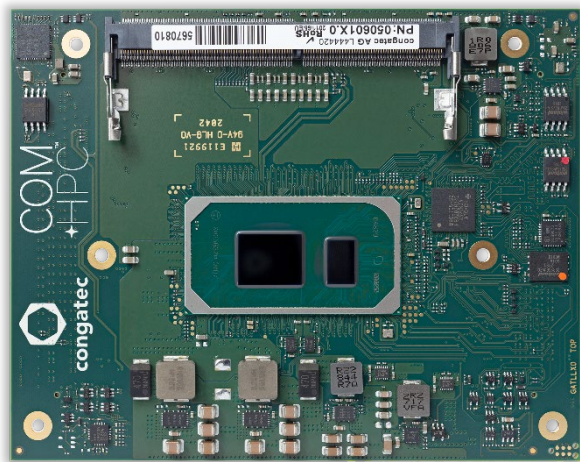


11TH GEN INTEL® CORE™ PROCESSORS

conga-HPC/cTLU

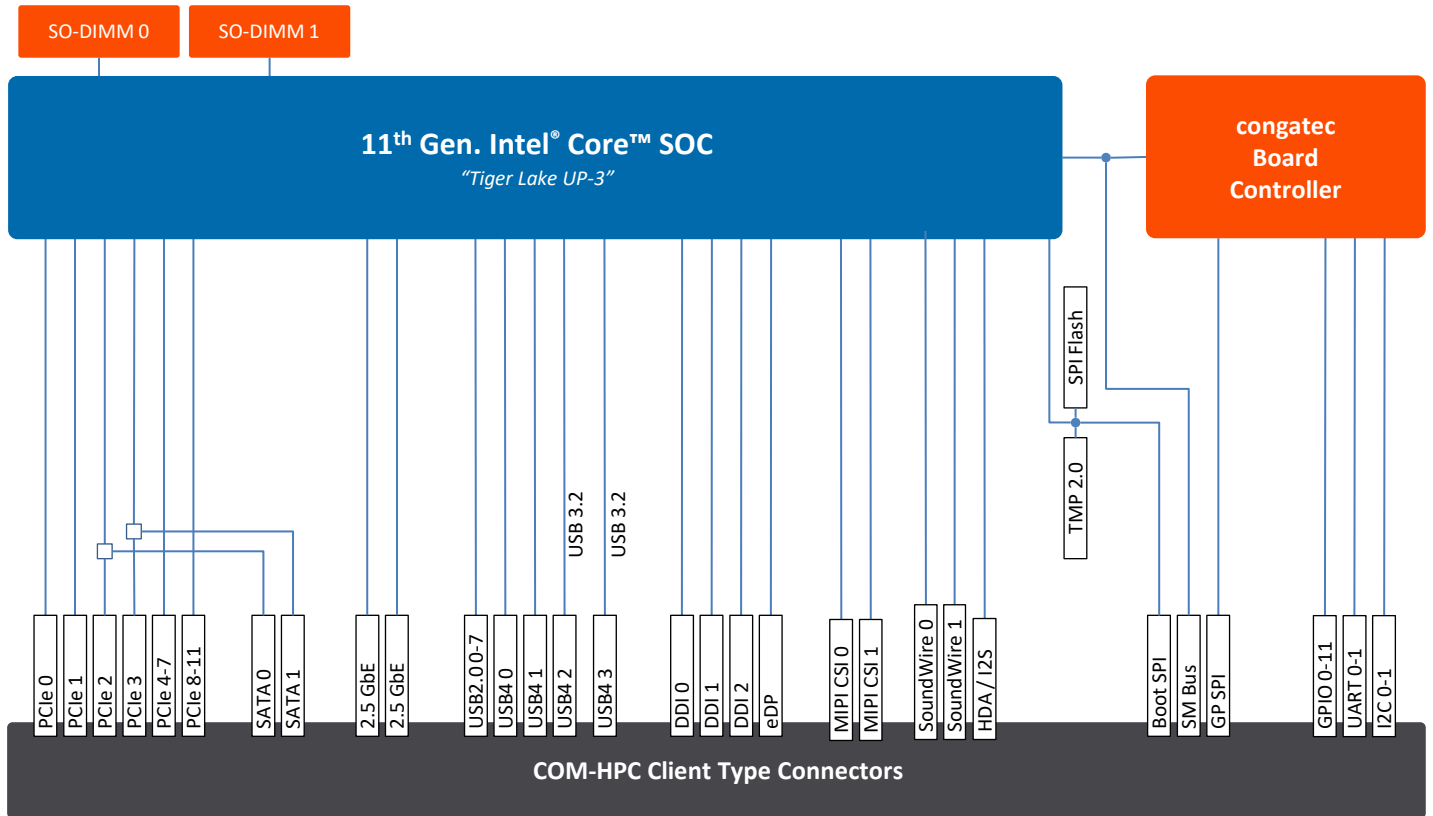


COM+HPC®

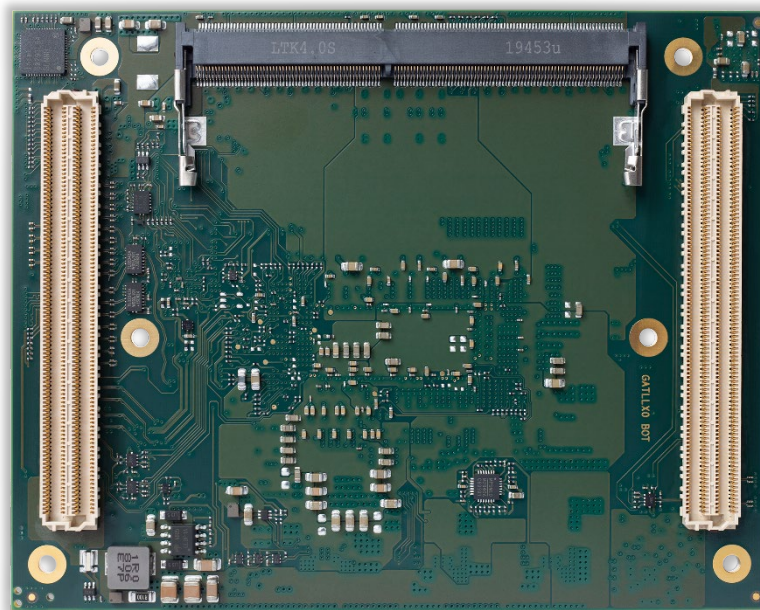
- Low-power 11th Gen Intel® Core™ Processor
- Integrated high performance Xe (Gen 12) graphics with 96 Execution Units
- Extended temperature processors available
- PCI Express Gen 4
- AI/DL Instruction Sets including VNNI

Form Factor	COM-HPC, Size A (95 x 120 mm), Client Connector Pinout						
CPU	Processor	Cores/Threads	Base Frequency/max. Turbo	TDP	Graphics	Intel Use Condition	
	Core™ i7-1185G7E	4C/8T	1.80 GHz / 4.40 GHz	12-28W	96EU	Embedded Broad Market	
	Core™ i5-1145G7E	4C/8T	1.50 GHz / 4.40 GHz	12-28W	80EU	Embedded Broad Market	
	Core™ i3-1115G4E	2C/4T	2.20 GHz / 3.90 GHz	12-28W	48EU	Embedded Broad Market	
	Celeron 6305E	2C/2T	1.80 GHz / --	15W	48EU	Embedded Broad Market	
	Core™ i7-1185GRE	4C/8T	1.80 GHz / 4.40 GHz	12-28W	96EU	Industrial	
	Core™ i5-1145GRE	4C/8T	1.50 GHz / 4.10 GHz	12-28W	80EU	Industrial	
	Core™ i3-1115GRE	2C/4T	2.20 GHz / 3.90 GHz	12-28W	48EU	Industrial	
DRAM	Up to 2x DDR4 SO-DIMM sockets for memory modules up to 32 Gbyte and 3200 MT/s each 64 GByte maximum memory capacity						
Graphics	Integrated Xe Gen 12 graphics engine with up to 96 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 DP 1.4						
Display	3x DP/DP++ 1x eDP						
Ethernet	2x 2.5 GbE with TSN support via Intel® i226 Ethernet controller series						
I/O Interfaces	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 8x MIPI-CSI						
Audio	1x HDA (default) shared with I2S 2x SoundWire						
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 11 IoT Enterprise 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 120 mm ²						

conga-HPC/cTLU | Block Diagram



conga-HPC/cTLU | Bottom Side View



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-UP3). Embedded temperature range 0°C to 60°C.
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-UP3). Embedded temperature range 0°C to 60°C.
