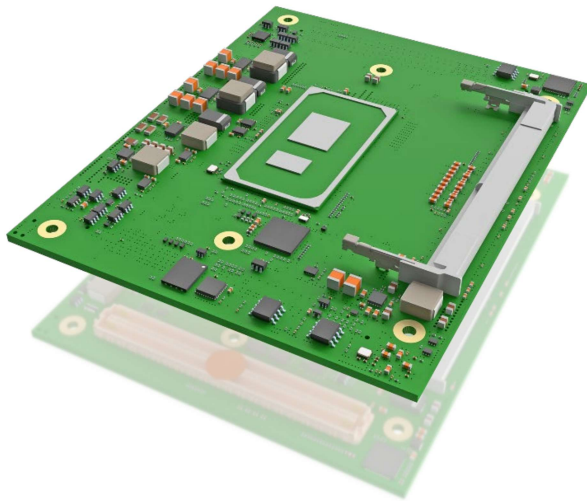


# COM HPC CLIENT MODULE

## conga-HPC/cTLU



- COM HPC Client Size A
- Intel® Tiger Lake-UP3 high performing and low power Intel® Core™ processor
- Embedded/Industrial use condition
- Extended temperature options available
- PCI Express Gen 4
- Integrated high performance Xe (Gen 12) graphics with 96 EU
- AI/DL Instruction Sets including VNNI

COM+HPC™

<b>Formfactor</b>	COM HPC, Size A (95 x 120 mm), Client Connector Pinout				
<b>CPU</b>	<b>General Embedded Versions</b> Intel® Core™ i7-1185G7E Processor      4 Cores / 8 Threads      12 MB cache      Int. Graphics with 96 EU      12-28W TDP Intel® Core™ i5-1145G7E Processor      4 Cores / 8 Threads      8 MB cache      Int. Graphics with 80 EU      12-28W TDP Intel® Core™ i3-1115G4E Processor      2 Cores / 4 Threads      6 MB cache      Int. Graphics with 48 EU      12-28W TDP  <b>Industrial Versions</b> Intel® Core™ i7-1185GRE Processor      4 Cores / 8 Threads      12 MB cache      Int. Graphics with 96 EU      12-28W TDP Intel® Core™ i5-1145GRE Processor      4 Cores / 8 Threads      8 MB cache      Int. Graphics with 80 EU      12-28W TDP Intel® Core™ i3-1115GRE Processor      2 Cores / 4 Threads      6 MB cache      Int. Graphics with 48 EU      12-28W TDP				
<b>DRAM</b>	Up to 2 SO-DIMM sockets for DDR4 memory modules up to 32 GByte each (64 GByte total) with 3200 MT/s				
<b>Graphics</b>	Integrated Xe (Gen 12) graphics engine with up to 96 EU (Execution Units)   Supporting 4 independent display units (4x 4k/2x 8K)   Enhanced media (AV1/12b) with up to 2 Vdbox   Next Gen IPU6 with DPHY2.1   HDMI 2.0/2.1   DP 1.4				
<b>Display</b>	3x DP/HDMI/DP++   1x eDP				
<b>Ethernet</b>	2x 2,5 GbE TSN Ethernet via Intel® i225				
<b>I/O Interfaces</b>	4x PCIe Gen4   8x PCIe Gen3 2x USB 4.0   2x USB 3.2   8x USB 2.0 2x SATA III (6Gb/s)   SPI   2x UART   12x GPIO   2x MIPI-CSI				
<b>Audio</b>	1x I2S   2x Soundwire				
<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 Features</b>	OEM Customization   Flash Update   based on AMI Aptio UEFI				
<b>Security</b>	Trusted Platform Module (TPM 2.0)				
<b>Power Management</b>	ACPI 5.0 with battery support				
<b>Operating Systems</b>	tbd				
<b>Power Consumption</b>	See user's guide for full details				
<b>Temperature</b>	Industrial:      Operating: -40 to +85°C      Storage: -40 to +85°C Commercial:      Operating: 0 to +60°C      Storage: -40 to +85°C				
<b>Humidity</b>	Operating: 10 - 90% r. H. non cond.      Storage: 5 - 95% r. H. non cond.				
<b>Size</b>	95 x 120 mm				

