

13th Gen Intel® Core™ Embedded Mobile Processors

conga-TC370



- ❖ 8th Generation Intel® Core™ SOC processor
- ❖ Up to 4 cores at low-power TDP of 15W
- ❖ New Intel® Gen 9 HD Graphics
- ❖ Optional eMMC 5.1 on board mass storage
- ❖ COM Express Compact Type 6 module 95x95 mm²

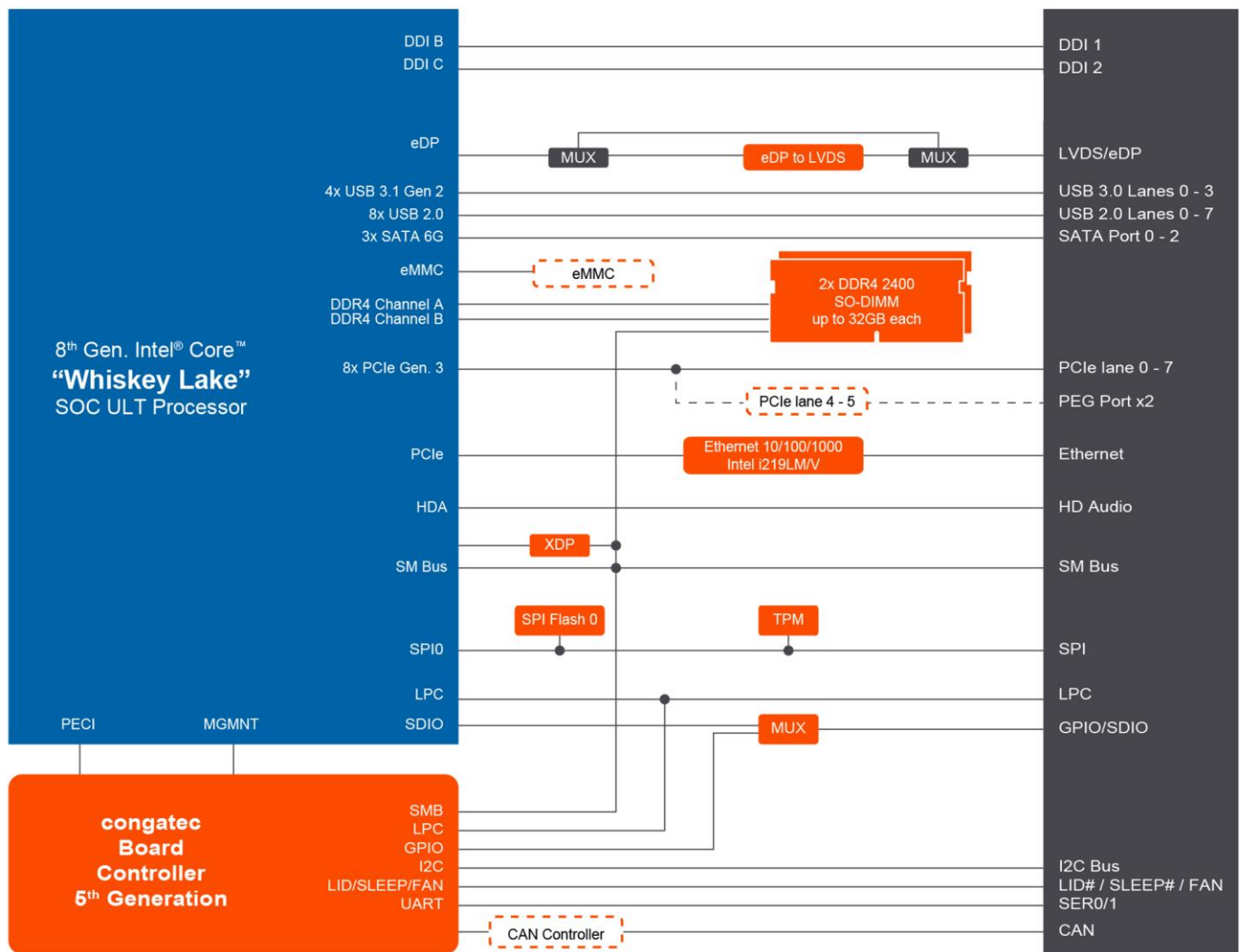
COM  **Express®**

Form factor

COM Express® Rev. 3.0, Compact form factor (95 x 95 mm), Type 6 Connector Pinout

| | | | | | |
|---------------------------|--|--|--|--|--|
| CPU | Intel® Core™ i7-8665UE Intel® Core™ i5-8365UE Intel® Core™ i3-8145UE Intel® Celeron™ 4305UE | 4 Cores 8 Threads 4 Cores 8 Threads 2 Cores 4 Threads 2 Cores 2 Threads | 1.7 GHz 4.4 GHz (boost) 1.6 GHz 4.1 GHz (boost) 2.2 GHz 3.9 GHz (boost) 2.0 GHz | 8 MB Cache 6 MB Cache 4 MB Cache 2 MB Cache | 15-25 W cTDP 15-25 W cTDP 15-25 W cTDP 15 W TDP |
| DRAM | Dual channel DDR4 up to 2400 MT/s 2x SO-DIMM connector up to 2x 32 GByte RAM | | | | |
| Chipset | Integrated in SoC | | | | |
| Ethernet | Intel® i219-LM/V GbE LAN controller with AMT 12.0 support | | | | |
| I/O Interfaces | 8x PCI Express™ Gen 3.0 lanes 3x SATA Gen 3 4x USB 3.1 Gen 2 @ 10 Gbit/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 HD Graphics Engine with OpenCL 2.1, OpenGL 4.5 and DirectX 11/12 up to three independent displays: HDMI 2.0a / DisplayPort 1.2 / eDP 1.4 MPEG-2 , WMV9 (VC-1), H.265 decoding HEVC, VP9 encoding | | | | |
| Storage | optional eMMC 5.1 on board mass storage | | | | |
| congatec Board Controller | Multi-Stage Watchdog non-volatile User Data Storage Manufacturing and Board Information Board Statistics I²C bus (fast mode, 400 kHz, multi-master) Power Loss Control Hardware Health Monitoring POST Code redirection | | | | |
| Embedded BIOS Features | AMI Aptio® UEFI 2.x firmware 32 MByte serial SPI firmware flash | | | | |
| Security | TPM 2.0 Infineon SLB9670 | | | | |
| Power Management | ACPI compliant with battery support Suspend to RAM (S3) support S5 enhanced support Intel AMT 12.0 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 to +60°C | | Storage: -20 to +80°C | | |
| Extended Temperature | Screening service on request: | | -25 to +80°C (burn-in & cold-soak) -40 to +85°C (burn-in & cold-soak) | | |
| Humidity | Operation 10% to 85% r. H. non cond. | | Storage 5% to 85% r. H. non cond. | | |
| Size | 95 x 95 mm (3.74" x 3.74") | | | | |

conga-TC370 | Block Diagram



conga-TC370 | Order Information

| Article | PN | Description |
|-------------------------|--------|--|
| conga-TC370/i7-8665UE | 048800 | COM Express Type 6 Compact module based on Intel® Core™ i7-8665UE 4-core processor with 1.7GHz up to 4.4GHz turbo boost, 8MB L2 cache, Intel® UHD Graphics 620 and dual channel DDR4 2400 MT/s memory interface (formerly Whiskey Lake). |
