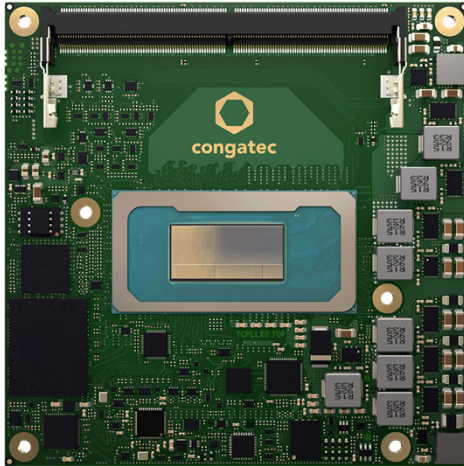


Intel® Core™ Ultra Processors Series 3

conga-TC1000

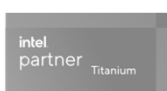


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- Intel® performance hybrid architecture with up to 16 cores
- Intel® Arc™ Graphics or Intel Graphics
- Integrated NPU with up to 50 TOPS and up to 180 TOPS total platform performance
- DDR5 SODIMM with up to 128 GB RAM system capacity

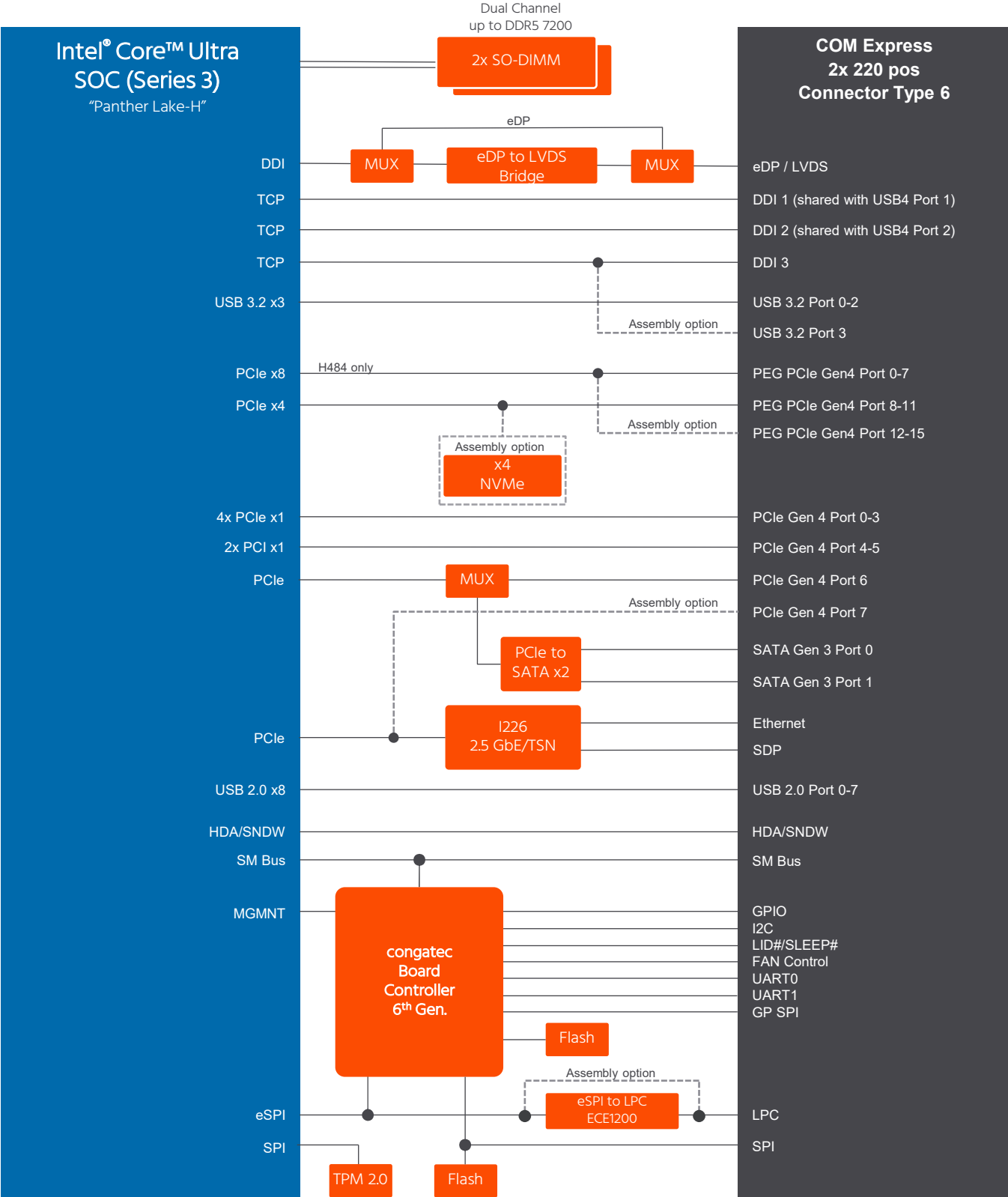
COM Express®

Form factor	COM Express® Compact Type 6 connector pinout	
CPU	Intel® Core™ Ultra Processors (Series 3) Panther Lake-H	
DRAM	2x SO-DIMM sockets for DDR5 memory modules up to 64 GB each Max. 128 GB RAM system capacity up to 7200 MT/s in-band ECC (only on selected product variants)	
Mass Storage	NVMe x4 SSD (optional) up to 1 TB capacity	
Graphics	Intel® Arc Graphics with up to 12 Xe cores or Intel Graphics with up to 4 Xe cores Intel® Xe Matrix Extensions	
AI Acceleration	Integrated NPU accelerator up to 50 TOPS Up to 180 TOPS platform total	
Display	Up to 3x DDI (2x shared with USB4) LVDS or eDP 4x independent displays up to 8k	
Ethernet	2.5 GbE via Intel® i226 Ethernet controller series Supporting TSN – Time Sensitive Networking (only on selected product variants) Software Definable Pin (SDP) to be used for IEEE 1588	
I/O Interfaces	Up to 12x PCIe Gen4 PEG (H484) or up to 4x PCIe Gen4 PEG (H12Xe, H404) up to 8x PCIe Gen4 Up to 2x USB4 3x USB 3.2 Gen2 (incl. USB 2.0) + 8x USB 2.0 2x SATA (flexible multiplexing) 2x UART GPIOs GP SPI LPC SM Bus I2C	
Audio	HDA Soundwire (optional)	
congatec Board controller	Next Gen 6 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 64 Mbyte serial SPI with congatec Embedded BIOS feature OEM Logo OEM CMOS default settings LCD Control Display Auto Detection Backlight Control Flash Update	
Security	Trusted Platform Module (TPM 2.0) through Infineon SLB9672	
Power Management	ACPI 6.0 with battery support	
Operating Systems	Microsoft® Windows 11 IoT Enterprise Microsoft® Windows 11 Linux Yocto	
Hypervisor	RTS Real-Time Hypervisor	
Temperature	Commercial Temp.: Operating 0°C to +60°C	Storage -20°C to +80°C
	Industrial Temp.: Operating -40°C to +85°C	Storage: -40°C to +85°C
Humidity	Operating 10% to 85% r. H. non cond.	Storage 5% to 85% r. H. non cond.
Size	95 x 95 mm	



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conga-TC1000 | Block Diagram



NOTES

 Assembly option
Only available on request

conga-TC1000 | Modules Order Information

Article	PN	Description
