

13th Gen Intel® Core™ Embedded mobile Processors

conga-HPC/cRLP



COM+HPC®

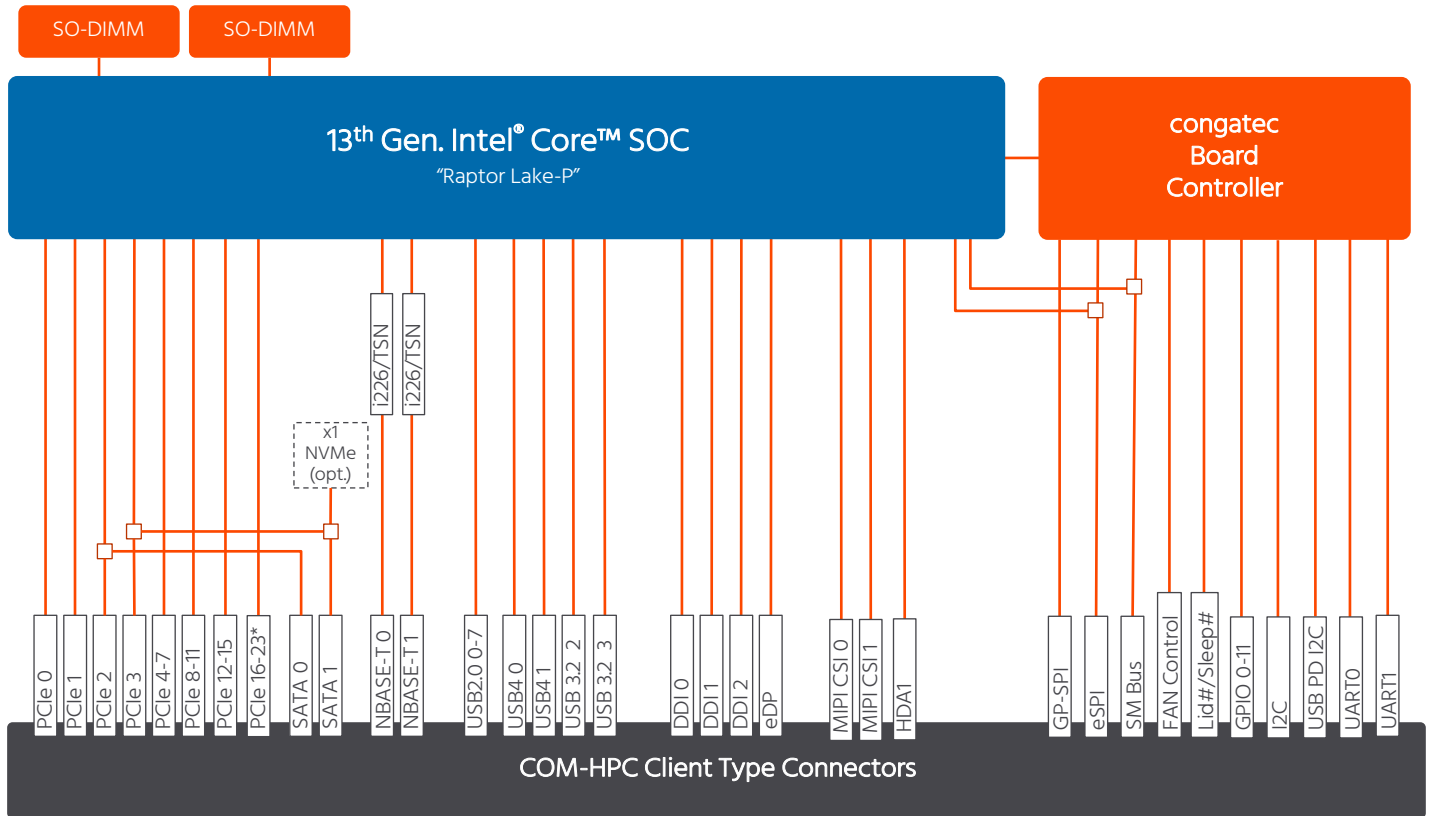


VIRTUALIZATION READY

- Intel® hybrid design combines Performance-cores with Efficient-cores
- Up to Intel® Iris® Xe Graphics architecture with up to 96 EUs
- Up to PCI Express Gen 5
- Options for Industrial Temperature Range -40°C to +85°C

