HIGH PERFORMANCE COMPUTING

conga-TS370

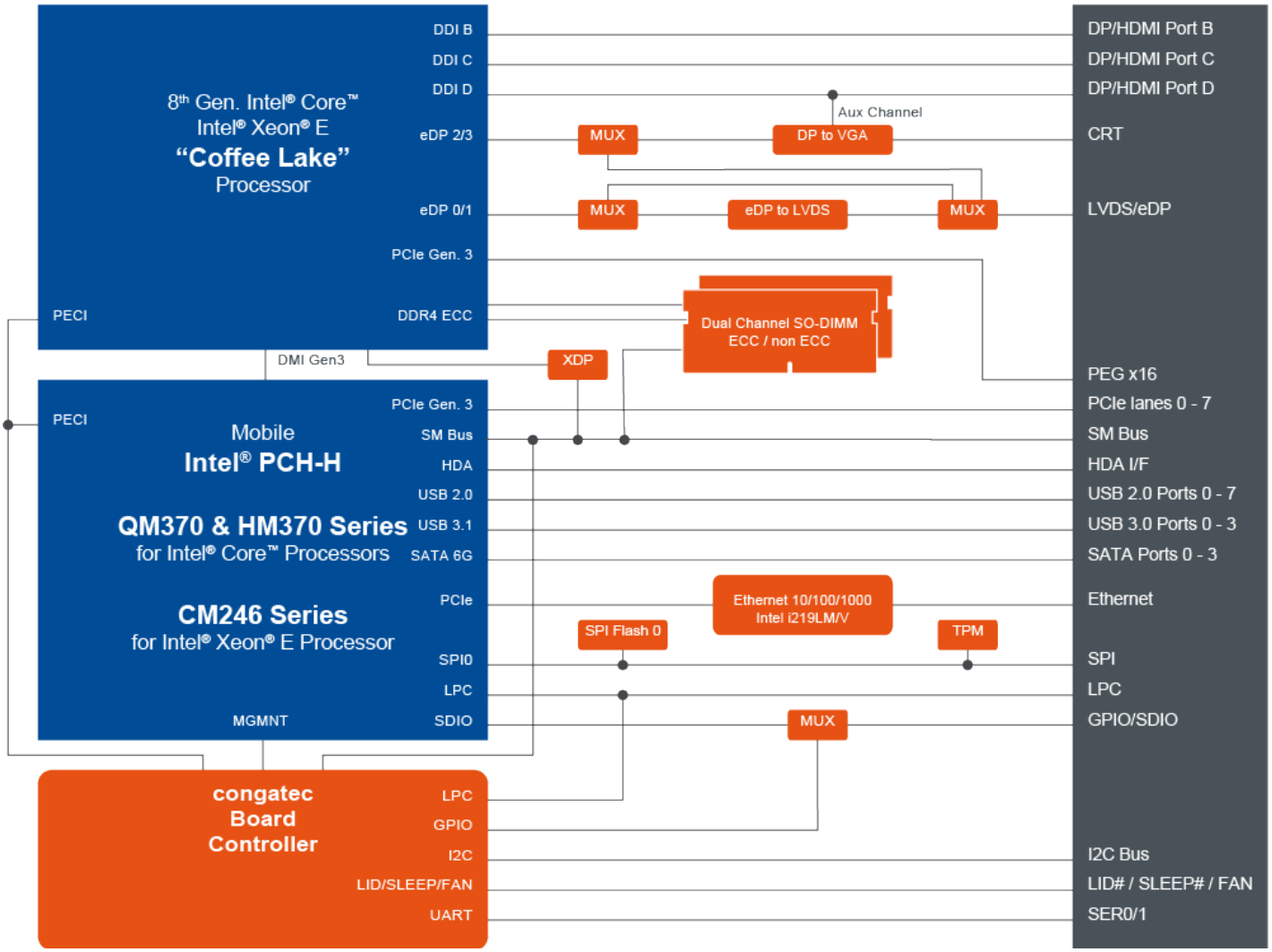


- 8th Generation Intel® Core™ processor series with up to 6 cores
- Intel® Xeon® processors for data center applications
- Support for USB 3.1 Gen2 with 10Gb/s
- Up to 64 GByte dual channel DDR4 memory
- ECC memory support

