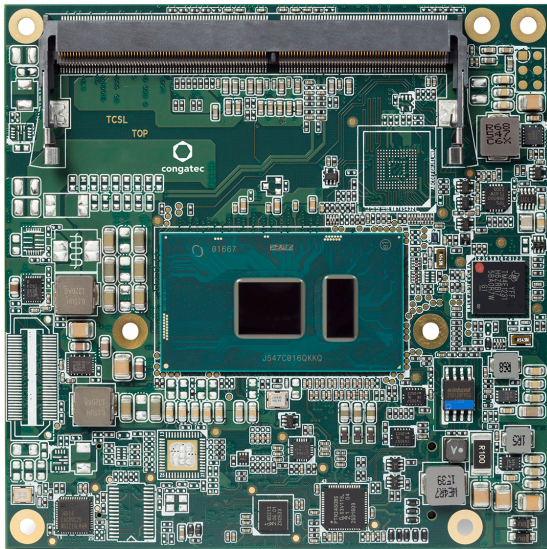


# FAST AND COMPACT

# conga-TC175

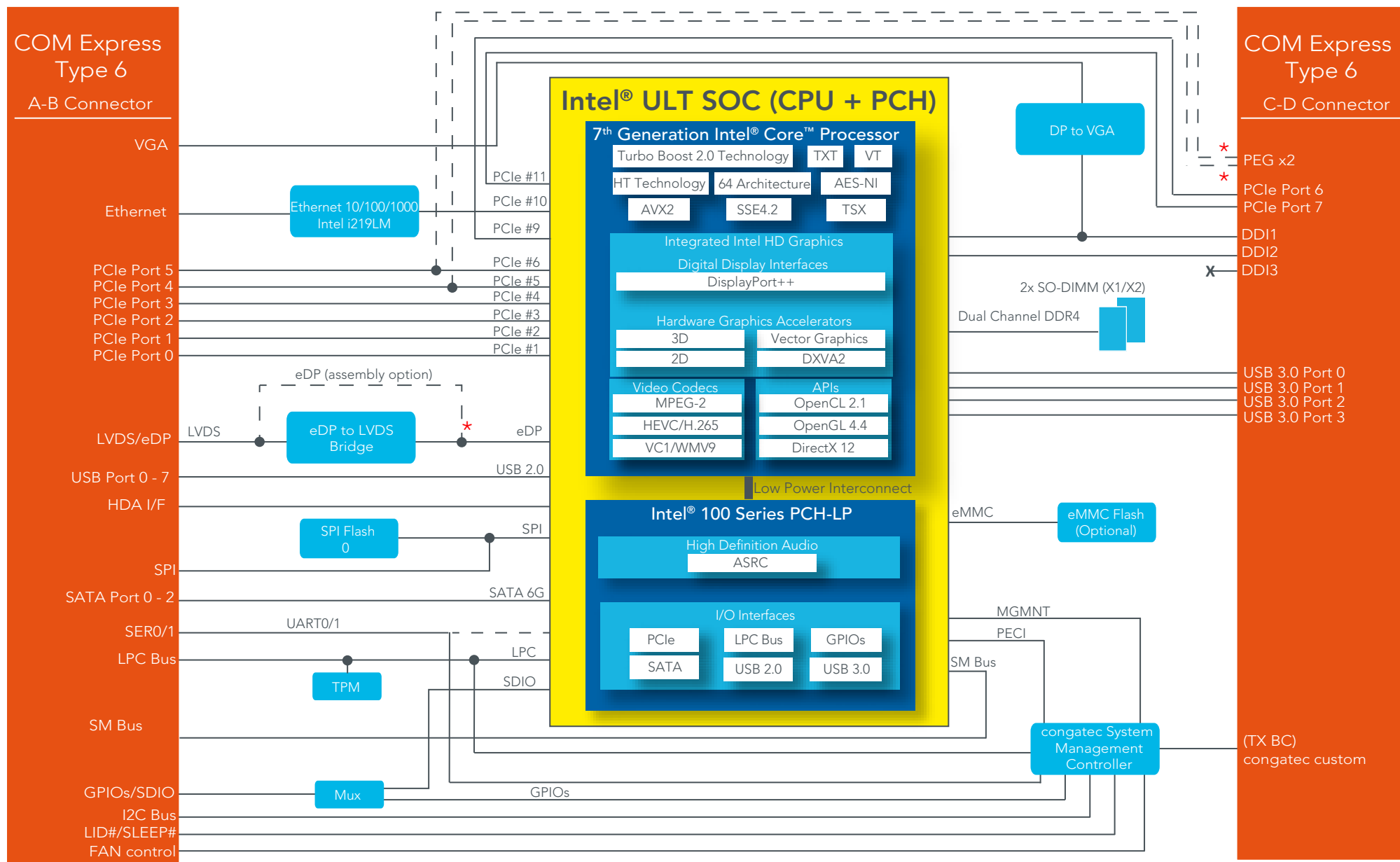


- 7<sup>th</sup> Generation Intel® Core™ SOC processor
- Intel® Gen9 HD Graphics with HEVC (H.265) support
- Intel® Optane™ memory can be connected via PCI Express Gen 3.0
- Low power consumption (TDP 15W, cTDP 7.5W)
- Up to 32 GByte dual channel DDR4 memory
- COM Express Compact Type 6 module 95x95 mm<sup>2</sup>



Formfactor	COM Express® Compact, (95 x 95 mm), Type 6 Connector Pinout							
CPU	Intel® Core™ i7-7600U	3.9 GHz (Burst)   2.8 GHz Clock	Dual Core	4MB cache	15W TDP	7.5W cTDP#	Intel® HD Graphics 620	
	Intel® Core™ i5-7300U	3.5 GHz (Burst)   2.6 GHz Clock	Dual Core	3MB cache	15W TDP	7.5W cTDP	Intel® HD Graphics 620	
	Intel® Core™ i3-7100U	2.4 GHz Clock	Dual Core	3MB cache	15W TDP	7.5W cTDP	Intel® HD Graphics 620	
	Intel® Celeron® 3965U	2.2 GHz Clock	Dual Core	2MB cache	15W TDP	10W cTDP	Intel® HD Graphics 610	
	Intel® Turbo Boost Technology   Intel® Hyper-Threading Technology (HT)   Intel® Advanced Vector Extensions 2.0 (AVX2) Intel® Advanced Encryption Standard New Instructions (AES-NI)   Integrated dual channel memory controller up to 34,1 GByte/sec. memory bandwidth   Integrated Intel® Gen9 HD Graphics with frequency up to 1.05 GHz   Intel® Clear Video HD Technology   Intel® Virtualization Technology (VT)   Intel® Trusted Execution Technology (TXT)   Intel® Secure Key							
DRAM	2 Sockets, SO-DIMM DDR4 up to 2133 MT/s and 32 GByte dual channel							
Chipset	Integrated PCH-LP							
Ethernet	Intel® i219-LM GbE LAN Controller with AMT 11.6 support							
I/O Interfaces	8x PCI Express GEN. 3.0 lanes   3x Serial ATA® Gen 3 (can be configured as RAID)   4x USB 3.0 (XHCI)   8x USB 2.0 (XHCI)   LPC bus (no DMA)   I²C bus (fast mode, 400 kHz, multi-master)   2x UART							