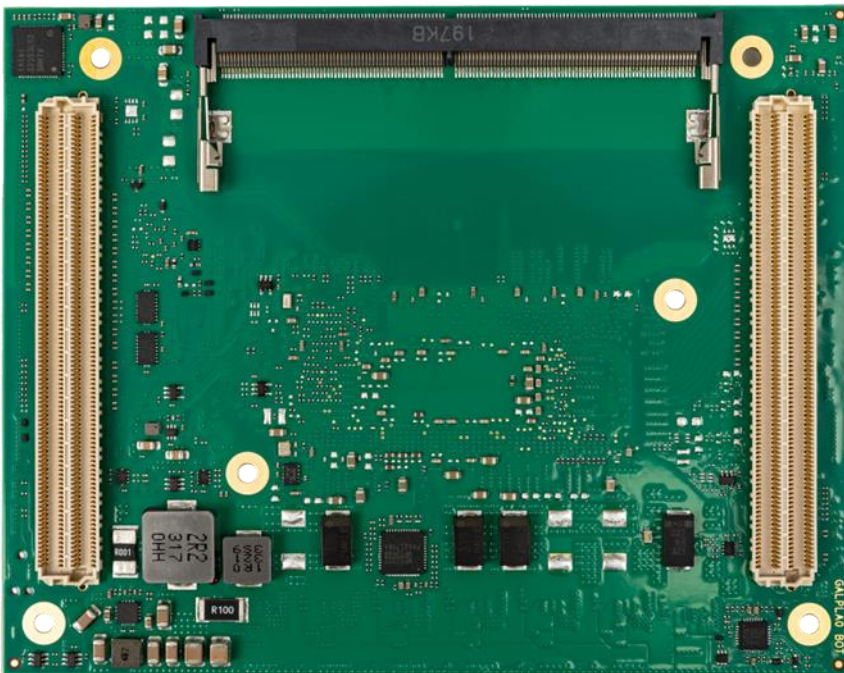
Form factor	COM-HPC Client Size A Client Connector Pinout
CPUs	Intel® Core™ 13 th Gen Processors Raptor Lake-P (H-Series, P-Series, U-Series)
DRAM	2 SO-DIMM sockets for DDR5 memory modules up to 32 GB RAM each (max. 64 GB RAM system capacity) up to 4800 MT/s
Mass Storage	NVMe x1 SSD (optional)
Graphics	Intel® UHD Graphics or Intel® Iris® Xe Graphics architecture up to 96 EUs
Display	3x DDI eDP
Ethernet	2x 2.5 GbE with TSN support via Intel® i226 Ethernet controller series
I/O Interfaces	x8 PCIe Gen5 (only available on variants based on RPL-P H series) 2 x4 PCIe Gen4 up to 8 PCIe Gen3 2x USB4 2x USB 3.2 Gen2x1 8x USB2.0 up to 2x SATA 2x UART 2x MIPI-CSI 12x GPIO eSPI SM Bus I2C GP-SPI
Audio	HDA
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 5.0a with battery support
Operating Systems	Microsoft® Windows 11 Microsoft® Windows 11 IoT Enterprise Microsoft® Windows 10 Microsoft® Windows 10 IoT Enterprise Linux Yocto
Hypervisor	RTS Real-Time Hypervisor
Temperature Range	Commercial Variants: Operation 0°C to 60°C Storage -20°C to 80°C Industrial Variants: Operation -40°C to 85°C Storage -40°C to 85°C
Humidity	Operation 10% to 90% r. H. non cond. Storage 5% to 95% r. H. non cond.
Size	120 x 95 mm

