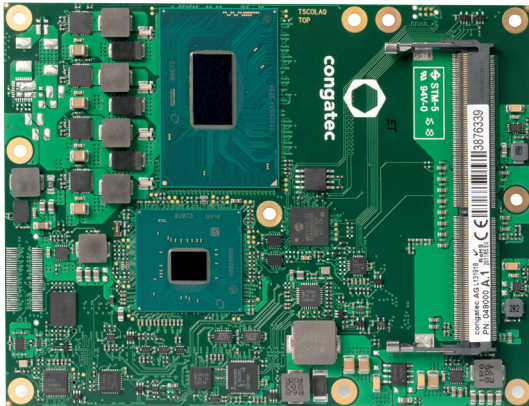


# SERVER-CLASS EMBEDDED PERFORMANCE

## conga-TS370

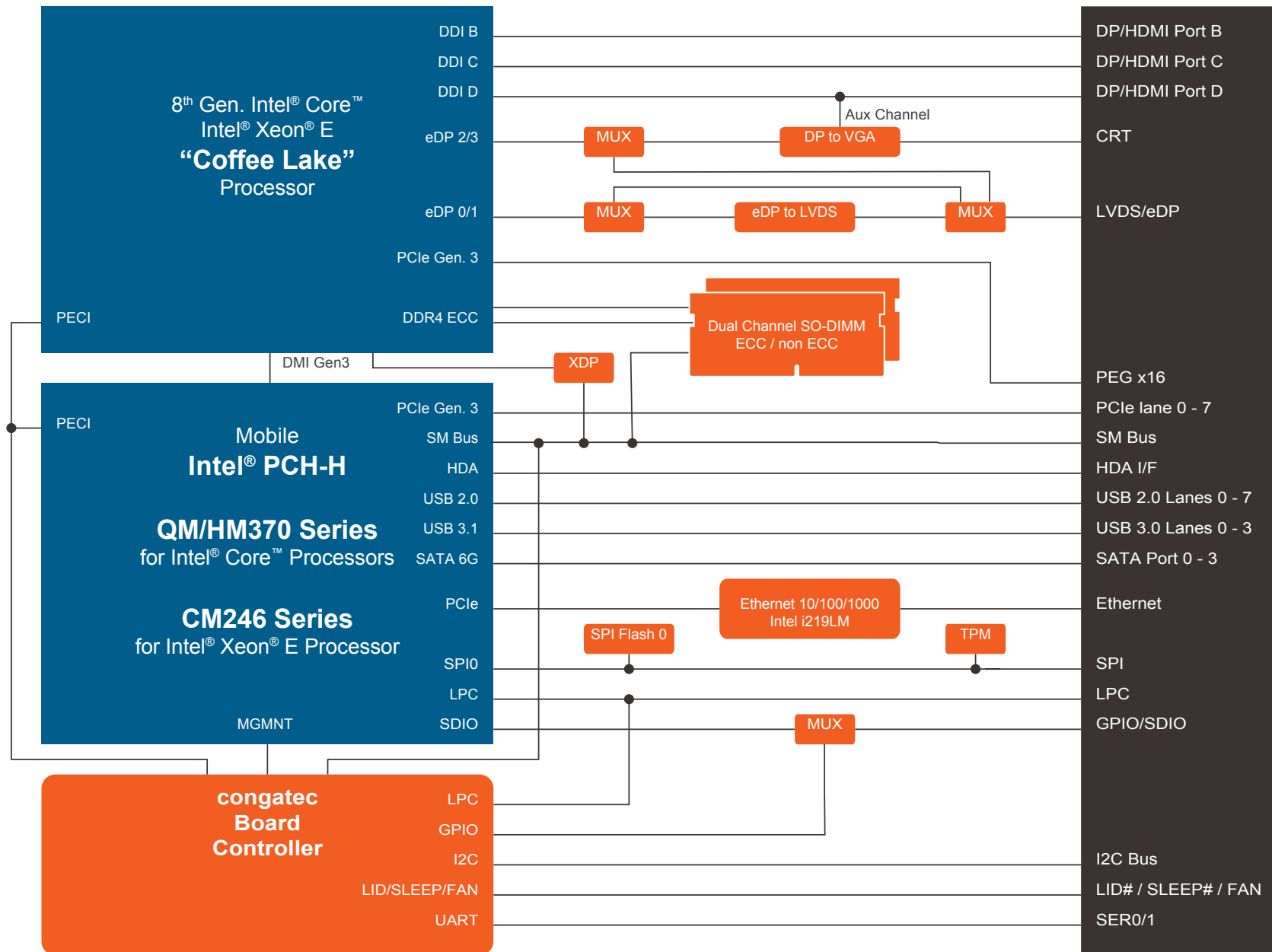


- 8<sup>th</sup> Generation Intel® Core™ processor with up to 6 Cores
- Intel® Xeon® processors for data center applications
- Support for USB 3.1 Gen2 with 10Gb/s
- Intel® Optane™ memory support
- ECC memory support
- Up to 32 GByte dual channel DDR4 memory

**COM**  **Express®**

Formfactor	COM Express® Basic, (95 x 125 mm), Type 6 Connector Pinout				
CPU	Intel® Xeon® E-2176M Processor	4.4 GHz (Boost)   2.7 GHz Clock	Hexa Core	12 MB cache	45 W (35 W cTDP)
	Intel® Core™ i7-8850H Processor	4.3 GHz (Boost)   2.6 GHz Clock	Hexa Core	9 MB cache	45 W (35 W cTDP)
	Intel® Core™ i5-8400H Processor	4.2 GHz (Boost)   2.5 GHz Clock	Quad Core	8 MB cache	45 W (35 W cTDP)
	Intel® Turbo Boost Technology   Intel® Hyper-Threading Technology (Intel® HT Technology)   Intel® Advanced Vector Extensions 2.0 (Intel® AVX2)   Intel® Advanced Encryption Standard New Instructions (Intel® AES-NI)   Integrated dual channel memory controller   up to 42,6 GByte/sec. memory bandwidth   Integrated Intel® Gen9 HD Graphics with frequency up to 1GHz   Intel® Clear Video HD Technology   Intel® Virtualization Technology (Intel® VT)   Intel® Trusted Execution Technology (Intel® TXT)   Intel® Secure Key				
