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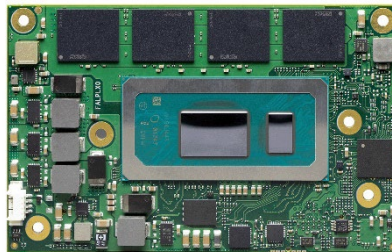


Datasheet

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conga-HPC/mRLP

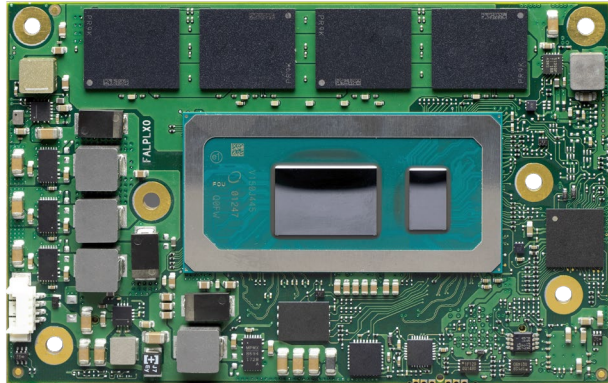
COM-HPC Mini Size high performance module based on 13th Gen Intel® Core™ Raptor Lake-P processor series



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13TH GEN INTEL® CORE™ PROCESSORS

conga-HPC/mRLP



COM+HPC®

- Embedded/Industrial use condition
- Extended temperature options available
- PCI Express Gen 4
- Integrated high performance Xe graphics with 96 EU
- AI/DL Instruction Sets including VNNI

Form Factor

COM-HPC, Size Mini (95 x 60 mm), Client Mini Connector Pinout

CPU	Processor	Cores/Threads	Base Frequency/max. Turbo	TDP	Graphics	Intel Use Condition
	Core™ i7-1365URE	10C/12T	1.7 GHz / 4.9 GHz	12-28W	96EU	Industrial
	Core™ i5-1345URE	10C/12T	1.3 GHz / 4.5 GHz	12-28W	80EU	Industrial
	Core™ i3-1315URE	6C/8T	1.2 GHz / 4.5 GHz	12-28W	64EU	Industrial
	Processor U300E	5C/6T	1.1 GHz / 4.3 GHz	12-28W	48EU	Industrial
DRAM	Up to 64 GByte LPDDR5 6400MT/s SDRAM memory down dual channel IB ECC					
Graphics	Integrated Xe graphics engine with up to 96 EU (Execution Units) Supporting 4 independent display units (4x 4k/1x 8K) Enhanced media (AV1/12b) with up to 2 Vdbox Next Gen IPU6 with DPHY2.1 DP 1.4					
Display	Up to 2x DP/DP++ 1x eDP USB Type-C					
Ethernet	2x 2.5 GbE with TSN support via Intel® i226 Ethernet controller series					
I/O Interfaces	2x 4 PCIe Gen4 6/8x PCIe Gen3 Up to 1x USB 4.0 4x USB 3.2 8x USB 2.0 Up to 2x SATA III (6Gb/s) SPI 2x UART 12x GPIO 2x MIPI-CSI (SMT connectors on module)					
Audio	2x Soundwire fixed 2x Soundwire or HDA or I2S (opt.)					
Storage	Optional NVMe SSD with up to 512 GB capacity					
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 Defaults LCD Control Display Auto Detection Backlight Control Flash Update					
Security	Trusted Platform Module (TPM 2.0)					
Power Management	ACPI 5.0 with battery support					
Operating Systems	Microsoft® Windows 10 Microsoft® Windows 10 IoT Enterprise Microsoft® Windows IoT 10 Core Linux Android Yocto RTS Hypervisor					
Temperature Range	Commercial: Operating Temperature: 0 to +60°C		Storage Temperature: -20 to +80°C			
	Industrial: Operating Temperature: -40 to +85°C		Storage Temperature: -40 to +85°C			
Humidity	Operating: 10 to 90% r. H. non cond.					
	Storage: 5 to 95% r. H. non cond.					
Size	95 x 60 mm ²					

conga-HPC/mRLP | Order Information

Article	PN	Description
conga-HPC/mRLP-i7-1365URE-32G	045600	COM-HPC Size M module based on Intel® Core™ i7-1365URE processor with 2 P-cores 1.7GHz up to 4.9GHz and 8 E-cores 1.2GHz up to 3.7GHz 12MB Intel® Smart Cache Intel® Iris® Xe Graphics architecture with 96 EUs Dual channel LPDDR5x 4800 MT/s memory interface 32GB onboard LPDDR5 memory Industrial grade temperature range from -40°C to +85°C Intel® code name Raptor Lake-P (U-Series)
conga-HPC/mRLP-i5-1345URE-16G	045601	COM-HPC Size M module based on Intel® Core™ i5-1345URE processor with 2 P-cores 1.3GHz up to 4.5GHz and 8 E-cores 1.1GHz up to 3.4GHz 12MB Intel® Smart Cache Intel® Iris® Xe Graphics architecture with 80 EUs Dual channel LPDDR5x 4800 MT/s memory interface 16GB onboard LPDDR5 memory Industrial grade temperature range from -40°C to +85°C Intel® code name Raptor Lake-P (U-Series)
conga-HPC/mRLP-i3-1315URE-16G	045602	COM-HPC Size M module based on Intel® Core™ i3-1315URE 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 LPDDR5x 4800 MT/s memory interface 16GB onboard LPDDR5 memory Industrial grade temperature range from -40°C to +85°C Intel® code name Raptor Lake-P (U-Series)
conga-HPC/mRLP-U300E-16G	045603	COM-HPC Size M module based on Intel® processor U300E 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 LPDDR5x 4800 MT/s memory interface 16GB onboard LPDDR5 memory Intel® code name Raptor Lake-P (U-Series)
conga-HPC/mRLP-CSA-B	049250	Standard active cooling solution for COM-HPC module conga-HPC/mRLP with 25mm 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 25mm 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 25mm 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 25mm 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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