COM Express®

Form factor	COM Express® Basic, (95 x 125 mm) | Type 6 connector pinout				
Processor	Intel® Core™ i7-9850HE	2.7 GHz | 4.4 GHz (boost)	6 cores	9 MB cache	45 W TDP (35 W cTDP)
	Intel® Core™ i7-9850HL	1.9 GHz | 4.1 GHz (boost)	6 cores	9 MB cache	35 W TDP (25 W cTDP)
	Intel® Core™ i3-9100HL	1.6 GHz | 2.9 GHz (boost)	4 cores	6 MB cache	25 W TDP
	Intel® Xeon® E-2276ME	2.8 GHz | 4.5 GHz (boost)	6 cores	12 MB cache	45 W TDP (35 W cTDP)
	Intel® Xeon® E-2276ML	2.0 GHz | 4.2 GHz (boost)	6 cores	12 MB cache	35 W TDP (25 W cTDP)
	Intel® Xeon® E-2254ME	2.6 GHz | 3.8 GHz (boost)	4 cores	8 MB cache	45 W TDP (35 W cTDP)
	Intel® Xeon® E-2254ML	2.7 GHz | 4.4 GHz (boost)	4 cores	8 MB cache	35 W TDP (25 W cTDP)
	Intel® Core™ i7-8850H	2.6 GHz | 4.3 GHz (boost)	6 cores	9 MB cache	45 W TDP (35 W cTDP)
	Intel® Core™ i5-8400H	2.5 GHz | 4.2 GHz (boost)	4 cores	8 MB cache	45 W TDP (35 W cTDP)
	Intel® Core™ i3-8100H	3.0 GHz	4 cores	6 MB cache	45 W TDP (35 W cTDP)
	Intel® Xeon® E-2176M	2.7 GHz | 4.4 GHz (boost)	6 cores	12 MB cache	45 W TDP (35 W cTDP)
	Intel® Celeron® G4932E	1.9 GHz	2 cores	2 MB cache	25 W TDP
	Intel® Celeron® G4930E	2.4 GHz	2 cores	2 MB cache	35 W TDP
	Intel® Turbo Boost Technology | Intel® Hyper-Threading Technology | Intel® Advanced Vector Extensions 2.0 (Intel® AVX2) | Intel® Advanced Encryption Standard New Instructions (Intel® AES-NI) | Integrated Intel® Gen 9 HD Graphics | Intel® Clear Video HD Technology | Intel® Virtualization Technology (Intel® VT) | Intel® Trusted Execution Technology (Intel® TXT) | Intel® Secure Key				
DRAM	Dual channel DDR4 up to 2666 MT/s | 2x SO-DIMM | up to 2x 32 GByte (optionally with ECC support for 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 Gbit/s | 8x USB 2.0 | LPC bus | I^2C 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 2.0, OpenGL 4.3/4.4 and DirectX 11/12 | up to three independent displays: HDMI 1.4a / DisplayPort 1.2 / eDP 1.4 | MPEG-2 , WMV9 (VC-1), H.265 decoding | HEVC, VP9 encoding				
LVDS / eDP	Dual channel LVDS transmitter, Supports flat panels 2x24 Bit interface | VESA and openLDI color mappings | resolutions up to 1920x1200 | Automatic Panel Detection via EDID/EPI | LVDS or eDP switchable in BIOS setup				
Digital Display Interface	3x HDMI 1.4a / 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 | I^2C 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	TPM 2.0 Infineon SLB9665				
Power Management	ACPI 4.0 with battery support, configurable TDP				
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 to +60°C		Storage: -40 to +85°C		
Extended Temperature	Screening service on request:		-25 to +80°C (burn-in & cold-soak) -40 to +85°C (burn-in & cold-soak)		
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 – COM Express® Module

