

13th Gen Intel® Core™ Embedded Desktop Processors

conga-HPC/cRLS



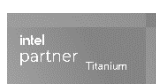
COM+HPC®

- Intel® hybrid design combines Performance-cores with Efficient-cores
- Intel® UHD Graphics 730/770 driven by X^e Architecture
- PCI Express Gen 4/5 | USB 3.2 Gen 2x2
- AI Acceleration based on Intel® Deep Learning
- Embedded Use Condition SKUs

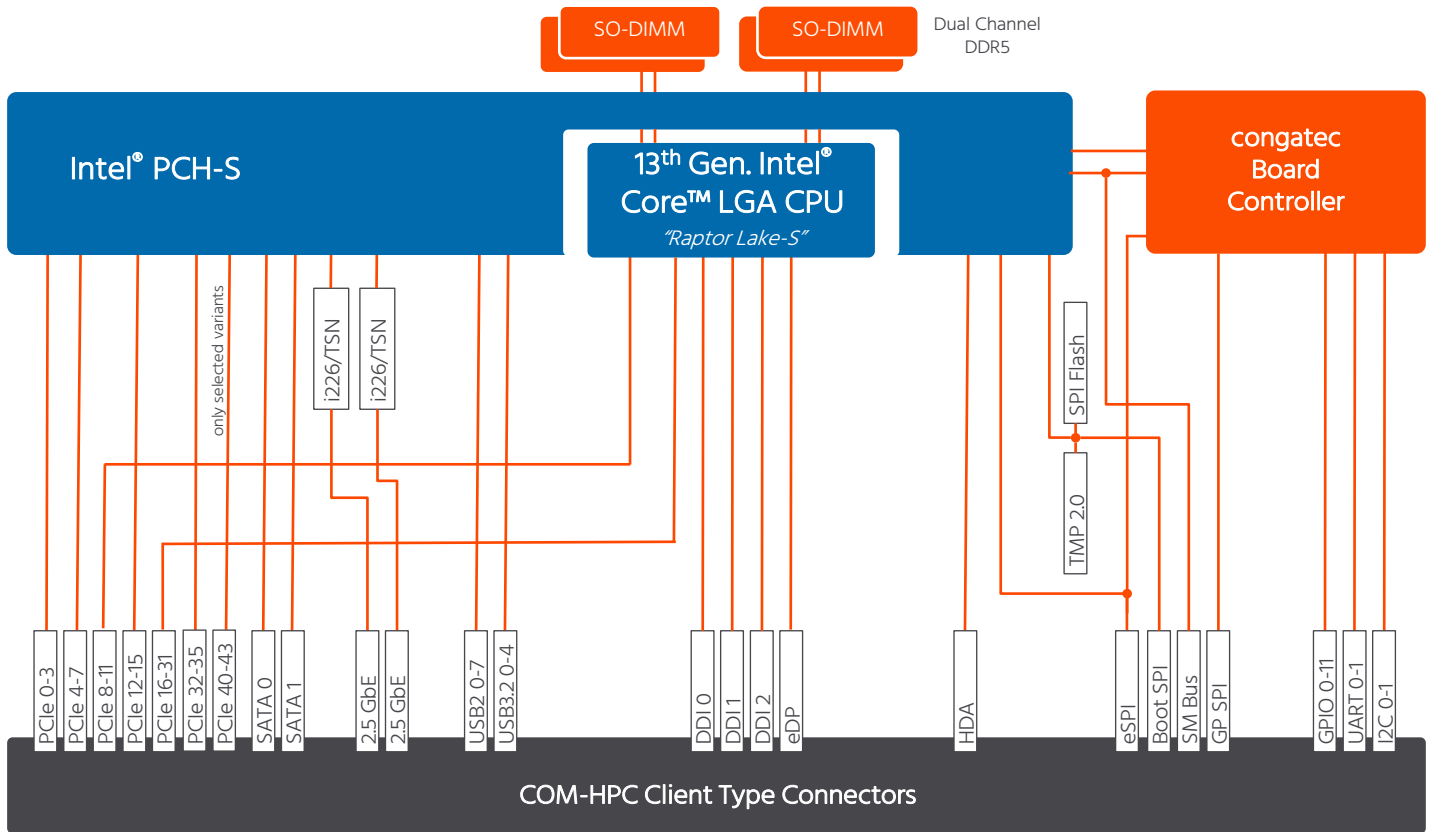
Form factor	COM-HPC Client Size C Client Connector Pinout						
CPUs	CPU	Processor Base Power	Cores count (P+E)	Processor Threads	P-cores Freq. GHz	E-cores Freq. GHz	GfX Execution Units
	i9-13900E	65W	24 (8+16)	32	1.8 / 5.2	1.3 / 4.0	32 EU
	i7-13700E	65W	16 (8+8)	24	1.9 / 5.1	1.3 / 3.9	32 EU
	i5-13400E	65W	10 (6+4)	16	2.4 / 4.6	1.5 / 3.3	24 EU
	i3-13100E	65W	4 (4+0)	8	3.3 / 4.4	- / -	24 EU
Processor Socket	LGA 1700						
DRAM	4 SO-DIMM sockets for DDR5 memory modules up to 32 GByte each (128 GByte system capacity)						
Graphics	Intel® UHD Graphics 730/770 driven by X ^e Architecture up to 32 EU						
Display	3x DDI eDP						
Ethernet	2x 2.5 GbE with TSN support via Intel® i226 Ethernet controller series						
I/O Interfaces	1x16 PCIe Gen 5 (PEG port) 3x4 PCIe Gen 4 3x4 PCIe Gen 3 4x USB 3.2 Gen2x2 8x USB2.0 2x SATA 2x UART 12x GPIO						
Audio	High-Definition Audio						
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 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 Real Time Systems Hypervisor						
Temperature	Operating Temp.: 0°C ... +60°C			Storage Temp.: -20°C ... +70°C			
Humidity	Operating.: 10% ... 90% r. H. non cond.			Storage.: 5% ... 95% r. H. non cond.			
Size	120 x 160 mm						



