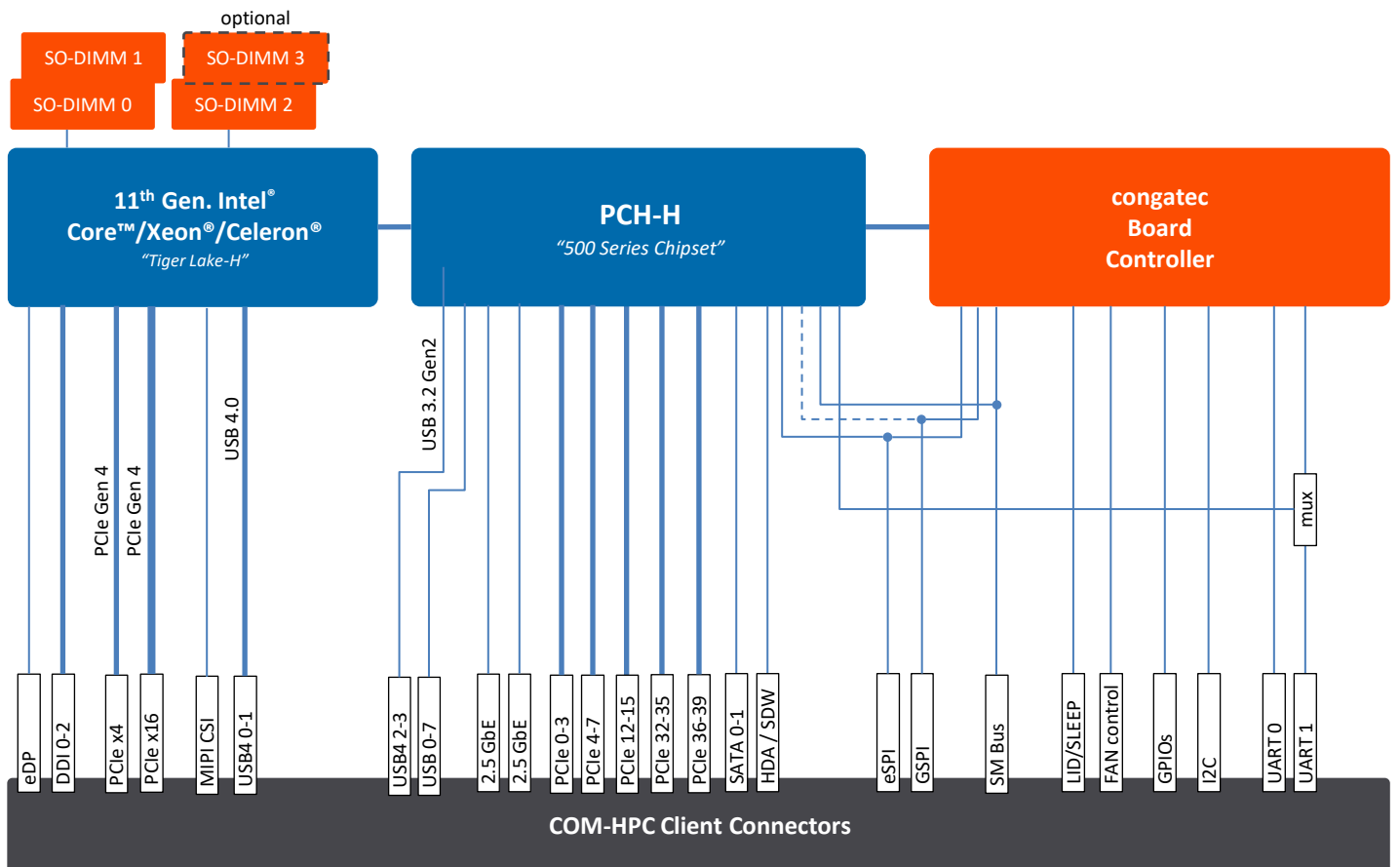


VIRTUALIZATION READY

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

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 with TSN support via Intel® i226 Ethernet controller series					
I/O Interfaces	4x PCIe Gen4 PEG support x16 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 HDA 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					
Hypervisor	RTS Real-Time 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: -20 to +80°C		
Humidity	Operating:	10 to 90% r. H. non cond.				
	Storage:	5 to 95% r. H. non cond.				
Size	120 x 120 mm ²					

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 heat pipe, 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 heat pipe, 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 heat pipe, 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 heat pipe, 29mm height. All standoffs are with M2.5mm thread.
conga-HPC/cTLH-HSP-HP-B	050854	Standard heat spreader for high performance COM-HPC module conga-HPC/cTLH with integrated heat pipe, 13mm height. All standoffs are with 2.7mm bore hole.
conga-HPC/cTLH-HSP-HP-T	050855	Standard heat spreader solution for high performance COM-HPC module conga-HPC/cTLH with integrated heat pipe, 13mm height. All standoffs are with M2.5mm thread.
conga-HPC/EVAL-Client	065600	Evaluation Carrier Board for COM-HPC Client type Modules.