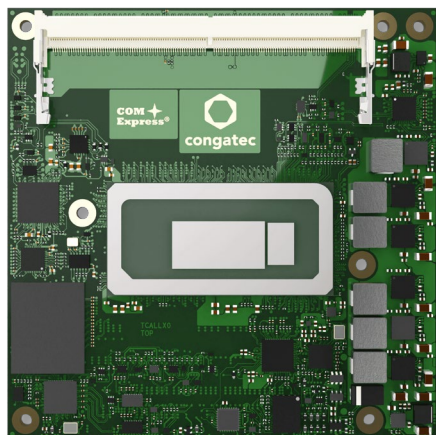


12th Gen Intel® Core™ Embedded mobile Processors

conga-TC670

COM  Express®

- Intel® hybrid design combines Performance-cores with Efficient-cores
- Up to Intel® Iris® Xe Graphics architecture with up to 96 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	COM Express® Compact Type 6 connector pinout						
	CPU	TDP Target	Cores count (P+E)	Processor Threads	P-cores Freq. GHz	E-cores Freq. GHz	Gfx Execution Units
	i7-12800HE	45W	14 (6+8)	20	2.4 / 4.6	1.8 / 3.5	96
	i5-12600HE	45W	12 (4+8)	16	2.5 / 4.5	1.8 / 3.3	80
	i3-12300HE	45W	8 (4+4)	12	1.9 / 4.3	1.5 / 3.3	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 96 EUs

Display 3x DDI (up to 5K support) | LVDS (optional eDP) | VGA (optional)

Ethernet 2.5 GbE TSN Ethernet (vial Intel® i225 LM)

I/O Interfaces 8 PCIe Gen4 PEG | up to 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 | I²C 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 11 | 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.

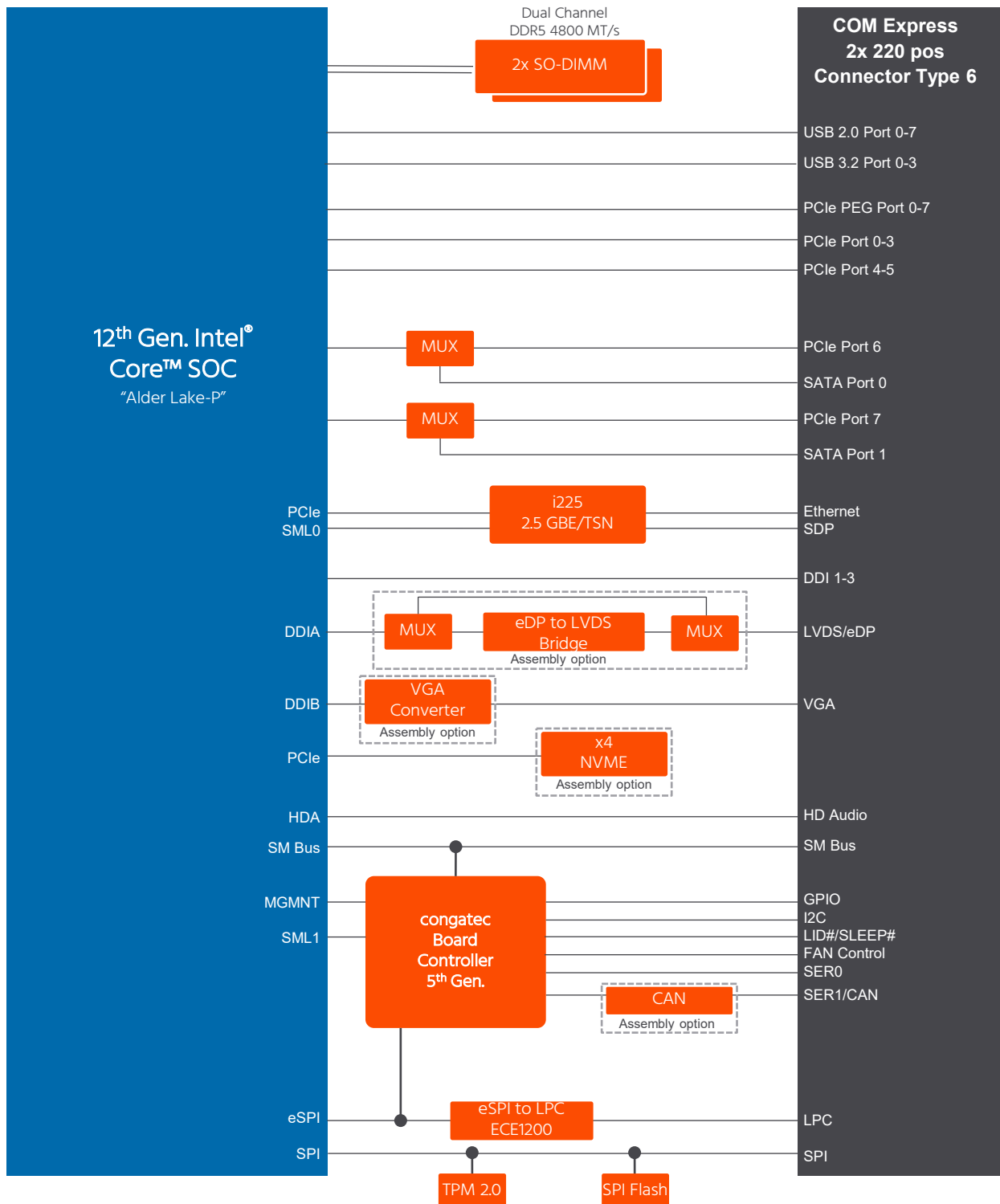
Size 95 x 95 mm



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conga-TC670 | Block Diagram



conga-TC670 | Order Information

Article	PN	Description
conga-TC670/i7-12800HE	049700	COM Express Type 6 Compact module based on Intel® Core™ i7-12800HE processor with 6 P-cores 2.4GHz up to 4.6GHz and 8 E-cores 1.8GHz up to 3.5GHz 24MB Intel® Smart Cache Intel® Iris® X ^e Graphics architecture with 96 EUs Dual channel DDR5 4800 MT/s memory interface Intel® code name Alder Lake-P (H-Series)
conga-TC670/i5-12600HE	049703	COM Express Type 6 Compact module based on Intel® Core™ i5-12600HE processor with 4 P-cores 2.5GHz up to 4.5GHz and 8 E-cores 1.8GHz up to 3.3GHz 18MB Intel® Smart Cache Intel® Iris® X ^e Graphics architecture with 80EUs Dual channel DDR5 4800 MT/s memory interface Intel® code name Alder Lake-P (H-Series)
conga-TC670/i3-12300HE	049706	COM Express Type 6 Compact module based on Intel® Core™ i3-12300HE processor with 4 P-cores 1.9GHz up to 4.3GHz and 4 E-cores 1.5GHz up to 3.3GHz 12MB Intel® Smart Cache Intel® UHD Graphics with 48EUs Dual channel DDR5 4800 MT/s memory interface Intel® code name Alder Lake-P (H-Series)



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