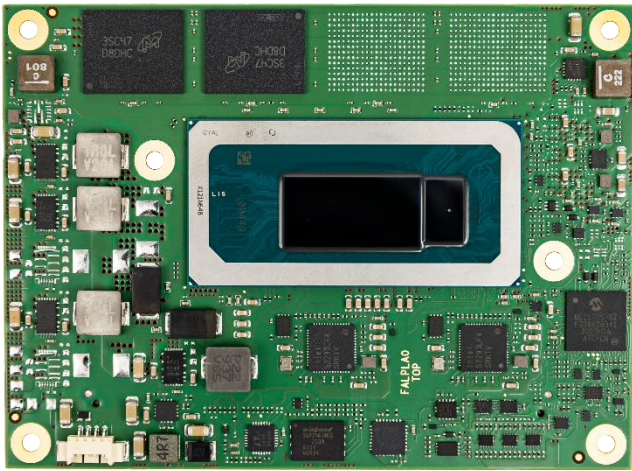


# 13<sup>th</sup> Gen Intel® Core™ Embedded mobile Processors

## conga-HPC/mRLP



## COM+HPC®

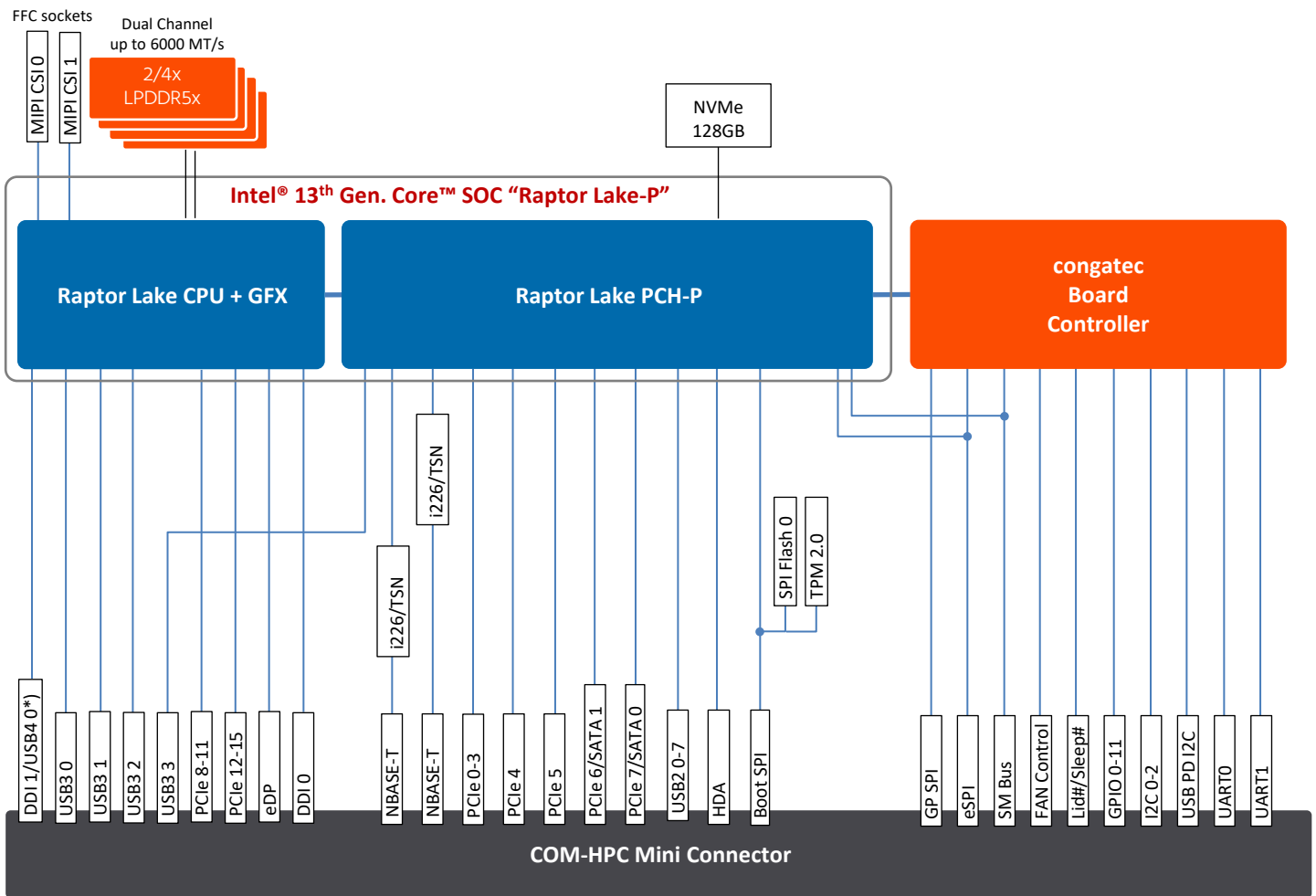


### VIRTUALIZATION READY

- 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

<b>Form Factor</b>	COM-HPC Mini	
<b>CPUs</b>	Intel® Core™ 13th Gen Processors Raptor Lake-P (U-Series, P-Series)	
<b>DRAM</b>	Up to 64 GB LPDDR5x max. 6000 MT/s SDRAM   soldered down   dual channel   IB ECC on industrial SKUs (IB ECC not supported on product variant 045603)	
<b>Graphics</b>	Integrated Iris® X <sup>e</sup> graphics architecture with up to 96 EUs or Intel® UHD Graphics with 48 EUs	
<b>Display</b>	Up to 2x DP/DP++   1x eDP	
<b>Ethernet</b>	2x 2.5 GbE with TSN support via Intel® i226 Ethernet controller series	
<b>I/O Interfaces</b>	2x 4 PCIe Gen4   up to 8x PCIe Gen3 Up to 1x USB 4.0 (option)   up to 4x USB 3.2 Gen2x1   up to 8x USB 2.0 Up to 2x SATA III   SPI   2x UART   12x GPIO   2x MIPI-CSI	
<b>Audio</b>	HDA	
<b>Storage</b>	NVMe SSD with 128GB (optional up to 1 TB capacity)	
<b>congatec Board controller</b>	Multi-stage Watchdog   non-volatile User Data Storage   Manufacturing and Board Information Board Statistics   I <sup>2</sup> C bus (fast mode, 400 kHz, multi-master)   Power Loss Control Hardware Health Monitoring   POST Code redirection	
<b>Embedded BIOS Feature</b>	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	
<b>Security</b>	Trusted Platform Module (TPM 2.0)	
<b>Power Management</b>	ACPI 5.0a with battery support	
<b>Operating Systems</b>	Microsoft® Windows 11   Microsoft® Windows 11 IoT Enterprise   Microsoft® Windows 10   Microsoft® Windows 10 IoT Enterprise   Linux   Yocto	
<b>Hypervisor</b>	RTS Real-Time Hypervisor	
