

13th Gen Intel® Core™ Embedded mobile Processors

conga-HPC/cRLP



COM+HPC®

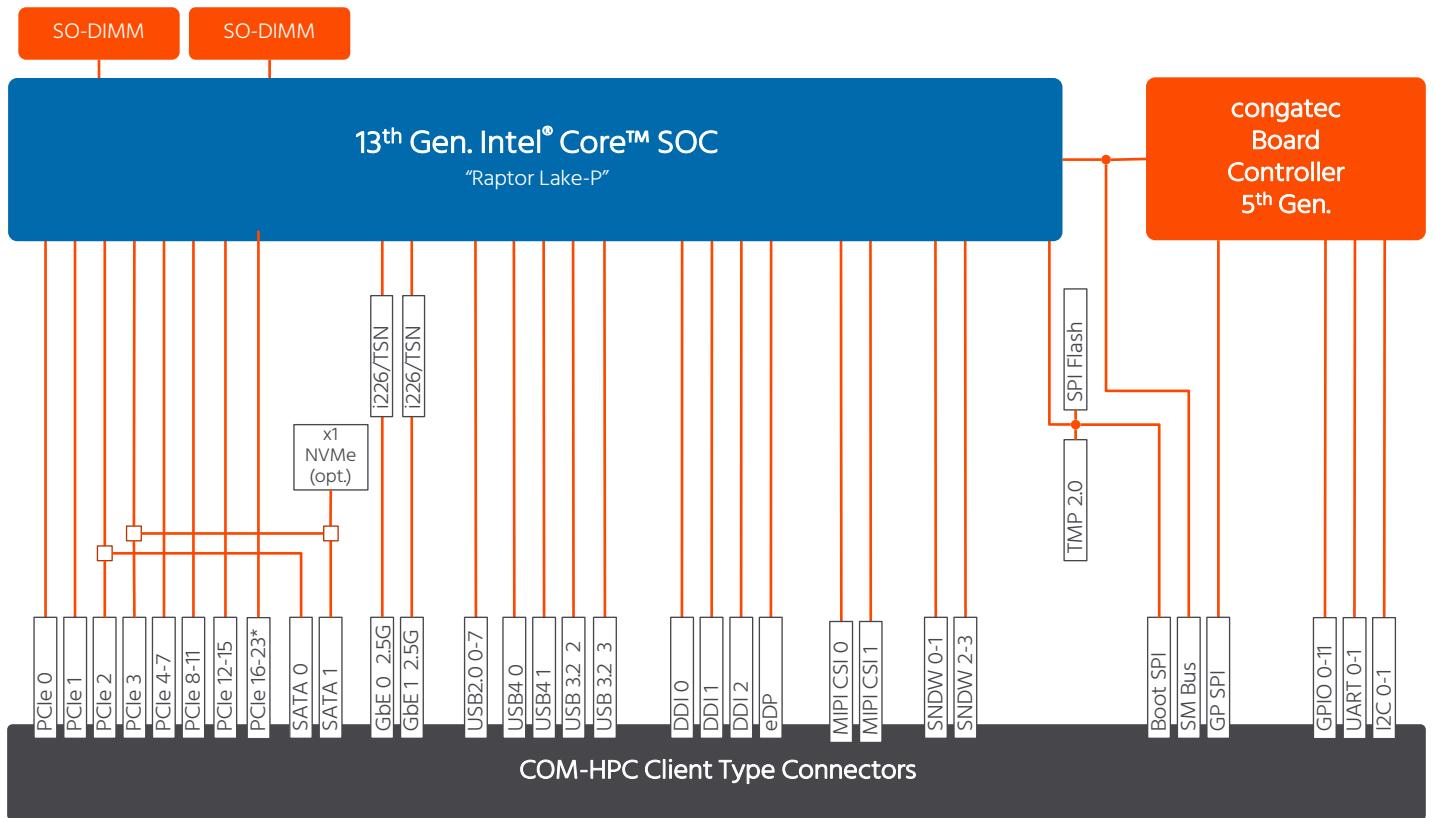
- Intel® hybrid design combines Performance-cores with Efficient-cores
- UP to Intel® Iris® Xe Graphics architecture with up to 80 EUs
- Up to PCI Express Gen 5 | Thunderbolt
- AI Acceleration with Intel® Deep Learning Boost (VNNI)
- Embedded Use Condition SKUs