Article	PN	Description
conga-TS370/i7-9850HE	049102	COM Express Type 6 Basic module based on Intel® Core™ i7-9850HE 6-core processor with 2.7GHz up to 4.4GHz turbo boost, 12MB Intel® Smart Cache, Intel® UHD Graphics 630 and dual channel DDR4 2666 MT/s memory interface (formerly Coffee Lake-H Refresh). Chipset QM370.
conga-TS370/i7-9850HL	049112	COM Express Type 6 Basic module based on Intel® Core™ i7-9850LE 6-core processor with 1.9GHz up to 4.1GHz turbo boost, 12MB Intel® Smart Cache, Intel® UHD Graphics 630 and dual channel DDR4 2666 MT/s memory interface (formerly Coffee Lake-H Refresh). Chipset QM370.
conga-TS370/i3-9100HL	049113	COM Express Type 6 Basic module based on Intel® Core™ i3-9100HL 4-core processor with 1.6GHz up to 2.9GHz turbo boost, 12MB Intel® Smart Cache, Intel® UHD Graphics 630 and dual channel DDR4 2666 MT/s memory interface (formerly Coffee Lake-H Refresh). Chipset HM370.
conga-TS370/E-2276ME	049100	COM Express Type 6 Basic module based on Intel® Xeon® E-2276ME 6-core processor with 2.8GHz up to 4.5GHz turbo boost, 12MB Intel® Smart Cache, Intel® UHD Graphics P630 and dual channel DDR4 2666 MT/s ECC memory interface (formerly Coffee Lake-H Refresh). Chipset CM246.
conga-TS370/E-2276ML	049110	COM Express Type 6 Basic module based on Intel® Xeon® E-2276ML 6-core processor with 2.0GHz up to 4.2GHz turbo boost, 12MB Intel® Smart Cache, Intel® UHD Graphics P630 and dual channel DDR4 2666 MT/s ECC memory interface (formerly Coffee Lake-H Refresh). Chipset CM246.
conga-TS370/E-2254ME	049101	COM Express Type 6 Basic module based on Intel® Xeon® E-2254ME 4-core processor with 2.6GHz up to 3.8GHz turbo boost, 8MB Intel® Smart Cache, Intel® UHD Graphics P630 and dual channel DDR4 2666 MT/s ECC memory interface (formerly Coffee Lake-H Refresh). Chipset CM246.
conga-TS370/E-2254ML	049111	COM Express Type 6 Basic module based on Intel® Core™ E-2254ML 4-core processor with 1.7GHz up to 3.5GHz turbo boost, 8MB Intel® Smart Cache, Intel® UHD Graphics P630 and dual channel DDR4 2666 MT/s ECC memory interface (formerly Coffee Lake-H Refresh). Chipset CM246.
conga-TS370/G4930E	049104	COM Express Type 6 Basic module based on Intel® Celeron® Processor G4930E 2-core processor with 2.4GHz, 2MB Intel® Smart Cache, Intel® UHD Graphics 610 and dual channel DDR4 2400 MT/s memory interface (formerly Coffee Lake-H Refresh). Chipset HM370.
conga-TS370/G4932E	049114	COM Express Type 6 Basic module based on Intel® Celeron® Processor G4832E 2-core processor with 1.9GHz, 2MB Intel® Smart Cache, Intel® UHD Graphics 610 and dual channel DDR4 2400 MT/s memory interface (formerly Coffee Lake-H Refresh). Chipset HM370.
conga-TS370/i7-8850H	049000	COM Express Type 6 Basic module based on Intel® Core™ i7-8850H 6-core processor with 2.6GHz up to 4.3GHz turbo boost, 9MB Intel® Smart Cache, Intel® UHD Graphics 630 and dual channel DDR4 2666 MT/s memory interface (formerly Coffee Lake-H). Chipset QM370.
conga-TS370/i5-8400H	049001	COM Express Type 6 Basic module based on Intel® Core™ i5-8400H 4-core processor with 2.5GHz up to 4.2GHz turbo boost, 8MB Intel® Smart Cache, Intel® UHD Graphics 630 and dual channel DDR4 2666 MT/s memory interface (formerly Coffee Lake-H). Chipset QM370.
conga-TS370/i3-8100H	049003	COM Express Type 6 Basic module based on Intel® Core™ i3-8100H 4-core processor with 3.0GHz, 6MB Intel® Smart Cache, Intel® UHD Graphics 630 and dual channel DDR4 2666 MT/s memory interface (formerly Coffee Lake-H). Chipset HM370.
conga-TS370/E-2176M	049002	COM Express Type 6 Basic module based on Intel® Xeon® E-2176M 6-core processor with 2.7GHz up to 4.4GHz turbo boost, 12MB Intel® Smart Cache, Intel® UHD Graphics P630 and dual channel DDR4 2666 MT/s ECC memory interface (formerly Coffee Lake-H). Chipset CM246.

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conga-TS370 | Order Information – Accessory

Article	PN	Description
conga-TS170/CSA-HP-B	045930	Standard active cooling solution for high performance COM Express modules conga-TS170/TS175 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 with integrated heat pipes, 15mm silver fins, 21mm overall heat sink height and integrated 12V fan. 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 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 with integrated heat pipes, 15mm silver fins and 21mm overall heat sink height. All standoffs are M2.5mm thread.
conga-TS170/HSP-HP-B	045934	Standard heat spreader for high performance COM Express modules conga-TS170/TS175 with integrated heat pipes. All standoffs are with 2.7mm bore hole.
conga-TS170/HSP-HP-T	045935	Standard heat spreader for high performance COM Express modules conga-TS170/TS175 with integrated heat pipes. All standoffs are M2.5mm thread.
DDR4-SODIMM-2666 (4GB)	067780	DDR4 SODIMM memory module with 2666 MT/s and 4GB RAM
DDR4-SODIMM-2666 (8GB)	067781	DDR4 SODIMM memory module with 2666 MT/s and 8GB RAM
DDR4-SODIMM-2666 (16GB)	067782	DDR4 SODIMM memory module with 2666 MT/s and 16GB RAM
DDR4-SODIMM-2666 (32GB)	068806	DDR4 SODIMM memory module with 2666 MT/s and 32GB RAM
DDR4-SODIMM-2666 ECC (4GB)	067783	DDR4 ECC SODIMM memory module with 2666 MT/s and 4GB RAM
DDR4-SODIMM-2666 ECC (8GB)	067784	DDR4 ECC SODIMM memory module with 2666 MT/s and 8GB RAM
DDR4-SODIMM-2666 ECC (16GB)	067785	DDR4 ECC SODIMM memory module with 2666 MT/s and 16GB RAM
DDR4-SODIMM-2666 ECC (32GB)	068805	DDR4 ECC SODIMM memory module with 2666 MT/s and 32GB RAM

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