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® Graphics with 48EU and dual channel DDR4 3200 MT/s memory interface (Intel Tiger Lake-UP3). Embedded temperature range 0°C to 60°C.
conga-HPC/cTLU-6305E	050603	COM-HPC Size A module based on Intel® Celeron® 6305E 2-core processor with 1.8GHz, 4MB cache, Intel® Graphics with 48EU and dual channel DDR4 3200 MT/s memory interface (Intel Tiger Lake-UP3). Embedded temperature range 0°C to 60°C.
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-UP3). Industrial temperature range -40°C to 85°C.
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-UP3). Industrial temperature range -40°C to 85°C.
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® Graphics with 48EU and dual channel DDR4 3200 MT/s memory interface (Intel Tiger Lake-UP3). Industrial temperature range -40°C to 85°C.
conga-HPC/cTLU-CSA-HP-B	050658	Standard active cooling solution for high performance COM-HPC module conga-HPC/cTLU with integrated heatpipe, 29mm height and integrated 12V fan. All standoffs are with 2.7mm bore hole.
conga-HPC/cTLU-CSA-HP-T	050659	Standard active cooling solution for high performance COM-HPC module conga-HPC/cTLU with integrated heatpipe, 29mm height and integrated 12V fan. All standoffs are M2.5mm thread.
conga-HPC/cTLU-CSP-HP-B	050660	Standard passive cooling solution for high performance COM-HPC module conga-HPC/cTLU with integrated heatpipe, 28mm height. All standoffs are with 2.7mm bore hole.
conga-HPC/cTLU-CSP-HP-T	050661	Standard passive cooling solution for high performance COM-HPC module conga-HPC/cTLU with integrated heatpipe, 28mm height. All standoffs are with M2.5mm thread.
conga-HPC/cTLU-HSP-HP-B	050662	Standard heatspreader for high performance COM-HPC module conga-HPC/cTLU with integrated heatpipe, 13mm height. All standoffs are with 2.7mm bore hole.
conga-HPC/cTLU-HSP-HP-T	050663	Standard heatspreader for high performance COM-HPC module conga-HPC/cTLU with integrated heatpipe, 13mm height. All standoffs are with M2.5mm thread.
conga-HPC/EVAL-Client	065600	Evaluation Carrier Board for COM-HPC Client type Modules.