Sound	Digital High Definition Audio Interface with support for multiple audio codecs							
Graphics	Intel® Gen9 HD Graphics Engine with OpenCL 2.1, OpenGL 5.0 and DirectX12 (for Windows 10) support   up to three independent displays High performance hardware MPEG-2 decoding   WMV9 (VC-1) and H.265 (HEVC) support Blu-ray support @ 40 MBit/s HEVC, VP9 and VDENC encoding							
LVDS (eDP optional)	Dual channel LVDS transmitter, Supports flat panels 2x24 Bit interface   VESA and openLDI colour mappings   resolutions up to 1920x1200 Automatic Panel Detection via EDID/EPI							
Digital Display Interface (DDI)	2x DDI (TMDS / DisplayPort 1.2) with support for Multi-Stream Transport (MST)   resolutions up to 4k   VGA (optional)							
congatec Board Controller	Multi Stage Watchdog   non-volatile User Data Storage   Manufacturing and Board Information   Board Statistics   BIOS Setup Data Backup I²C bus (fast mode, 400 kHz, multi-master)   Power Loss Control							
Embedded BIOS Features	AMI Aptio® UEFI 2.x firmware   8/16 MByte serial SPI firmware flash							
Security	The conga-TC175 can be optionally equipped with a discrete "Trusted Platform Module" (TPM 1.2 / 2.0). It is capable of calculating efficient hash and RSA algorithms with key lengths up to 2,048 bits and includes a real random number generator. Security sensitive applications such as gaming and e commerce will benefit also with improved authentication, integrity and confidence levels.							
Power Management	ACPI 4.0 with battery support							
Operating Systems	Microsoft® Windows 10   Microsoft® Windows 10 IoT Enterprise   Linux							
Power Consumption	See User's Guide for full details							
Temperature	Operating: 0 .. +60°C Storage: -40 .. +85°C							
Humidity	Operating: 10 - 90% r. H. non cond. Storage: 5 - 95% r. H. non cond.							
Size	95 x 95 mm (3.74" x 3.74")							