Form factor

COM-HPC Client Size A | Client Connector Pinout

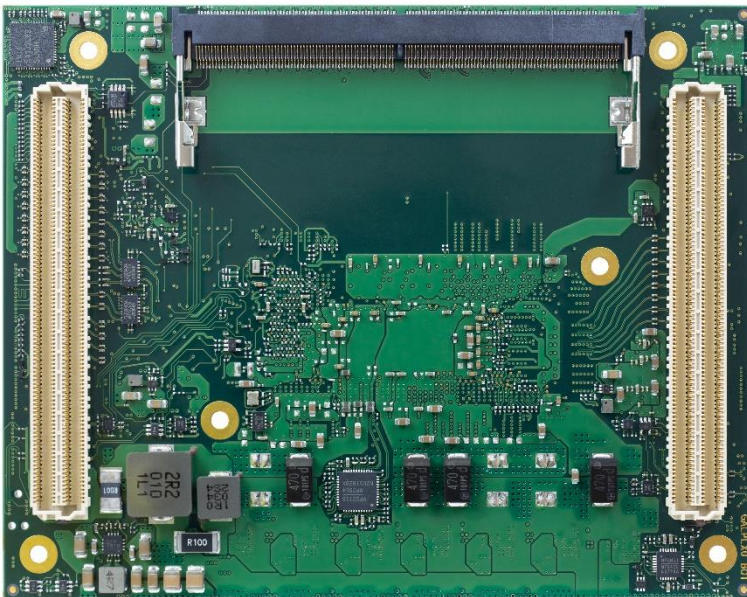
CPU	CPU	TDP in W	Cores count (P+E)	Processor Threads	P-cores Freq. GHz	E-cores Freq. GHz	Gfx Execution Units
	i5-1340PE	28	12 (4+8)	16	1.8/4.5	1.3/3.3	80
	i5-1335UE	15	10 (2+8)	12	1.3/4.5	1.1/3.3	80
	i3-13300HE	45	8 (4+4)	12	2.1/4.6	1.5/3.4	48
	i3-1320PE	28	8 (4+4)	12	1.7/4.5	1.2/3.3	48
	i3-1315UE	15	6 (2+4)	8	1.2/4.5	0.9/3.3	64
	UE-300	15	5 (1+4)	6	1.1/4.3	0.9/3.2	48
DRAM	2 SO-DIMM sockets for DDR5 memory modules up to 32 GByte each (max. 64 GByte system capacity) up to 4800 MT/s						
Mass Storage	NVMe x1 SSD (optional)						
Graphics	Intel® UHD Graphics or Intel® Iris® X ^e Graphics architecture up to 80 EUs						
Display	3x DDI (up to 8K support) eDP						
Ethernet	2x 2.5 GbE with TSN support via Intel® i226 Ethernet controller series						
I/O Interfaces	Up to x8 PCIe Gen4/Gen5 2 x4 PCIe Gen4 up to 8 PCIe Gen3 2x Thunderbolt 2x USB 3.2 Gen2x1 8x USB2.0 up to 2x SATA 2x UART 2x MIPI-CSI 12x GPIO eSPI SM Bus I2C GSPI						
Audio	2x Soundwire fixed 2x Soundwire or HDA or I2S (opt.)						
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: 0°C ... +60°C			Storage: -20°C ... +70°C			
Humidity	Operating: 10% ... 90% r. H. non cond.			Storage: 5% ... 95% r. H. non cond.			
Size	120 x 95 mm						