| conga-TC370/i5-8365UE | 048801 | COM Express Type 6 Compact module based on Intel® Core™ i5-8365UE 4-core processor with 1.6GHz up to 4.1GHz turbo boost, 6MB L2 cache, Intel® UHD Graphics 620 and dual channel DDR4 2400 MT/s memory interface (formerly Whiskey Lake). |
| conga-TC370/i3-8145UE | 048802 | COM Express Type 6 Compact module based on Intel® Core™ i3-8145UE 2-core processor with 2.2GHz up to 3.9GHz turbo boost, 4MB L2 cache, Intel® UHD Graphics 620 and dual channel DDR4 2400 MT/s memory interface (formerly Whiskey Lake). |
| conga-TC370/4305UE | 048804 | COM Express Type 6 Compact module based on Intel® Celeron™ 4305UE 2-core processor with 2.0GHz, 2MB L2 cache, Intel® UHD Graphics 610 and dual channel DDR4 2133 MT/s memory interface (formerly Whiskey Lake). |
| conga-TC370/CSA-HP-B | 048850 | Standard active cooling solution for COM Express Compact modules conga-TC370 with integrated heat pipes, 25.5mm overall cooling height and integrated 12V fan. Through hole mounting with bore hole standoffs Ø2.7mm. |
| conga-TC370/CSA-HP-T | 048851 | Standard active cooling solution for COM Express Compact modules conga-TC370 with integrated heat pipes, 25.5mm overall cooling height and integrated 12V fan. Threaded mounting with threaded standoffs M2.5. |
| conga-TC370/CSP-HP-B | 048852 | Standard passive cooling solution for COM Express Compact modules conga-TC370 with integrated heat pipes and 24.3mm overall cooling height. Through hole mounting with bore hole standoffs Ø2.7mm. |
| conga-TC370/CSP-HP-T | 048853 | Standard passive cooling solution for COM Express Compact modules conga-TC370 with integrated heat pipes and 24.3mm overall cooling height. Threaded mounting with threaded standoffs M2.5. |
| conga-TC370/HSP-HP-B | 048854 | Standard heatspreader for COM Express Compact modules conga-TC370 with integrated heat pipes and 11mm overall cooling height. Through hole mounting with bore hole standoffs Ø2.7mm. |
| conga-TC370/HSP-HP-T | 048855 | Standard heatspreader for COM Express Compact modules conga-TC370 with integrated heat pipes and 11mm overall cooling height. Threaded mounting with threaded standoffs M2.5. |
| DDR4-SODIMM-2400 (4GB) | 068790 | DDR4 SODIMM memory module with 2400 MT/s and 4GB RAM |
| DDR4-SODIMM-2400 (8GB) | 068791 | DDR4 SODIMM memory module with 2400 MT/s and 8GB RAM |
| DDR4-SODIMM-2400 (16GB) | 068792 | DDR4 SODIMM memory module with 2400 MT/s and 16GB RAM |
| DDR4-SODIMM-2666 (32GB) | 068806 | DDR4 SODIMM memory module with 2666 MT/s and 32GB RAM |
| conga-TEVAL | 065810 | Evaluation carrier board for Type 6 COM-Express-modules |