DRAM	2 Sockets, SO-DIMM DDR4 up to 2666 MT/s and 32GByte dual channel, optionally with ECC support (Intel® Xeon®)				
Chipset	Mobile Intel® PCH-H QM370 Series or CM246 Series for Intel Xeon Processor				
Ethernet	Intel® i219-LM GbE LAN Controller with AMT 12.0 support				
I/O Interfaces	8x PCI Express™ Gen 3.0 lanes   1x PEG x16 Gen 3   4x SATA Gen 3   4x USB 3.1 Gen 2 @ 10 GB/s   8x USB 2.0   LPC bus   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 UHD Graphics Engine with OpenCL 2.0, OpenGL 4.3 / 4.4 and DirectX 11/12 (for Windows 10) support   up to three independent displays: HDMI 1.4a / DisplayPort 1.2 / eDP 1.4   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	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   LVDS or eDP switchable in BIOS setup				
Digital Display Interface (DDI)	3x TMDS (HDMI) / DisplayPort 1.2 with support for Multi-Stream Transport (MST)   resolutions up to 4k   VGA support				
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   32 MByte serial SPI firmware flash				
Security	The conga-TS370 is equipped with a discrete "Trusted Platform Module" (TPM 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 (64bit only)   Microsoft® Windows 10 IoT Enterprise (64bit only)   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 125 mm (3.74" x 4.92")				

