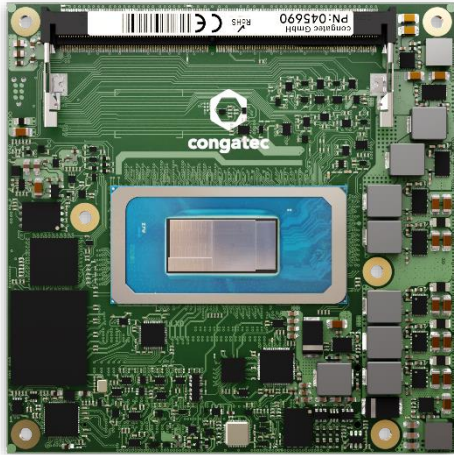


Intel® Core™ Ultra Processors

conga-TC700



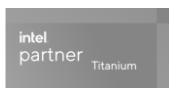
COM Express®



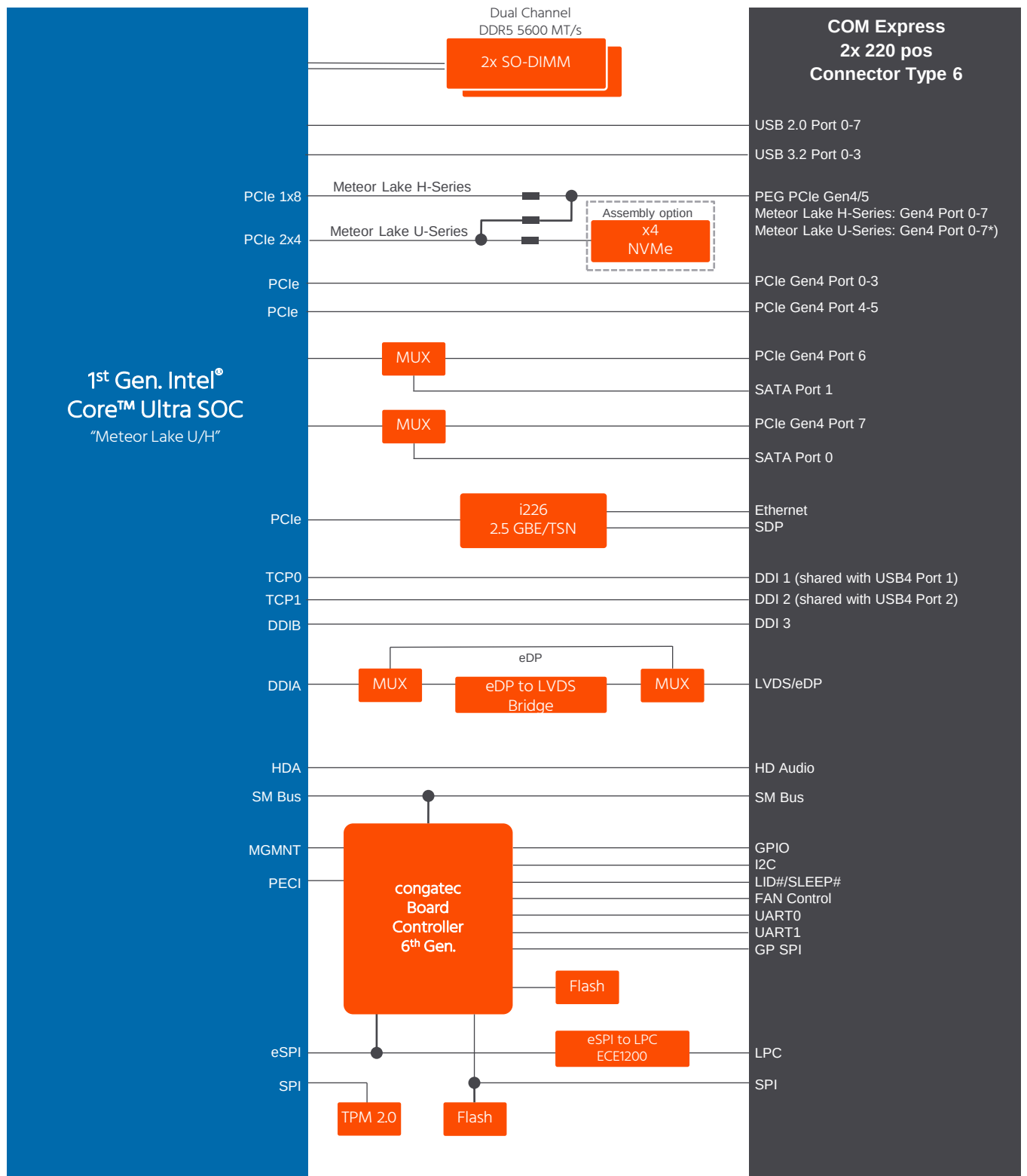
VIRTUALIZATION READY

- Intel® performance hybrid architecture with up to 16 cores and 22 threads
- Integrated Intel® Arc™ Graphics - entry level discrete graphics performance up to 128EUs
- Intel® AI Boost – Integrated NPU accelerator
- Up to 96 GB RAM with in-band ECC
- PCI Express Gen 4 | USB 4

Form factor	COM Express® Compact Type 6 connector pinout	
CPU	Intel® Core™ Ultra Processors Meteor Lake-U/H (H-Series, U-Series)	
DRAM	2 SO-DIMM sockets for DDR5 memory modules up to 48 GB each (max. 96 GB RAM system capacity) up to 5600 MT/s in-band ECC	
Mass Storage	NVMe x4 SSD (optional) up to 1 TB capacity	
Graphics	Intel® Arc™ Graphics architecture up to 8 X ^e Cores with 128 EUs	
AI Acceleration	Integrated NPU accelerator on all part numbers	
Display	Up to 3x DDI (2x shared with USB4) LVDS or eDP 4x independent displays up to 8k	
Ethernet	2.5 GbE with TSN support via Intel® i226 Ethernet controller series	
I/O Interfaces	Up to 8 PCIe Gen5 PEG (H-Series) or up to 2x4 PCIe Gen4 PEG (U-Series) up to 8 PCIe Gen4 up to 2x USB4 4x USB 3.2 Gen2 (incl. USB 2.0) + 8x USB 2.0 up to 2x SATA 2x UART GPIOs GP SPI LPC SM Bus I2C	
Audio	HDA	
congatec Board controller	Next Gen 6 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 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)	
Power Management	ACPI 6.0 with battery support	
Operating Systems	Microsoft® Windows 11 IoT Enterprise Microsoft® Windows 11 Microsoft® Windows 10 IoT Enterprise Linux Yocto	
Hypervisor	RTS Real-Time Hypervisor	
Temperature	Embedded Temp.: Operating 0°C to 60°C	Storage -20°C to 80°C
Humidity	Operating 10% to 90% r. H. non cond.	Storage 5% to 95% r. H. non cond.
Size	95 x 95 mm	



conga-TC700 | Block Diagram



 Assembly option – only available on request

*) U-Series: If assembly option for NVMe is used PEG port capability is 1x4 on PEG[0:3]

conga-TC700 | Modules Order Information

Article	PN	Description
