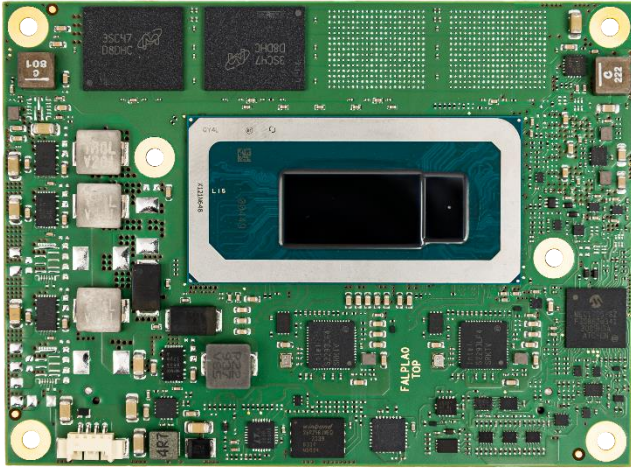


# 13<sup>th</sup> Gen Intel® Core™ Embedded mobile Processors

## conga-HPC/mRLP



## COM-HPC®

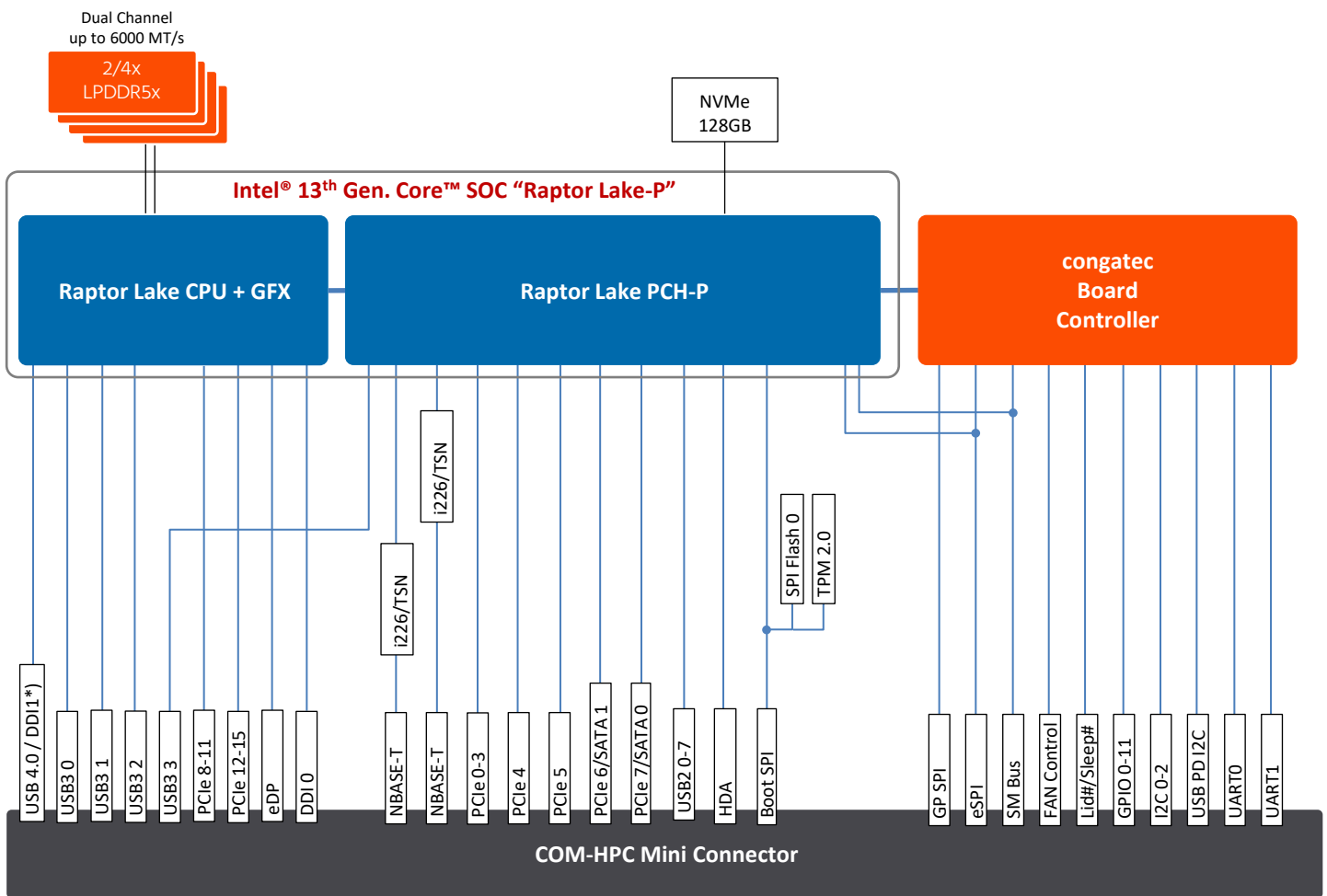


### VIRTUALIZATION READY

- Intel® hybrid design combines Performance-cores with Efficient-cores
- Options with Integrated high performance Iris X<sup>e</sup> graphics architecture with up to 96 EU
- PCI Express Gen 4
- Options for Industrial Temperature Range -40°C to +85°C