# conga-TS370 | Block diagram



# conga-TS370 | Order Information

Article	PN	Description
conga-TS370/i7-8850H	049000	COM Express Type 6 Basic module with Coffeelake-H Intel® Core™ i7-8850H hexa core processor with 2.6GHz, 9MB L2 cache, GT2 graphics and 2666MT/s dual channel DDR4 memory interface. Chipset QM370. TPM 2.0.
conga-TS370/i5-8400H	049001	COM Express Type 6 Basic module with Coffeelake-H Intel® Core™ i5-8400H quad core processor with 2.5GHz, 8MB L2 cache, GT2 graphics and 2666MT/s dual channel DDR4 memory interface. Chipset QM370. TPM 2.0.
conga-TS370/i3-8100H	049003	COM Express Type 6 Basic module with Coffeelake-H Intel® Core™ i3-8100H quad core processor with 3.0GHz, 6MB L2 cache, GT2 graphics and 2666MT/s dual channel DDR4 memory interface. Chipset HM370. TPM 2.0.
conga-TS370/E-2176M	049002	COM Express Type 6 Basic module with Coffeelake-H Intel® Xeon® Processor E-2176M, hexa core processor with 2.7GHz, 12MB L2 cache, GT2 graphics and 2666MT/s dual channel DDR4 memory interface with ECC support. Chipset CM246. TPM 2.0.

Article	PN	Description
conga-TS170/HSP-HP-B	045934	Standard heatspreader for high performance COM Express modules conga-TS170/TS175/TS370 with integrated heat pipes. All standoffs are with 2.7mm bore hole.
conga-TS170/HSP-HP-T	045935	Standard heatspreader for high performance COM Express modules conga-TS170/TS175/TS370 with integrated heat pipes. All standoffs are M2.5mm thread.
conga-TS170/CSP-HP-B	045932	Standard passive cooling solution for high performance COM Express modules conga-TS170/TS175/TS370 with integrated heat pipes, 15mm silver fins and 21mm overall heat sink height. All standoffs are with 2.7mm bore hole.
conga-TS170/CSP-HP-T	045933	Standard passive cooling solution for high performance COM Express modules conga-TS170/TS175/TS370 with integrated heat pipes, 15mm silver fins and 21mm overall heat sink height. All standoffs are M2.5mm thread.
conga-TS170/CSA-HP-B	045930	Standard active cooling solution for high performance COM Express modules conga-TS170/TS175/TS370 with integrated heat pipes, 15mm silver fins, 21mm overall heat sink height and integrated 12V fan. All standoffs are with 2.7mm bore hole.
conga-TS170/CSA-HP-T	045931	Standard active cooling solution for high performance COM Express modules conga-TS170/TS175/TS370 with integrated heat pipes, 15mm silver fins, 21mm overall heat sink height and integrated 12V fan. All standoffs are M2.5mm thread.

DDR4-SODIMM-2666 (4GB)	067780	DDR4 SODIMM memory module with 2666 MT/s and 4 GByte
DDR4-SODIMM-2666 (8GB)	067781	DDR4 SODIMM memory module with 2666 MT/s and 8GByte
DDR4-SODIMM-2666 (16GB)	067782	DDR4 SODIMM memory module with 2666 MT/s and 16 GByte
DDR4-SODIMM-2666 (32GB)	068806	DDR4 SODIMM memory module with 2666 MT/s and 32 GByte
DDR4-SODIMM-2666 ECC (4GB)	067783	DDR4 ECC SODIMM memory module with 2666 MT/s and 4 GByte
DDR4-SODIMM-2666 ECC (8GB)	067784	DDR4 ECC SODIMM memory module with 2666 MT/s and 8 GByte
DDR4-SODIMM-2666 ECC (16GB)	067785	DDR4 ECC SODIMM memory module with 2666 MT/s and 16 GByte
DDR4-SODIMM-2666 ECC (32GB)	068805	DDR4 ECC SODIMM memory module with 2666 MT/s and 32 GByte

conga-TEVA2	065810	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
COMe-carrier-board-Socket-5	400007	Connector for COM-Express carrier boards, height 5mm, packing unit 4 pieces
COMe-carrier-board-Socket-8	400004	Connector for COM-Express carrier boards, height 8mm, packing unit 4 pieces