# conga-HPC/cTLU | Order Information

Article	PN	Description
conga-HPC/cTLU-i7-1185G7E	050600	COM HPC Size A module based on Intel® Core™ i7-1185G7E 4-core processor with 1.8GHz up to 4.4GHz turbo boost, 12MB cache, Intel® Iris® Xe Graphics with 96EU and dual channel DDR4 3200 MT/s memory interface (Intel Tiger Lake). Commercial temperature range.
conga-HPC/cTLU-i5-1145G7E	050601	COM HPC Size A module based on Intel® Core™ i5-1145G7E 4-core processor with 1.5GHz up to 4.1GHz turbo boost, 8MB cache, Intel® Iris® Xe Graphics with 80EU and dual channel DDR4 3200 MT/s memory interface (Intel Tiger Lake). Commercial temperature range.
conga-HPC/cTLU-i3-1115G4E	050602	COM HPC Size A module based on Intel® Core™ i3-1115G4E 2-core processor with 2.2GHz up to 3.9GHz turbo boost, 6MB cache, Intel® Iris® Xe Graphics with 48EU and dual channel DDR4 3200 MT/s memory interface (Intel Tiger Lake). Commercial temperature range.
conga-HPC/cTLU-i7-1185GRE	050610	COM HPC Size A module based on Intel® Core™ i7-1185GRE 4-core processor with 1.8GHz up to 4.4GHz turbo boost, 12MB cache, Intel® Iris® Xe Graphics with 96EU and dual channel DDR4 3200 MT/s memory interface (Intel Tiger Lake). Industrial temperature range.
conga-HPC/cTLU-i5-1145GRE	050611	COM HPC Size A module based on Intel® Core™ i5-1145GRE 4-core processor with 1.5GHz up to 4.1GHz turbo boost, 8MB cache, Intel® Iris® Xe Graphics with 80EU and dual channel DDR4 3200 MT/s memory interface (Intel Tiger Lake). Industrial temperature range.
conga-HPC/cTLU-i3-1115GRE	050612	COM HPC Size A module based on Intel® Core™ i3-1115GRE 2-core processor with 2.2GHz up to 3.9GHz turbo boost, 6MB cache, Intel® Iris® Xe Graphics with 48EU and dual channel DDR4 3200 MT/s memory interface (Intel Tiger Lake). Industrial temperature range.
conga-HPC/cTLU-CSA-VC-B	050650	Standard active cooling solution for high performance COM HPC module conga-HPC/cTLU with integrated vapor chamber, 45mm overall heat sink height and integrated 12V fan. All standoffs are with 2.7mm bore hole.
conga-HPC/cTLU-CSA-VC-T	050651	Standard active cooling solution for high performance COM HPC module conga-HPC/cTLU with integrated vapor chamber, 45mm overall heat sink height and integrated 12V fan. All standoffs are M2.5mm thread.
conga-HPC/cTLU-CSP-VC-B	050652	Standard passive cooling solution for high performance COM HPC module conga-HPC/cTLU with integrated vapor chamber, 44mm overall heat sink height. All standoffs are with 2.7mm bore hole.
conga-HPC/cTLU-CSP-VC-T	050653	Standard passive cooling solution for high performance COM HPC module conga-HPC/cTLU with integrated vapor chamber, 44mm overall heat sink height. All standoffs are with M2.5mm thread.
conga-HPC/cTLU-HSP-VC-B	050654	Standard heatspreader for high performance COM HPC module conga-HPC/cTLU with integrated vapor chamber, 13mm overall heat sink height. All standoffs are with 2.7mm bore hole.
conga-HPC/cTLU-HSP-VC-T	050655	Standard heatspreader solution for high performance COM HPC module conga-HPC/cTLU with integrated vapor chamber, 13mm overall heat sink height. All standoffs are with M2.5mm thread.
conga-HPC/EVAL-Client	065600	Evaluation Carrier Board for COM-HPC Client type Modules.