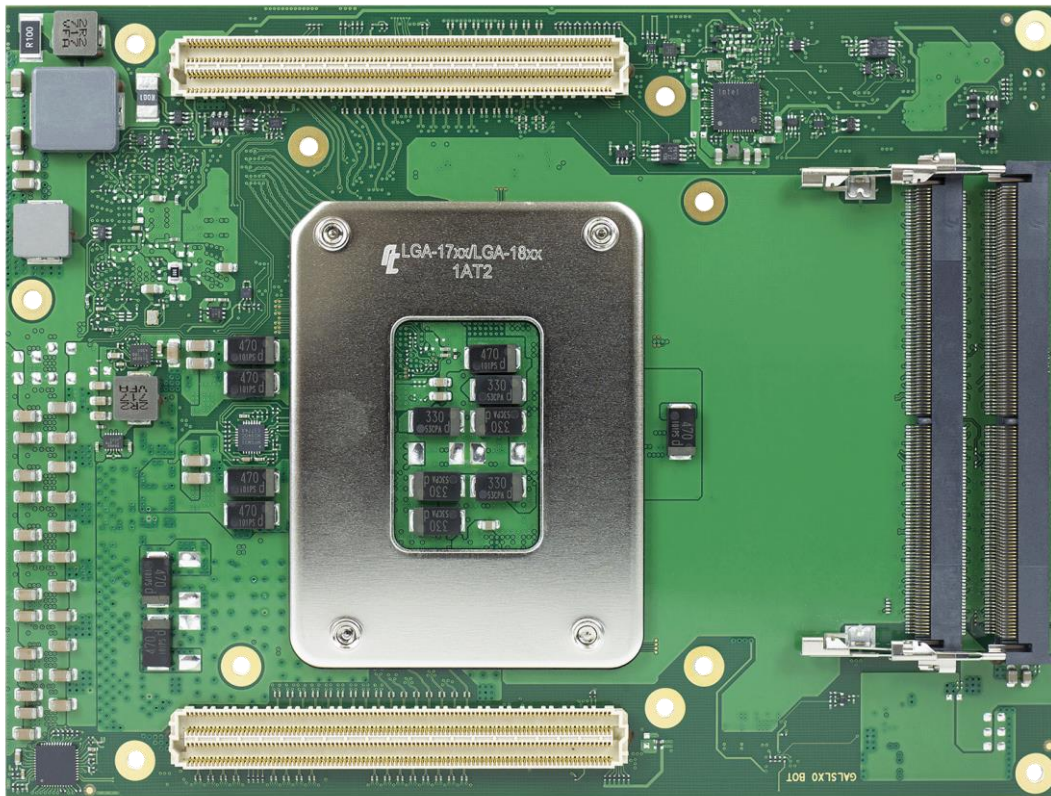
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conga-HPC/cRLS | Block Diagram