conga-HPC/cRLP | Block Diagram



** available on selected SKUs*

conga-HPC/cRLP | Bottom Side View



conga-HPC/cRPLP | Modules Order Information

Article	PN	Description
conga-HPC/cRPLP-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 and 8 E-cores 1.3GHz up to 3.3GHz 12MB Intel® Smart Cache Intel® Iris® Xe Graphics architecture with 80 EUs Dual channel DDR5 4800 MT/s memory interface Intel® code name Raptor Lake-P (P-Series)
conga-HPC/cRPLP-i5-1335UE	045505	COM-HPC Size A module based on Intel® Core™ i5-1335UE processor with 2 P-cores 1.3GHz up to 4.5GHz and 8 E-cores 1.1GHz up to 3.3GHz 12MB Intel® Smart Cache Intel® Iris® Xe Graphics architecture with 80 EUs Dual channel DDR5 4800 MT/s memory interface Intel® code name Raptor Lake-P (U-Series)
conga-HPC/cRPLP-i3-13300HE	045506	COM-HPC Size A module based on Intel® Core™ i3-13300HE processor with 4 P-cores 2.1GHz up to 4.6GHz and 4 E-cores 1.5GHz up to 3.4GHz 12MB Intel® Smart Cache Intel® UHD Graphics with 48 EUs Dual channel DDR5 4800 MT/s memory interface Intel® code name Raptor Lake-P (H-Series)
conga-HPC/cRPLP-i3-1320PE	045507	COM-HPC Size A module based on Intel® Core™ i3-1320PE processor with 4 P-cores 1.7GHz up to 4.5GHz and 4 E-cores 1.2GHz up to 3.3GHz 12MB Intel® Smart Cache Intel® UHD Graphics with 48EUs Dual channel DDR5 4800 MT/s memory interface Intel® code name Raptor Lake-P (P-Series)
conga-HPC/cRPLP-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 and 4 E-cores 0.9GHz up to 3.3GHz 10MB Intel® Smart Cache Intel® UHD Graphics with 64EUs Dual channel DDR5 4800 MT/s memory interface Intel® code name Raptor Lake-P (U-Series)
conga-HPC/cRPLP-U300E	045509	COM-HPC Size A module based on Intel® U300E processor with 1 P-core 1.1GHz up to 4.3GHz and 4 E-cores 0.9GHz up to 3.2GHz 8MB Intel® Smart Cache Intel® UHD Graphics with 48 EUs Dual channel DDR5 4800 MT/s memory interface Intel® code name Raptor Lake-P (U-Series)

conga-HPC/cRLP | Accessories Order Information

Article	PN	Description
conga-HPC/cALP-CSA-HP-B	049550	Standard active cooling solution for COM-HPC module conga-HPC/cALP and conga-HPC/cRLP with integrated heat pipes, 29mm height and integrated 12V fan. All standoffs are with 2.7mm bore hole.
conga-HPC/cALP-CSA-HP-T	049551	Standard active cooling solution for COM-HPC module conga-HPC/cALP and conga-HPC/cRLP with integrated heat pipes, 29mm height and integrated 12V fan. All standoffs are M2.5mm threaded.
conga-HPC/cALP-CSP-HP-B	049552	Standard passive cooling solution for COM-HPC module conga-HPC/cALP and conga-HPC/cRLP with integrated heat pipes, 28.2mm height. All standoffs are with 2.7mm bore hole.
conga-HPC/cALP-CSP-HP-T	049553	Standard passive cooling solution for COM-HPC module conga-HPC/cALP and conga-HPC/cRLP with integrated heat pipes, 28.2mm height. All standoffs are M2.5mm threaded.
conga-HPC/cALP-HSP-HP-B	049554	Standard heatspreader for COM-HPC module conga-HPC/cALP and conga-HPC/cRLP with integrated heat pipes, 13mm height. All standoffs are with 2.7mm bore hole.
conga-HPC/cALP-HSP-HP-T	049555	Standard heatspreader for COM-HPC module conga-HPC/cALP and conga-HPC/cRLP with integrated heat pipes, 13mm height. All standoffs are M2.5mm threaded.
conga-HPC/EVAL-Client	065600	Evaluation Carrier Board for COM-HPC Client type Modules.