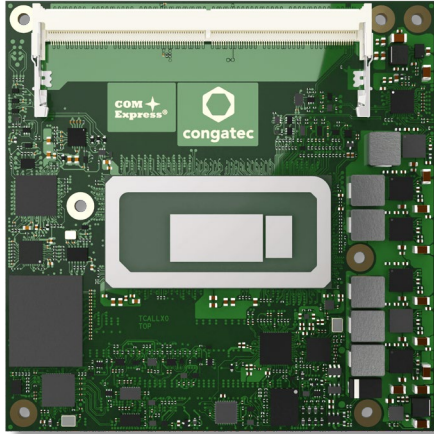


# 12<sup>th</sup> Gen Intel® Core™ Embedded mobile Processors

## 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

<b>Form factor</b>	COM Express® Compact   Type 6 connector pinout						
<b>CPUs</b>	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
<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® Xe Graphics architecture   up to 96 EUs						
<b>Display</b>	3x DDI (up to 5K support)   LVDS (optional eDP)   VGA (optional)						
<b>Ethernet</b>	2.5 GbE TSN Ethernet (vial Intel® i225 LM)						
<b>I/O Interfaces</b>	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						
<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 11   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						

# conga-TC670 | Block Diagram