Form Factor	COM-HPC Mini		
CPUs	Intel® Core™ 13th Gen Processors Raptor Lake-P (U-Series, P-Series)		
DRAM	Up to 64 GB LPDDR5x max. 6000 MT/s SDRAM   soldered down   dual channel   IBECC on industrial SKUs (IBECC not supported on product variant 045603)		
Graphics	Integrated Iris® Xe graphics architecture with up to 96 EUs or Intel® UHD Graphics with 48 EUs		
Display	DP/DP++ (adding second DP/DP++ would require separate BIOS which disables USB4.0)   eDP		
Ethernet	2x 2.5 GbE with TSN support via Intel® i226 Ethernet controller series		
I/O Interfaces	2x 4 PCIe Gen4   up to 8x PCIe Gen3   USB4.0 (USB4.0 would be disabled if second DP/DP++ was enabled by separate BIOS)   up to 4x USB 3.2 Gen2x1   up to 8x USB 2.0   up to 2x SATA III   SPI   2x UART   12x GPIO		
Audio	HDA		
Storage	NVMe SSD with 128GB (optional up to 1 TB capacity)		
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 Defaults   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 Industrial variants	Operation: 0°C to 60°C Operation: -40°C to 85°C	Storage: -20°C to 80°C Storage: -40°C to 85°C
Humidity	Operation: Storage:	10 to 85% r. H. non cond. 5 to 85% r. H. non cond.	
Size	95 x 70 mm²		

# conga-HPC/mRLP | Block Diagram



\*) adding second DP/DP++ would require separate BIOS which disables USB4.0

# conga-HPC/mRLP | Order Information

Article	PN	Description
conga-HPC/mRLP-i7-1365URE-32G NVMe128	045600	COM-HPC Mini 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   32GB onboard LPDDR5x memory   128GB onboard NVMe   Industrial grade temperature range from -40°C to +85°C   Intel® code name Raptor Lake-P (U-Series)
conga-HPC/mRLP-i5-1345URE-16G NVMe128	045601	COM-HPC Mini module based on Intel® Core™ i5-1345URE processor with 2 P-cores 1.4GHz up to 4.6GHz Turbo and 8 E-cores 1.1GHz up to 3.4GHz Turbo   12MB Intel® Smart Cache   Intel® Iris® Xe Graphics architecture with 80 EUs   16GB onboard LPDDR5x memory   128GB onboard NVMe   Industrial grade temperature range from -40°C to +85°C   Intel® code name Raptor Lake-P (U-Series)
conga-HPC/mRLP-i3-1315URE-16G NVMe128	045602	COM-HPC Mini module based on Intel® Core™ i3-1315URE 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   16GB onboard LPDDR5x memory   128GB onboard NVMe   Industrial grade temperature range from -40°C to +85°C   Intel® code name Raptor Lake-P (U-Series)
conga-HPC/mRLP-U300E-16G NVMe128	045603	COM-HPC Mini module based on Intel® processor U300E with 1 P-core 1.1GHz up to 4.3GHz Turbo and 4 E-cores 0.9GHz up to 3.2GHz Turbo   8MB Intel® Smart Cache   Intel® UHD Graphics with 48 EUs   16GB onboard LPDDR5x memory   128GB onboard NVMe   Intel® code name Raptor Lake-P (U-Series)
conga-HPC/mRLP-i7-1370PRE-32G NVMe128	045604	COM-HPC Mini 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   32GB onboard LPDDR5x memory   128GB onboard NVMe   Industrial grade temperature range from -40°C to +85°C   Intel® code name Raptor Lake-P (P-Series)
conga-HPC/mRLP-i5-1350PRE-16G NVMe128	045605	COM-HPC Mini 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   16GB onboard LPDDR5x memory   128GB onboard NVMe   Industrial grade temperature range from -40°C to +85°C   Intel® code name Raptor Lake-P (P-Series)
conga-HPC/mRLP-i3-1320PRE-16G NVMe128	045606	COM-HPC Mini module based on Intel® Core™ i3-1320PRE processor with 4 P-cores 1.7GHz up to 4.5GHz Turbo and 4 E-cores 1.2GHz up to 3.3GHz Turbo   12MB Intel® Smart Cache   Intel® UHD Graphics with 48EUs   16GB onboard LPDDR5x memory   128GB onboard NVMe   Industrial grade temperature range from -40°C to +85°C   Intel® code name Raptor Lake-P (P-Series)
conga-HPC/3.5-Mini	065630	COM-HPC Client 3.5" carrier board suitable for congatec COM-HPC Mini modules
conga-HPC/mRLP-CSA-B	049250	Standard active cooling solution for COM-HPC module conga-HPC/mRLP with 24.5mm overall heat sink height and integrated 12V fan. All standoffs are with 2.7mm bore hole.
conga-HPC/mRLP-CSA-T	049251	Standard active cooling solution for COM-HPC module conga-HPC/mRLP with 24.5mm overall heat sink height and integrated 12V fan. All standoffs are M2.5mm threaded.
conga-HPC/mRLP-CSP-B	049252	Standard passive cooling solution for COM-HPC module conga-HPC/mRLP with 23.7mm overall heat sink height. All standoffs are with 2.7mm bore hole.
conga-HPC/mRLP-CSP-T	049253	Standard passive cooling solution for COM-HPC module conga-HPC/mRLP with 23.7mm overall heat sink height. All standoffs are M2.5mm threaded.
conga-HPC/mRLP-HSP-B	049254	Standard heatspreader for COM-HPC module conga-HPC/mRLP. All standoffs are with 2.7mm bore hole.
conga-HPC/mRLP-HSP-T	049255	Standard heatspreader for COM-HPC module conga-HPC/mRLP. All standoffs are M2.5mm threaded.

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