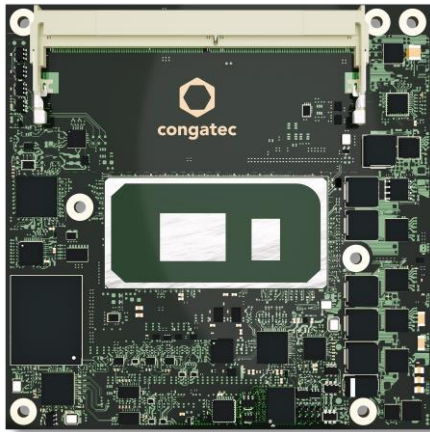


13th Gen Intel® Core™ Embedded mobile Processors

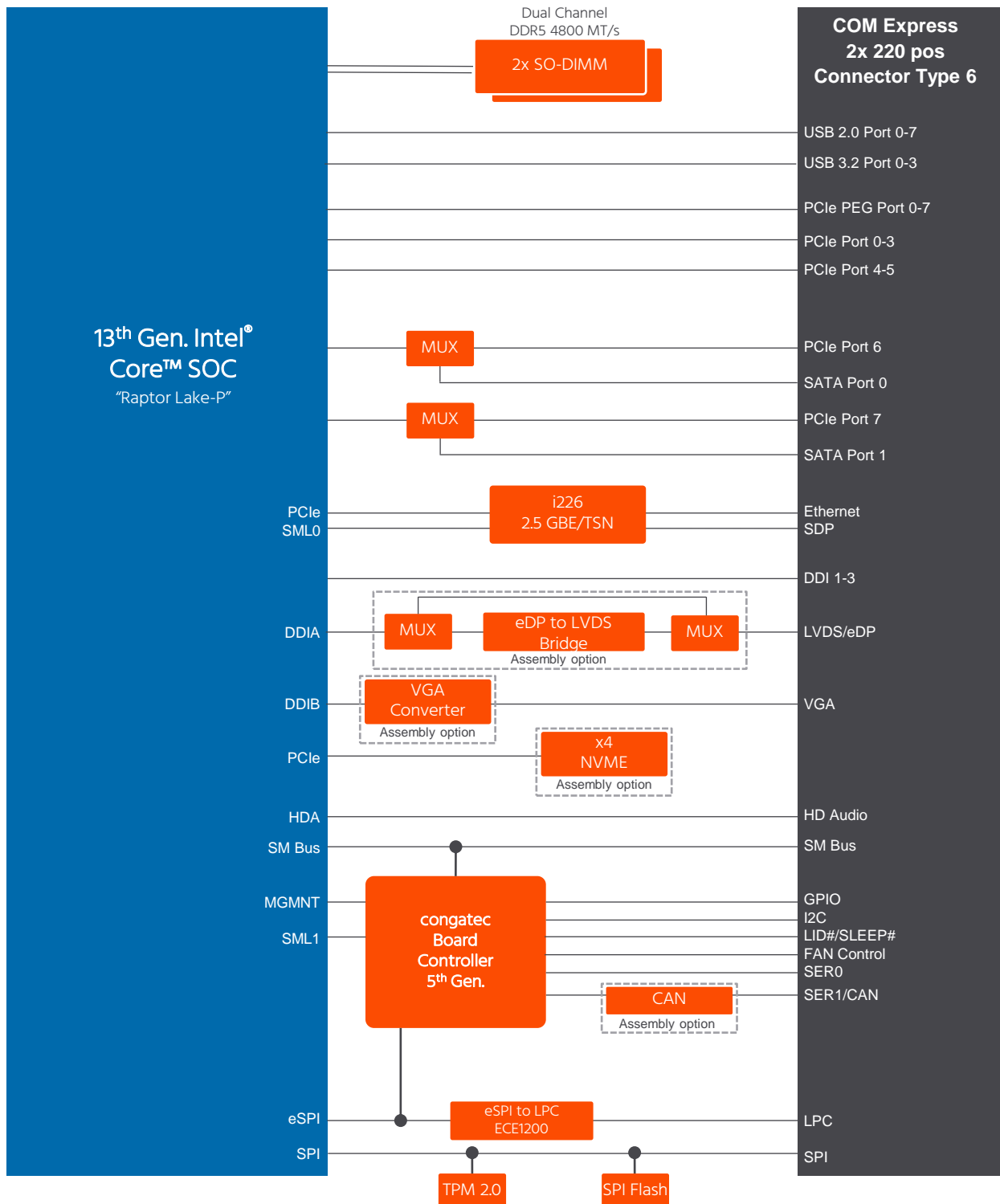
conga-TC675



- Intel® hybrid design combines Performance-cores with Efficient-cores
- Up to Intel® Iris® Xe Graphics architecture with up to 80 EUs
- PCI Express Gen 4 | USB 3.2
- AI Acceleration with Intel® Deep Learning Boost (VNNI)
- Embedded Use Condition SKUs