# conga-TC175 | Block diagram



**Note:**

\* Not supported by default. Only available as assembly option.

# conga-TC175 | Order Information

Article	PN	Description
conga-TC175/i7-7600U	045250	COM Express Type 6 Compact module with Intel® Core™ i7-7600U dual core processor with 2.8GHz up to 3.9GHz, 4MB Intel® Smart Cache , GT2 graphics and 2133MT/s dual channel DDR4 memory interface (Intel Kaby Lake-U).
conga-TC175/i5-7300U	045251	COM Express Type 6 Compact module with Intel® Core™ i5-7300U dual core processor with 2.6GHz up to 3.5GHz, 3MB Intel® Smart Cache , GT2 graphics and 2133MT/s dual channel DDR4 memory interface (Intel Kaby Lake-U).
conga-TC175/i3-7100U	045252	COM Express Type 6 Compact module with Intel® Core™ i3-7100U dual core processor with 2.4GHz, 3MB Intel® Smart Cache , GT2 graphics and 2133MT/s dual channel DDR4 memory interface (Intel Kaby Lake-U).
conga-TC175/3965U	045253	COM Express Type 6 Compact module with Intel® Celeron® 3965U dual core processor with 2.2GHz, 2MB Intel® Smart Cache, GT1 graphics and 2133MT/s dual channel DDR4 memory interface (Intel Kaby Lake-U).
conga-TC170/HSP-B	045230	Standard heatspreader for COM Express modules conga-TC97, TC170 and TC175. All standoffs are with 2.7mm bore hole.
conga-TC170/HSP-T	045231	Standard heatspreader for COM Express modules conga-TC97, TC170 and TC175. All standoffs are M 2.5 threaded..
conga-TC170/CSP-B	045232	Standard passive cooling solution for COM Express modules conga-TC97, TC170 and TC175. All standoffs are with 2.7mm bore hole.
conga-TC170/CSP-T	045233	Standard passive cooling solution for COM Express modules conga-TC97, TC170 and TC175. All standoffs are M 2.5 threaded
conga-TC170/CSA-B	045234	Standard active cooling solution for COM Express modules conga-TC97, TC170 and TC175. All standoffs are with 2.7mm bore hole, 15mm fins, 18mm overall heat sink height and integrated 12V fan..
conga-TC170/CSA-T	045235	Standard active cooling solution for COM Express modules conga-TC97, TC170 and TC175. All standoffs are M 2.5 threaded, 15mm fins, 18mm overall heat sink height and integrated 12V fan.
DDR4-SODIMM-2400 (4GB)	068790	4 GByte DDR4 SODIMM memory module with 2400 MT/s
DDR4-SODIMM-2400 (8GB)	068791	8 GByte DDR4 SODIMM memory module with 2400 MT/s
DDR4-SODIMM-2400 (16GB)	068792	16 GByte DDR4 SODIMM memory module with 2400 MT/s

Article	PN	Description
conga-TEVAL	065800	Evaluation carrier board for Type 6 COM Express modules
conga-LDVI/EPI	011115	LVDS to DVI converter board for digital flat panels with onboard EEPROM