conga-TC700/ultra7-155H	045700	COM Express Type 6 Compact module based on Intel® Core™ Ultra 7 processor with 6 P-cores, 8 E-cores and 2 Low Power E-cores P-cores 1.4Ghz up to 4.8GHz (turbo) E-Cores 0.9GHz up to 3.8GHz (turbo) Low Power E-cores up to 2.5GHz (turbo) Integrated NPU 24MB Intel® Smart Cache Intel® Arc™ graphics with 8 X ^e cores (128 EU) Dual channel SODIMM DDR5 5600 MT/s memory interface 28W Base-TDP Intel® code name Meteor Lake-H
conga-TC700/ultra5-135H	045701	COM Express Type 6 Compact module based on Intel® Core™ Ultra 5 processor with 4 P-cores, 8 E-cores and 2 Low Power E-cores P-cores 1.7GHz up to 4.6GHz (turbo) E-cores 1.2GHz up to 3.6GHz (turbo) Low Power E-cores up to 2.5GHz (turbo) Integrated NPU 18MB Intel® Smart Cache Intel® Arc™ graphics with 8 Xe cores (128 EU) Dual channel SODIMM DDR5 5600 MT/s memory interface 28W Base TDP Intel® code name Meteor Lake-H
conga-TC700/ultra5-125H	045702	COM Express Type 6 Compact module based on Intel® Core™ Ultra 5 processor with 4 P-cores, 8 E-cores and 2 Low Power E-cores P-cores 1.2GHz up to 4.5GHz (turbo) E-cores 0.7GHz up to 3.6GHz (turbo) Low Power E-cores up to 2.5GHz (turbo) Integrated NPU 18MB Intel® Smart Cache Intel® Arc™ graphics with 7 X ^e cores (112 EU) Dual channel SODIMM DDR5 5600 MT/s memory interface 28W Base-TDP Intel® code name Meteor Lake-H
conga-TC700/ultra7-155U	045710	COM Express Type 6 Compact module based on Intel® Core™ Ultra 7 processor with 2 P-cores, 8 E-cores and 2 Low Power E-cores P-cores 1.7Ghz up to 4.8GHz (turbo) E-cores 1.2GHz up to 3.8GHz (turbo) Low Power E-cores up to 2.1GHz (turbo) Integrated NPU 12MB Intel® Smart Cache Intel® Graphics with 4 X ^e cores (64 EU) Dual channel SODIMM DDR5 5600 MT/s memory interface 15W Base-TDP Intel® code name Meteor Lake-U
conga-TC700/ultra5-125U	045711	COM Express Type 6 Compact module based on Intel® Core™ Ultra 5 processor with 2 P-cores, 8 E-cores and 2 Low Power E-cores P-cores 1.3Ghz up to 4.3GHz (turbo) E-cores 0.8GHz up to 3.6GHz (turbo) Low Power E-cores up to 2.1GHz (turbo) Integrated NPU 12MB Intel® Smart Cache Intel® Graphics with 4 X ^e cores (64 EU) Dual channel SODIMM DDR5 5600 MT/s memory interface 15W Base-TDP Intel® code name Meteor Lake-U