Form factor	COM Express® Compact Type 6 connector pinout						
CPUs	CPU	TDP in W	Cores count (P+E)	Processor Threads	P-cores Freq. GHz	E-cores Freq. GHz	Gfx Execution Units
	i5-1340PE	28	12 (4+8)	16	1.8/4.5	1.3/3.3	80
	i5-1335UE	15	10 (2+8)	12	1.3/4.5	1.1/3.3	80
	i3-13300HE	45	8 (4+4)	12	2.1/4.6	1.5/3.4	48
	i3-1320PE	28	8 (4+4)	12	1.7/4.5	1.2/3.3	48
	i3-1315UE	15	6 (2+4)	8	1.2/4.5	0.9/3.3	64
	U300E	15	5 (1+4)	6	1.1/4.3	0.9/3.2	48
DRAM	2 SO-DIMM sockets for DDR5 memory modules up to 32 GByte each (max. 64 GByte system capacity) up to 4800 MT/s						
Mass Storage	NVMe x4 SSD (optional)						
Graphics	Intel® UHD Graphics or Intel® Iris® Xe Graphics architecture up to 80 EUs						
Display	3x DDI (up to 8K support) LVDS (optional eDP) VGA (optional)						
Ethernet	2x 2.5 GbE with TSN support via Intel® i226 Ethernet controller series						
I/O Interfaces	Up to 8 PCIe Gen4 PEG 8 PCIe Gen3 8x USB (up to 4x USB 3.2, up to 8x USB 2.0) up to 2x SATA up to 2x UART CAN (opt.) GPIOs SPI LPC SM Bus I2C						
Audio	HDA						
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 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 10 Microsoft® Windows 10 IoT Enterprise Linux Yocto Real Time Systems Hypervisor						
Temperature	Operating: 0°C ... +60°C			Storage: -20°C ... +70°C			
Humidity	Operating: 10% ... 90% r. H. non cond.			Storage: 5% ... 95% r. H. non cond.			
Size	95 x 95 mm						

conga-TC675 | Block Diagram



conga-TC675 | Modules Order Information

Article	PN	Description
conga-TC675/i5-1340PE	045304	COM Express Type 6 Compact module based on Intel® Core™ i5-1340PE processor with 4 P-cores 1.8GHz up to 4.5GHz and 8 E-cores 1.3GHz up to 3.3GHz 12MB Intel® Smart Cache Intel® Iris® Xe Graphics architecture with 80 EUs Dual channel DDR5 4800 MT/s memory interface Intel® code name Raptor Lake-P (P-Series)
conga-TC675/i5-1335UE	045305	COM Express Type 6 Compact module based on Intel® Core™ i5-1335UE processor with 2 P-cores 1.3GHz up to 4.5GHz and 8 E-cores 1.1GHz up to 3.3GHz 12MB Intel® Smart Cache Intel® Iris® Xe Graphics architecture with 80 EUs Dual channel DDR5 4800 MT/s memory interface Intel® code name Raptor Lake-P (U-Series)
conga-TC675/i3-13300HE	045306	COM Express Type 6 Compact module based on Intel® Core™ i3-13300HE processor with 4 P-cores 2.1GHz up to 4.6GHz and 4 E-cores 1.5GHz up to 3.4GHz 12MB Intel® Smart Cache Intel® UHD Graphics with 48 EUs Dual channel DDR5 4800 MT/s memory interface Intel® code name Raptor Lake-P (H-Series)
conga-TC675/i3-1320PE	045307	COM Express Type 6 Compact module based on Intel® Core™ i3-1320PE processor with 4 P-cores 1.7GHz up to 4.5GHz and 4 E-cores 1.2GHz up to 3.3GHz 12MB Intel® Smart Cache Intel® UHD Graphics with 48EUs Dual channel DDR5 4800 MT/s memory interface Intel® code name Raptor Lake-P (P-Series)
conga-TC675/i3-1315UE	045308	COM Express Type 6 Compact module based on Intel® Core™ i3-1315UE 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 DDR5 4800 MT/s memory interface Intel® code name Raptor Lake-P (U-Series)
conga-TC675/U300E	045309	COM Express Type 6 Compact module based on Intel® U300E processor 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 DDR5 4800 MT/s memory interface Intel® code name Raptor Lake-P (U-Series)

conga-TC675 | Accessories Order Information

Article	PN	Description
conga-TC670/CSA-HP-B	049750	Standard active cooling solution for high performance COM Express module conga-TC670/675 with integrated heat pipes, 25.5mm height and integrated 12V fan. All standoffs are with 2.7mm bore hole.
conga-TC670/CSA-HP-T	049751	Standard active cooling solution for high performance COM Express module conga-TC670/675 with integrated heat pipes, 25.5mm height and integrated 12V fan. All standoffs are M2.5mm threaded.
conga-TC670/CSP-HP-B	049752	Standard passive cooling solution for high performance COM Express module conga-TC670/675 with integrated heat pipes, 24.7mm height. All standoffs are with 2.7mm bore hole.
conga-TC670/CSP-HP-T	049753	Standard passive cooling solution for high performance COM Express module conga-TC670/675 with integrated heat pipes, 24.7mm height. All standoffs are M2.5mm threaded.
conga-TC670/HSP-HP-B	049754	Standard heatspreader for high performance COM Express module conga-TC670 with integrated heat pipes, 11mm height. All standoffs are with 2.7mm bore hole.
conga-TC670/HSP-HP-T	049755	Standard heatspreader for high performance COM Express module conga-TC670 with integrated heat pipes, 11mm height. All standoffs are M2.5mm threaded.
conga-TEVAL2	065810	Evaluation Carrier Board for COM Express Type 6 modules