conga-HPC/cRLS | Bottom Side View



conga-HPC/cRLS | Order Information

Article	PN	Description
conga-HPC/cRLS-i9-13900E	049800	COM-HPC Client module based on Intel® Core™ i9-13900E LGA 1700 processor with 8 P-cores 1.8GHz up to 5.2GHz Turbo and 16 E-cores 1.3GHz up to 4.0GHz Turbo 36MB Intel® Smart Cache Intel® UHD Graphics 770 with 32EUs Dual channel DDR5 memory interface Chipset R680E Intel® code name: Raptor Lake-S
conga-HPC/cRLS-i7-13700E	049801	COM-HPC Client module based on Intel® Core™ i7-13700E LGA 1700 processor with 8 P-cores 1.9GHz up to 5.1GHz Turbo and 8 E-cores 1.3GHz up to 3.9GHz Turbo 30MB Intel® Smart Cache Intel® UHD Graphics 770 with 32EUs Dual channel DDR5 memory interface Chipset R680E Intel® code name: Raptor Lake-S
conga-HPC/cRLS-i5-13400E	049802	COM-HPC Client module based on Intel® Core™ i5-13400E LGA 1700 processor with 6 P-cores 2.4GHz up to 4.6GHz Turbo and 4 E-cores 1.5GHz up to 3.3GHz Turbo 20MB Intel® Smart Cache Intel® UHD Graphics 730 with 24EUs Dual channel DDR5 memory interface Chipset R680E Intel® code name: Raptor Lake-S
conga-HPC/cRLS-i3-13100E	049803	COM-HPC Client module based on Intel® Core™ i3-13100E LGA 1700 processor with 4 P-cores 3.3GHz up to 4.4GHz Turbo 12MB Intel® Smart Cache Intel® UHD Graphics 730 with 24EUs Dual channel DDR5 memory interface Chipset Q670E Intel® code name: Raptor Lake-S
conga-HPC/cRLS-CSA-HP-B	049650	Standard active cooling solution for COM-HPC module conga-HPC/cRLS with integrated heat pipes, 30mm overall height and two integrated 12V fans. All standoffs are with 2.7mm bore hole.
conga-HPC/cRLS-CSA-HP-T	049651	Standard active cooling solution for COM-HPC module conga-HPC/cRLS with integrated heat pipes, 30mm height and two integrated 12V fans. All standoffs are M2.5mm threaded.
conga-HPC/cRLS-HSP-HP-B	049652	Standard heatspreader for COM-HPC module conga-HPC/cRLS with integrated heat pipes, 13mm height. All standoffs are with 2.7mm bore hole.
conga-HPC/cRLS-HSP-HP-T	049653	Standard heatspreader for COM-HPC module conga-HPC/cRLS with integrated heat pipes, 13mm height. All standoffs are M2.5mm threaded.
conga-HPC/cRLS-HPA	049654	Standard heatpipe adapter for COM-HPC module conga-HPC/cRLS.



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