conga-TC700 | Accessories Order Information

Article	PN	Description
conga-TC700/CSA-HP-B	045750	Standard active cooling solution for high performance COM Express module conga-TC700 with integrated heat pipes, 25.5mm height and integrated 12V fan. All standoffs are with 2.7mm bore hole.
conga-TC700/CSA-HP-T	045751	Standard active cooling solution for high performance COM Express module conga-TC700 with integrated heat pipes, 25.5mm height and integrated 12V fan. All standoffs are M2.5mm threaded.
conga-TC700/CSP-HP-B	045752	Standard passive cooling solution for high performance COM Express module conga-TC700 with integrated heat pipes, 24.7mm height. All standoffs are with 2.7mm bore hole.
conga-TC700/CSP-HP-T	045753	Standard passive cooling solution for high performance COM Express module conga-TC700 with integrated heat pipes, 24.7mm height. All standoffs are M2.5mm threaded.
conga-TC700/HSP-HP-B	045754	Standard heatspreader for high performance COM Express module conga-TC700 with integrated heat pipes, 11mm height. All standoffs are with 2.7mm bore hole.
conga-TC700/HSP-HP-T	045755	Standard heatspreader for high performance COM Express module conga-TC700 with integrated heat pipes, 11mm height. All standoffs are M2.5mm threaded.
conga-TEVAL/COMe 3.0	065810	Evaluation carrier board for COM Express Type 6 revision 3.0 modules.
conga-TEVAL/COMe 3.1	065820	Evaluation carrier board for COM Express Type 6 revision 3.1 modules.
DDR5-SODIMM-5600 (8GB)	068930	DDR5 SODIMM memory module with up to 5600 MT/s and 8GB RAM, commercial temp 0°C to +60°C
DDR5-SODIMM-5600 (16GB)	068931	DDR5 SODIMM memory module with up to 5600 MT/s and 16GB RAM, commercial temp 0°C to +60°C
DDR5-SODIMM-5600 (32GB)	068932	DDR5 SODIMM memory module with up to 5600 MT/s and 32GB RAM, commercial temp 0°C to +60°C
DDR5-SODIMM-5600 (48GB)	068933	DDR5 SODIMM memory module with up to 5600 MT/s and 48GB RAM, commercial temp 0°C to +60°C
DDR5-SODIMM-5600 (8GB) / i-temp	068935	DDR5 SODIMM memory module with up to 5600 MT/s and 8GB RAM, industrial temp -40°C to +85°C
DDR5-SODIMM-5600 (16GB) / i-temp	068936	DDR5 SODIMM memory module with up to 5600 MT/s and 16GB RAM, industrial temp -40°C to +85°C
DDR5-SODIMM-5600 (32GB) / i-temp	068937	DDR5 SODIMM memory module with up to 5600 MT/s and 32GB RAM, industrial temp -40°C to +85°C
DDR5-SODIMM-5600 (48GB) / i-temp	068938	DDR5 SODIMM memory module with up to 5600 MT/s and 48GB RAM, industrial temp -40°C to +85°C