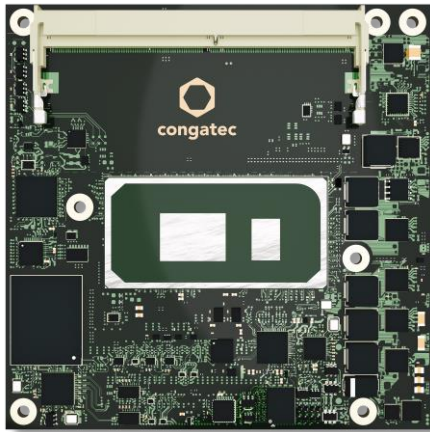


13<sup>th</sup> Gen Intel® Core™ Embedded mobile Processors

## conga-TC675

COM  Express®

- Intel® hybrid design combines Performance-cores with Efficient-cores
- Up to Intel® Iris® X<sup>e</sup> 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

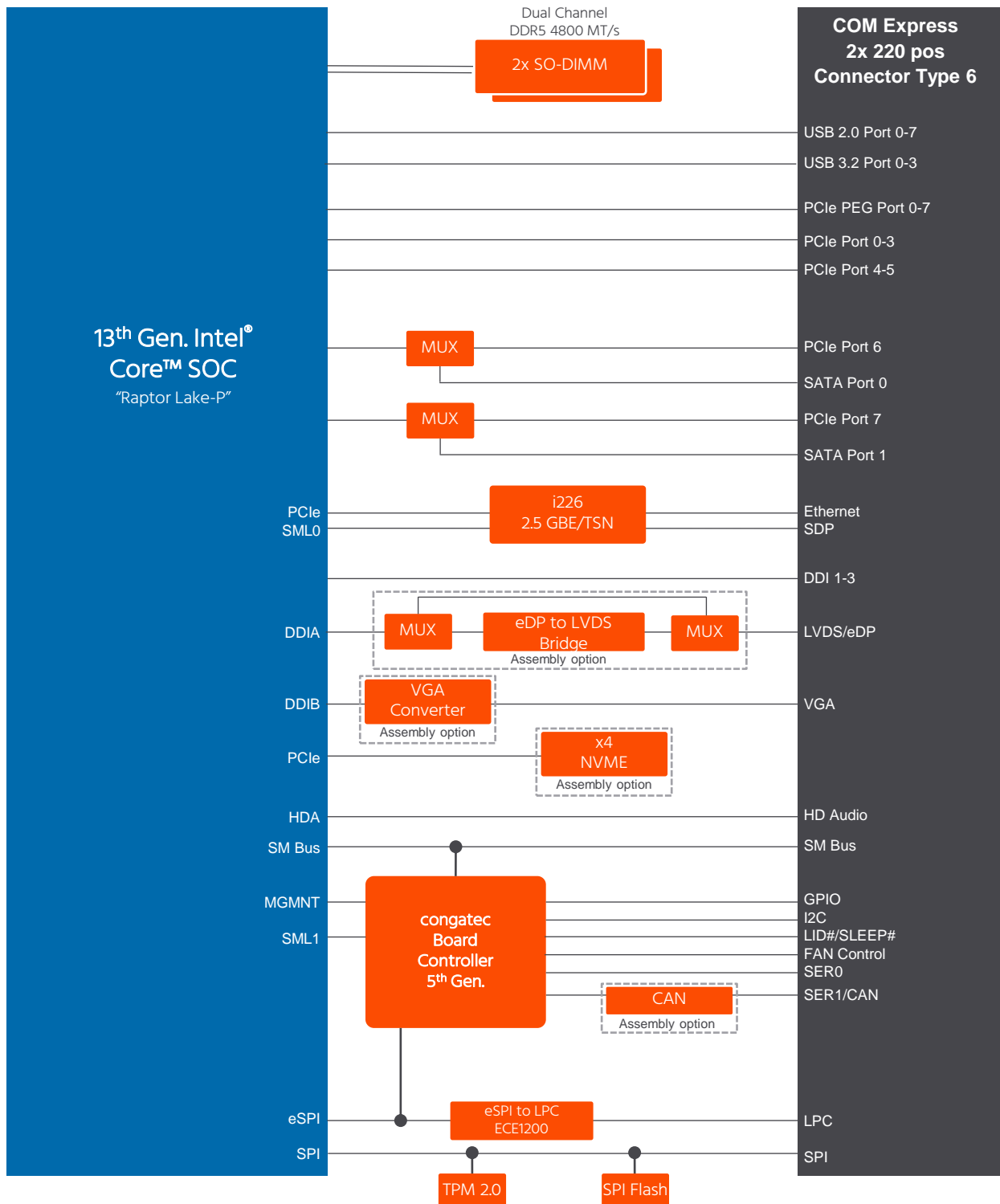
<b>Form factor</b>	COM Express® Compact   Type 6 connector pinout						
<b>CPUs</b>	CPU	TDP in W	Cores count (P+E)	Processor Threads	P-cores Freq. GHz	E-cores Freq. GHz	Gfx Execution Units
	i5-1340PE	28	12 (4+8)	16	1.8/4.5	1.3/3.3	80
	i5-1335UE	15	10 (2+8)	12	1.3/4.5	1.1/3.3	80
	i3-13300HE	45	8 (4+4)	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
<b>DRAM</b>	2 SO-DIMM sockets for DDR5 memory modules up to 32 GByte each (max. 64 GByte system capacity)   up to 4800 MT/s						
<b>Mass Storage</b>	NVMe x4 SSD (optional)						
<b>Graphics</b>	Intel® UHD Graphics or Intel® Iris® X <sup>e</sup> Graphics architecture   up to 80 EUs						
<b>Display</b>	3x DDI (up to 8K support)   LVDS (optional eDP)   VGA (optional)						
<b>Ethernet</b>	2x 2.5 GbE with TSN support via Intel® i226 Ethernet controller series						
<b>I/O Interfaces</b>	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						
<b>Audio</b>	HDA						
<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 Feature</b>	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						
<b>Security</b>	Trusted Platform Module (TPM 2.0)						
<b>Power Management</b>	ACPI 6.0 with battery support						
<b>Operating Systems</b>	Microsoft® Windows 10   Microsoft® Windows 10 IoT Enterprise   Linux   Yocto   Real Time Systems Hypervisor						
<b>Temperature</b>	Operating: 0°C ... +60°C			Storage: -20°C ... +70°C			
<b>Humidity</b>	Operating: 10% ... 90% r. H. non cond.			Storage: 5% ... 95% r. H. non cond.			
<b>Size</b>	95 x 95 mm						



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# 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



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