13th Gen Intel® Core™ Embedded mobile Processors

conga-HPC/cRLP

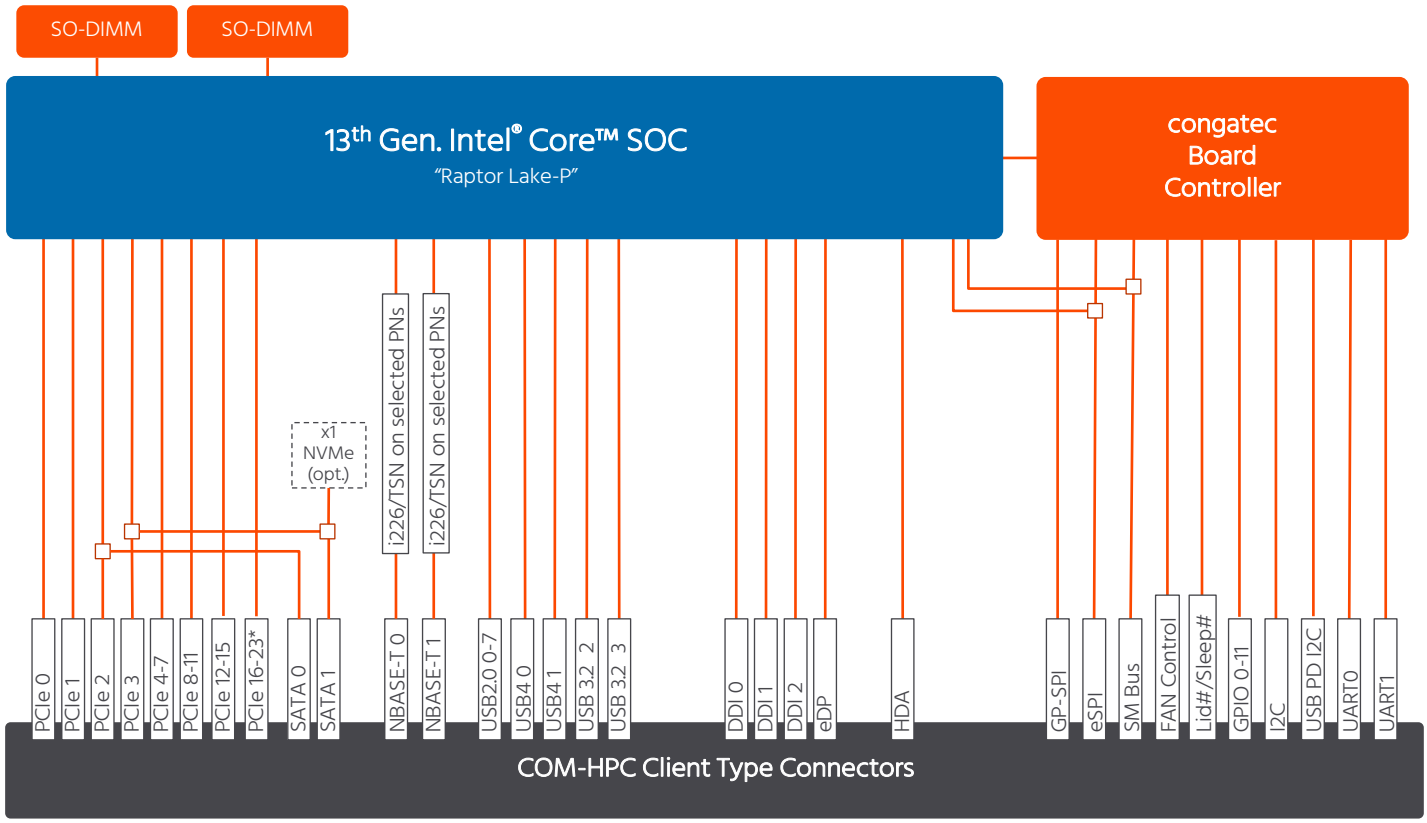
COM-HPC®

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

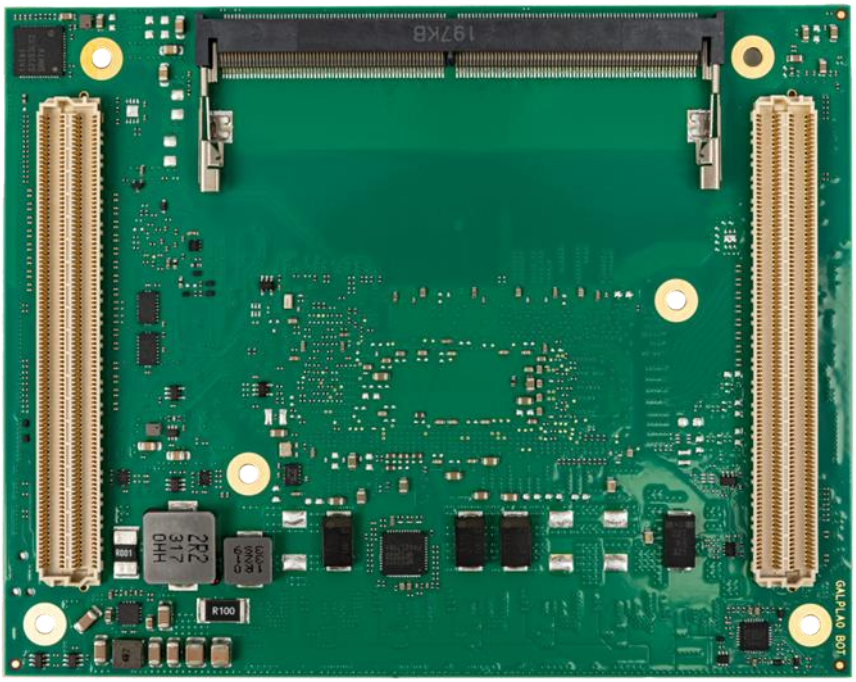
Form factor	COM-HPC Client Size A | Client Connector Pinout
CPUs	Intel® Core™ 13th Gen Processors Raptor Lake-P (H-Series, P-Series, U-Series)
DRAM	2 SO-DIMM sockets for DDR5 memory modules up to 48 GB RAM each (max. 96 GB RAM system capacity) | up to 5200 MT/s
Mass Storage	NVMe x1 SSD (optional)
Graphics	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 (TSN only on selected PNs)
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 | up to 8x USB2.0 | up to 2x SATA | 2x UART | 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 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 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 85% r. H. non cond. Storage 5% to 85% 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® Xᵉ Graphics architecture with 96 EUs | Dual channel DDR5 5200 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® Xᵉ Graphics architecture with 96 EUs | Dual channel DDR5 5200 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® Xᵉ Graphics architecture with 96 EUs | Dual channel DDR5 5200 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® Xᵉ Graphics architecture with 80 EUs | Dual channel DDR5 5200 MT/s memory interface | Intel® code name Raptor Lake-P (P-Series)
conga-HPC/cRLP-i3-1315UE	045508	COM-HPC Size A module based on Intel® Core™ i3-1315UE processor with 2 P-cores 1.2GHz up to 4.5GHz Turbo and 4 E-cores 0.9GHz up to 3.3GHz Turbo | 10MB Intel® Smart Cache | Intel® UHD Graphics with 64EUs | Dual channel DDR5 5200 MT/s memory interface | Intel® code name Raptor Lake-P (U-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® Xᵉ Graphics architecture with 96 EUs | Dual channel DDR5 5200 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® Xᵉ Graphics architecture with 96 EUs | Dual channel DDR5 5200 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® Xᵉ Graphics architecture with 96 EUs | Dual channel DDR5 5200 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® Xᵉ Graphics architecture with 80 EUs | Dual channel DDR5 5200 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 µATX Application Carrier Board suitable for congatec COM-HPC modules with Size A,B and C.
DDR5-SODIMM-5600 (8GB)	068930	DDR5 SODIMM memory module with up to 5600 MT/s and 8GB RAM, commercial temp 0°C to +60°C
DDR5-SODIMM-5600 (16GB)	068931	DDR5 SODIMM memory module with up to 5600 MT/s and 16GB RAM, commercial temp 0°C to +60°C
DDR5-SODIMM-5600 (32GB)	068932	DDR5 SODIMM memory module with up to 5600 MT/s and 32GB RAM, commercial temp 0°C to +60°C
DDR5-SODIMM-5600 (48GB)	068933	DDR5 SODIMM memory module with up to 5600 MT/s and 48GB RAM, commercial temp 0°C to +60°C
DDR5-SODIMM-5600 (8GB) / i-temp	068935	DDR5 SODIMM memory module with up to 5600 MT/s and 8GB RAM, industrial temp -40°C to +85°C
DDR5-SODIMM-5600 (16GB) / i-temp	068936	DDR5 SODIMM memory module with up to 5600 MT/s and 16GB RAM, industrial temp -40°C to +85°C
DDR5-SODIMM-5600 (32GB) / i-temp	068937	DDR5 SODIMM memory module with up to 5600 MT/s and 32GB RAM, industrial temp -40°C to +85°C
DDR5-SODIMM-5600 (48GB) / i-temp	068938	DDR5 SODIMM memory module with up to 5600 MT/s and 48GB RAM, industrial temp -40°C to +85°C

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