conga-HPC/cRLP | Block Diagram



**available only on variants based on RPL-P H-Series*

conga-HPC/cRLP | Bottom Side View



conga-HPC/cRLP | Modules Order Information

Article	PN	Description
conga-HPC/cRLP-i7-13800HE	045500	COM-HPC Size A module based on Intel® Core™ i7-13800HE processor with 6 P-cores 2.5GHz up to 5.0GHz Turbo and 8 E-cores 1.8GHz up to 4.0GHz Turbo 24MB Intel® Smart Cache Intel® Iris® X ^e Graphics architecture with 96 EUs Dual channel DDR5 4800 MT/s memory interface Intel® code name Raptor Lake-P (H-Series)
conga-HPC/cRLP-i7-1370PE	045501	COM-HPC Size A module based on Intel® Core™ i7-1370PE processor with 6 P-cores 1.9GHz up to 4.8GHz Turbo and 8 E-cores 1.2GHz up to 3.7GHz Turbo 24MB Intel® Smart Cache Intel® Iris® X ^e Graphics architecture with 96 EUs Dual channel DDR5 4800 MT/s memory interface Intel® code name Raptor Lake-P (P-Series)
conga-HPC/cRLP-i7-1365UE	045502	COM-HPC Size A module based on Intel® Core™ i7-1365UE processor with 2 P-cores 1.7GHz up to 4.9GHz Turbo and 8 E-cores 1.2GHz up to 3.7GHz Turbo 12MB Intel® Smart Cache Intel® Iris® X ^e Graphics architecture with 96 EUs Dual channel DDR5 4800 MT/s memory interface Intel® code name Raptor Lake-P (U-Series)
conga-HPC/cRLP-i5-1340PE	045504	COM-HPC Size A module based on Intel® Core™ i5-1340PE processor with 4 P-cores 1.8GHz up to 4.5GHz Turbo and 8 E-cores 1.3GHz up to 3.3GHz Turbo 12MB Intel® Smart Cache Intel® Iris® X ^e Graphics architecture with 80 EUs Dual channel DDR5 4800 MT/s memory interface Intel® code name Raptor Lake-P (P-Series)
conga-HPC/cRLP-i7-13800HRE	045510	COM-HPC Size A module based on Intel® Core™ i7-13800HRE processor with 6 P-cores 2.5GHz up to 5.0GHz Turbo and 8 E-cores 1.8GHz up to 4.0GHz Turbo 24MB Intel® Smart Cache Intel® Iris® X ^e Graphics architecture with 96 EUs Dual channel DDR5 4800 MT/s memory interface Industrial grade temperature range from -40°C to +85°C Intel® code name Raptor Lake-P (H-Series)
conga-HPC/cRLP-i7-1370PRE	045511	COM-HPC Size A module based on Intel® Core™ i7-1370PRE processor with 6 P-cores 1.9GHz up to 4.8GHz Turbo and 8 E-cores 1.2GHz up to 3.7GHz Turbo 24MB Intel® Smart Cache Intel® Iris® X ^e Graphics architecture with 96 EUs Dual channel DDR5 4800 MT/s memory interface Industrial grade temperature range from -40°C to +85°C Intel® code name Raptor Lake-P (P-Series)
conga-HPC/cRLP-i7-1365URE	045512	COM-HPC Size A module based on Intel® Core™ i7-1365URE processor with 2 P-cores 1.7GHz up to 4.9GHz Turbo and 8 E-cores 1.2GHz up to 3.7GHz Turbo 12MB Intel® Smart Cache Intel® Iris® X ^e Graphics architecture with 96 EUs Dual channel DDR5 4800 MT/s memory interface Industrial grade temperature range from -40°C to +85°C Intel® code name Raptor Lake-P (U-Series)
conga-HPC/cRLP-i5-1350PRE	045514	COM-HPC Size A module based on Intel® Core™ i5-1350PRE processor with 4 P-cores 1.8GHz up to 4.6GHz Turbo and 8 E-cores 1.3GHz up to 3.4GHz Turbo 12MB Intel® Smart Cache Intel® Iris® X ^e Graphics architecture with 80 EUs Dual channel DDR5 4800 MT/s memory interface Industrial grade temperature range from -40°C to +85°C Intel® code name Raptor Lake-P (P-Series)

conga-HPC/cRLP | Accessories Order Information

Article	PN	Description
conga-HPC/cRLP-CSA-HP-B	049550	Standard active cooling solution for COM-HPC module conga-HPC/cRLP with integrated heat pipes, 29mm height and integrated 12V fan. All standoffs are with 2.7mm bore hole.
conga-HPC/cRLP-CSA-HP-T	049551	Standard active cooling solution for COM-HPC module conga-HPC/cRLP with integrated heat pipes, 29mm height and integrated 12V fan. All standoffs are M2.5mm threaded.
conga-HPC/cRLP-CSP-HP-B	049552	Standard passive cooling solution for COM-HPC module conga-HPC/cRLP with integrated heat pipes, 28.2mm height. All standoffs are with 2.7mm bore hole.
conga-HPC/cRLP-CSP-HP-T	049553	Standard passive cooling solution for COM-HPC module conga-HPC/cRLP with integrated heat pipes, 28.2mm height. All standoffs are M2.5mm threaded.
conga-HPC/cRLP-HSP-HP-B	049554	Standard heatspreader for COM-HPC module conga-HPC/cRLP with integrated heat pipes, 13mm height. All standoffs are with 2.7mm bore hole.
conga-HPC/cRLP-HSP-HP-T	049555	Standard heatspreader for COM-HPC module conga-HPC/cRLP with integrated heat pipes, 13mm height. All standoffs are M2.5mm threaded.
conga-HPC/EVAL-Client	065600	COM-HPC Evaluation Carrier Board for congatec COM-HPC Client type Modules.
conga-HPC/uATX-Client	065620	COM-HPC Client μ ATX Application Carrier Board suitable for congatec COM-HPC modules with Size A,B and C.
DDR5-SODIMM-4800 (8GB)	068901	DDR5 SODIMM memory module with up to 4800 MT/s and 8GB RAM, commercial temp 0°C to +60°C
DDR5-SODIMM-4800 (16GB)	068902	DDR5 SODIMM memory module with up to 4800 MT/s and 16GB RAM, commercial temp 0°C to +60°C
DDR5-SODIMM-4800 (32GB)	068903	DDR5 SODIMM memory module with up to 4800 MT/s and 32GB RAM, commercial temp 0°C to +60°C
DDR5-SODIMM-4800 (8GB) / i-temp	068921	DDR5 SODIMM memory module with up to 4800 MT/s and 8GB RAM, industrial temp -40°C to +85°C
DDR5-SODIMM-4800 (16GB) / i-temp	068922	DDR5 SODIMM memory module with up to 4800 MT/s and 16GB RAM, industrial temp -40°C to +85°C
DDR5-SODIMM-4800 (32GB) / i-temp	068923	DDR5 SODIMM memory module with up to 4800 MT/s and 32GB RAM, industrial temp -40°C to +85°C