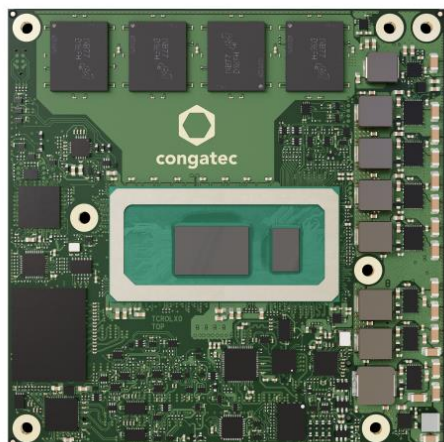


# 13<sup>th</sup> Gen Intel® Core™ Embedded mobile Processors

## conga-TC675r



### 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 4
- AI Acceleration with Intel® Deep Learning Boost (VNNI)
- Options for Industrial Temperature Range -40°C up to +85°C

<b>Form factor</b>	COM Express® Compact   Type 6 connector pinout	
<b>CPUs</b>	Intel® Core™ 13 <sup>th</sup> Gen Processors Raptor Lake-P (H-Series, P-Series, U-Series)	
<b>DRAM</b>	Up to 32 GB (optional 64GB) LPDDR5x with up to 6400 MT/s SDRAM   memory down   dual channel   IB ECC	
<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>	Up to 3x DDI (2x shared with USB4)   LVDS or eDP   VGA (optional)	
<b>Ethernet</b>	2.5 GbE with TSN support via Intel® i226 Ethernet controller series	
<b>I/O Interfaces</b>	Up to 8 PCIe Gen4 PEG (H-Series) or up to 4 PCIe Gen4 PEG (P- and U-Series)   up to 8 PCIe Gen3   up to 2x USB4   4x USB 3.2 Gen2 (incl. USB 2.0) + 4x USB 2.0   up to 2x SATA   up to 2x UART   CAN (opt)   8x GPIOs   GP 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 IoT Enterprise   Microsoft® Windows 10   Microsoft® Windows 10 IoT Enterprise   Linux   Yocto	
<b>Hypervisor</b>	RTS Real-Time Hypervisor	
<b>Temperature</b>	Operation: -40°C to 85°C	Storage: -40°C to 85°C
<b>Humidity</b>	Operation: 10% to 90%	Storage: 5% to 95%
<b>Size</b>	95 x 95 mm	

# conga-TC675r | Modules Order Information

Article	PN	Description
conga-TC675r/i7-13800HRE-32G	045330	COM Express Type 6 Compact module based on Intel® Core™ i7-13800HRE processor with 6 P-cores 2.5GHz up to 5.0GHz Turbo and 8 E-cores 1.8GHz up to 4.0GHz Turbo   24MB Intel® Smart Cache   Intel® Iris® X <sup>e</sup> Graphics architecture with 96 EUs   32 GByte dual channel LPDDR5x memory down   Industrial grade temperature range from -40°C to +85°C   Intel® code name Raptor Lake-P (H-Series)
conga-TC675r/i7-1370PRE-16G	045331	COM Express Type 6 Compact module based on Intel® Core™ i7-1370PRE processor with 6 P-cores 1.9GHz up to 4.8GHz Turbo and 8 E-cores 1.2GHz up to 3.7GHz Turbo   24MB Intel® Smart Cache   Intel® Iris® X <sup>e</sup> Graphics architecture with 96 EUs   16 GByte dual channel LPDDR5x memory down   Industrial grade temperature range from -40°C to +85°C   Intel® code name Raptor Lake-P (P-Series)
conga-TC675r/i7-1365URE-16G	045332	COM Express Type 6 Compact module based on Intel® Core™ i7-1365URE processor with 2 P-cores 1.7GHz up to 4.9GHz Turbo and 8 E-cores 1.2GHz up to 3.7GHz Turbo   12MB Intel® Smart Cache   Intel® Iris® X <sup>e</sup> Graphics architecture with 96 EUs   16 GByte dual channel LPDDR5x memory down   Industrial grade temperature range from -40°C to +85°C   Intel® code name Raptor Lake-P (U-Series)
conga-TC675r/i5-13600HRE-16G	045333	COM Express Type 6 Compact module based on Intel® Core™ i5-13600HRE processor with 4 P-cores 2.7GHz up to 4.8GHz Turbo and 8 E-cores 1.9GHz up to 3.6GHz Turbo   18MB Intel® Smart Cache   Intel® Iris® X <sup>e</sup> Graphics architecture with 80EUs   16 GByte dual channel LPDDR5x memory down   Industrial grade temperature range from -40°C to +85°C   Intel® code name Raptor Lake-P (H-Series)
conga-TC675r/i5-1350PRE-16G	045334	COM Express Type 6 Compact module based on Intel® Core™ i5-1350PRE processor with 4 P-cores 1.8GHz up to 4.6GHz Turbo and 8 E-cores 1.3GHz up to 3.4GHz Turbo   12MB Intel® Smart Cache   Intel® Iris® X <sup>e</sup> Graphics architecture with 80 EUs   16 GByte dual channel LPDDR5x memory down   Industrial grade temperature range from -40°C to +85°C   Intel® code name Raptor Lake-P (P-Series)
conga-TC675r/i3-1320PRE-16G	045337	COM Express Type 6 Compact module based on Intel® Core™ i3-1320PRE processor with 4 P-cores 1.7GHz up to 4.5GHz Turbo and 4 E-cores 1.2GHz up to 3.3GHz Turbo   12MB Intel® Smart Cache   Intel® UHD Graphics with 48EUs   16 GByte dual channel LPDDR5x memory down   Industrial grade temperature range from -40°C to +85°C   Intel® code name Raptor Lake-P (P-Series)

# conga-TC675r | Accessories Order Information

Article	PN	Description
conga-TC675/CSA-HP-B	049750	Standard active cooling solution for high performance COM Express module conga-TC675 with integrated heat pipes, 25.5mm height and integrated 12V fan. All standoffs are with 2.7mm bore hole.
conga-TC675/CSA-HP-T	049751	Standard active cooling solution for high performance COM Express module conga-TC675 with integrated heat pipes, 25.5mm height and integrated 12V fan. All standoffs are M2.5mm threaded.
conga-TC675/CSP-HP-B	049752	Standard passive cooling solution for high performance COM Express module conga-TC675 with integrated heat pipes, 24.7mm height. All standoffs are with 2.7mm bore hole.
conga-TC675/CSP-HP-T	049753	Standard passive cooling solution for high performance COM Express module conga-TC675 with integrated heat pipes, 24.7mm height. All standoffs are M2.5mm threaded.
conga-TC675/HSP-HP-B	049754	Standard heatspreader for high performance COM Express module conga-TC675 with integrated heat pipes, 11mm height. All standoffs are with 2.7mm bore hole.
conga-TC675/HSP-HP-T	049755	Standard heatspreader for high performance COM Express module conga-TC675 with integrated heat pipes, 11mm height. All standoffs are M2.5mm threaded.