<b>Temperature Range</b>	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
<b>Humidity</b>	Operation: Storage:	10 to 90% r. H. non cond. 5 to 95% r. H. non cond.
<b>Size</b>	95 x 70 mm <sup>2</sup>	

# conga-HPC/mRLP | Block Diagram



\*) USB4 0-enabled BIOS required

# conga-HPC/mRPLP | Order Information

Article	PN	Description
conga-HPC/mRPLP-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/mRPLP-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/mRPLP-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/mRPLP-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/mRPLP-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/mRPLP-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/mRPLP-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/mRPLP-CSA-B	049250	Standard active cooling solution for COM-HPC module conga-HPC/mRPLP with 25mm overall heat sink height and integrated 12V fan. All standoffs are with 2.7mm bore hole.
conga-HPC/mRPLP-CSA-T	049251	Standard active cooling solution for COM-HPC module conga-HPC/mRPLP with 25mm overall heat sink height and integrated 12V fan. All standoffs are M2.5mm threaded.
conga-HPC/mRPLP-CSP-B	049252	Standard passive cooling solution for COM-HPC module conga-HPC/mRPLP with 24.2mm overall heat sink height. All standoffs are with 2.7mm bore hole.
conga-HPC/mRPLP-CSP-T	049253	Standard passive cooling solution for COM-HPC module conga-HPC/mRPLP with 24.2mm overall heat sink height. All standoffs are M2.5mm threaded.
conga-HPC/mRPLP-HSP-B	049254	Standard heatspreader for COM-HPC module conga-HPC/mRPLP. All standoffs are with 2.7mm bore hole.
conga-HPC/mRPLP-HSP-T	049255	Standard heatspreader for COM-HPC module conga-HPC/mRPLP. All standoffs are M2.5mm threaded.