conga-TC1000/ultraX9-388H	052000	COM Express Compact module based on Intel® Core™ Ultra X9 388H processor with 4 P-cores, 8 E-cores and 4 LPE-cores Integrated NPU 18MB Intel® Smart Cache LLC Intel® Arc™ B390 Graphics with 12X ^e cores Dual channel SODIMM DDR5 memory interface with up to 7200 MT/s and up to 96 GB system memory capacity Commercial grade temperature range from 0°C to 60°C
conga-TC1000/ultra9-386H	052001	COM Express Compact module based on Intel® Core™ Ultra 9 386H processor with 4 P-cores, 8 E-cores and 4 LPE-cores Integrated NPU 18MB Intel® Smart Cache LLC Intel Graphics with 4X ^e cores Dual channel SODIMM DDR5 memory interface with up to 7200 MT/s and up to 128 GB system memory capacity Commercial grade temperature range from 0°C to 60°C
conga-TC1000/ultraX7-358H	052002	COM Express Compact module based on Intel® Core™ Ultra X7 358H processor with 4 P-cores, 8 E-cores and 4 LPE-cores Integrated NPU 18MB Intel® Smart Cache LLC Intel® Arc™ B390 Graphics with 12X ^e cores Dual channel SODIMM DDR5 memory interface with up to 7200 MT/s and up to 96 GB system memory capacity Commercial grade temperature range from 0°C to 60°C
conga-TC1000/ultra7-356H	052003	COM Express Compact module based on Intel® Core™ Ultra 7 356H processor with 4 P-cores, 8 E-cores and 4 LPE-cores Integrated NPU 18MB Intel® Smart Cache LLC Intel Graphics with 4X ^e cores Dual channel SODIMM DDR5 memory interface with up to 7200 MT/s and up to 128 GB system memory capacity Commercial grade temperature range from 0°C to 60°C
conga-TC1000/ultra5-336H	052005	COM Express Compact module based on Intel® Core™ Ultra 5 336H processor with 4 P-cores, 4 E-cores and 4 LPE-cores Integrated NPU 18MB Intel® Smart Cache LLC Intel Graphics with 4X ^e cores Dual channel SODIMM DDR5 memory interface with up to 7200 MT/s and up to 128 GB system memory capacity Commercial grade temperature range from 0°C to 60°C
conga-TC1000/ultra5-325	052006	COM Express Compact module based on Intel® Core™ Ultra 5 325 processor with 4 P-cores and 4 LPE-cores Integrated NPU 12MB Intel® Smart Cache LLC Intel Graphics with 4X ^e cores Dual channel SODIMM DDR5 memory interface with up to 6400 MT/s and up to 128 GB system memory capacity Commercial grade temperature range from 0°C to 60°C
conga-TC1000/ultra7-366H	052007	COM Express Compact module based on Intel® Core™ Ultra 7 366H processor with 4 P-cores, 8 E-cores and 4 LPE-cores Integrated NPU 18MB Intel® Smart Cache LLC Intel Graphics with 4X ^e cores Dual channel SODIMM DDR5 memory interface with up to 7200 MT/s and up to 128 GB system memory capacity Commercial grade temperature range from 0°C to 60°C

conga-TC1000

| Modules Order Information II

Article	PN	Description
conga-TC1000/ultra7-366HRE	052010	COM Express Compact module based on Intel® Core™ Ultra 7 366HRE processor with 4 P-cores, 8 E-cores and 4 LPE-cores Integrated NPU 18MB Intel® Smart Cache LLC Intel Graphics with 4Xe cores Dual channel SODIMM DDR5 memory interface with up to 7200 MT/s and up to 128 GB system memory capacity Industrial grade temperature range from -40°C to 85°C
conga-TC1000/ultra7-365RE	052011	COM Express Compact module based on Intel® Core™ Ultra 7 365RE processor with 4 P-cores and 4 LPE-cores Integrated NPU 18MB Intel® Smart Cache LLC Intel Graphics with 4Xe cores Dual channel SODIMM DDR5 memory interface with up to 7200 MT/s and up to 128 GB system memory capacity Industrial grade temperature range from -40°C to 85°C
conga-TC1000/ultra5-336HRE	052012	COM Express Compact module based on Intel® Core™ Ultra 5 336HRE processor with 4 P-cores, 4 E-cores and 4 LPE-cores Integrated NPU 18MB Intel® Smart Cache LLC Intel Graphics with 4Xe cores Dual channel SODIMM DDR5 memory interface with up to 7200 MT/s and up to 128 GB system memory capacity Industrial grade temperature range from -40°C to 85°C
conga-TC1000/ultra5-335RE	052013	COM Express Compact module based on Intel® Core™ Ultra 5 335RE processor with 4 P-cores and 4 LPE-cores Integrated NPU 18MB Intel® Smart Cache LLC Intel Graphics with 4Xe cores Dual channel SODIMM DDR5 memory interface with up to 7200 MT/s and up to 128 GB system memory capacity Industrial grade temperature range from -40°C to 85°C

conga-TC1000

| Accessories Order Information

Article	PN	Description
conga-TC1000/CSA-HP-B	052050	Standard active cooling solution for high performance COM Express module conga-TC1000 with integrated heat pipes, 25.5mm height and integrated 12V fan. All standoffs are with 2.7mm bore hole.
conga-TC1000/CSA-HP-T	052051	Standard active cooling solution for high performance COM Express module conga-TC1000 with integrated heat pipes, 25.5mm height and integrated 12V fan. All standoffs are M2.5mm threaded.
conga-TC1000/CSP-HP-B	052052	Standard passive cooling solution for high performance COM Express module conga-TC1000 with integrated heat pipes, 24.7mm height. All standoffs are with 2.7mm bore hole.
conga-TC1000/CSP-HP-T	052053	Standard passive cooling solution for high performance COM Express module conga-TC1000 with integrated heat pipes, 24.7mm height. All standoffs are M2.5mm threaded.
conga-TC1000/HSP-HP-B	052054	Standard heatspreader for high performance COM Express module conga-TC1000 with integrated heat pipes, 11mm height. All standoffs are with 2.7mm bore hole.
conga-TC1000/HSP-HP-T	052055	Standard heatspreader for high performance COM Express module conga-TC1000 with integrated heat pipes, 11mm height. All standoffs are M2.5mm threaded.
conga-TEVAL/COMe 3.1	065820	Evaluation carrier board for COM Express Type 6 revision 3.1 modules.
DDR5-SODIMM-7200 (8GB)	068960	DDR5 SODIMM memory module with up to 7200 MT/s and 8GB RAM, commercial temp 0°C to +60°C
DDR5-SODIMM-7200 (16GB)	068961	DDR5 SODIMM memory module with up to 7200 MT/s and 16GB RAM, commercial temp 0°C to +60°C
DDR5-SODIMM-7200 (32GB)	068962	DDR5 SODIMM memory module with up to 7200 MT/s and 32GB RAM, commercial temp 0°C to +60°C
DDR5-SODIMM-7200 (48GB)	068963	DDR5 SODIMM memory module with up to 7200 MT/s and 48GB RAM, commercial temp 0°C to +60°C
DDR5-SODIMM-7200 (64GB)	068964	DDR5 SODIMM memory module with up to 7200 MT/s and 64GB RAM, commercial temp 0°C to +60°C