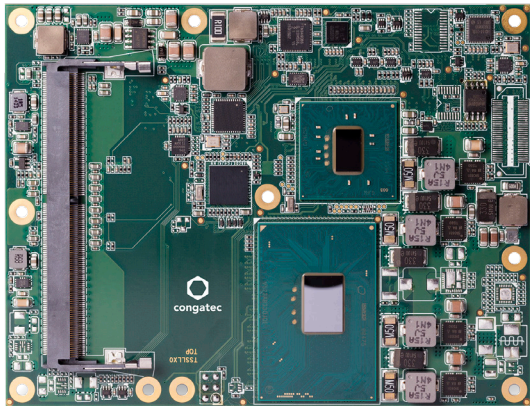


SERVER-CLASS EMBEDDED PERFORMANCE

conga-TS175

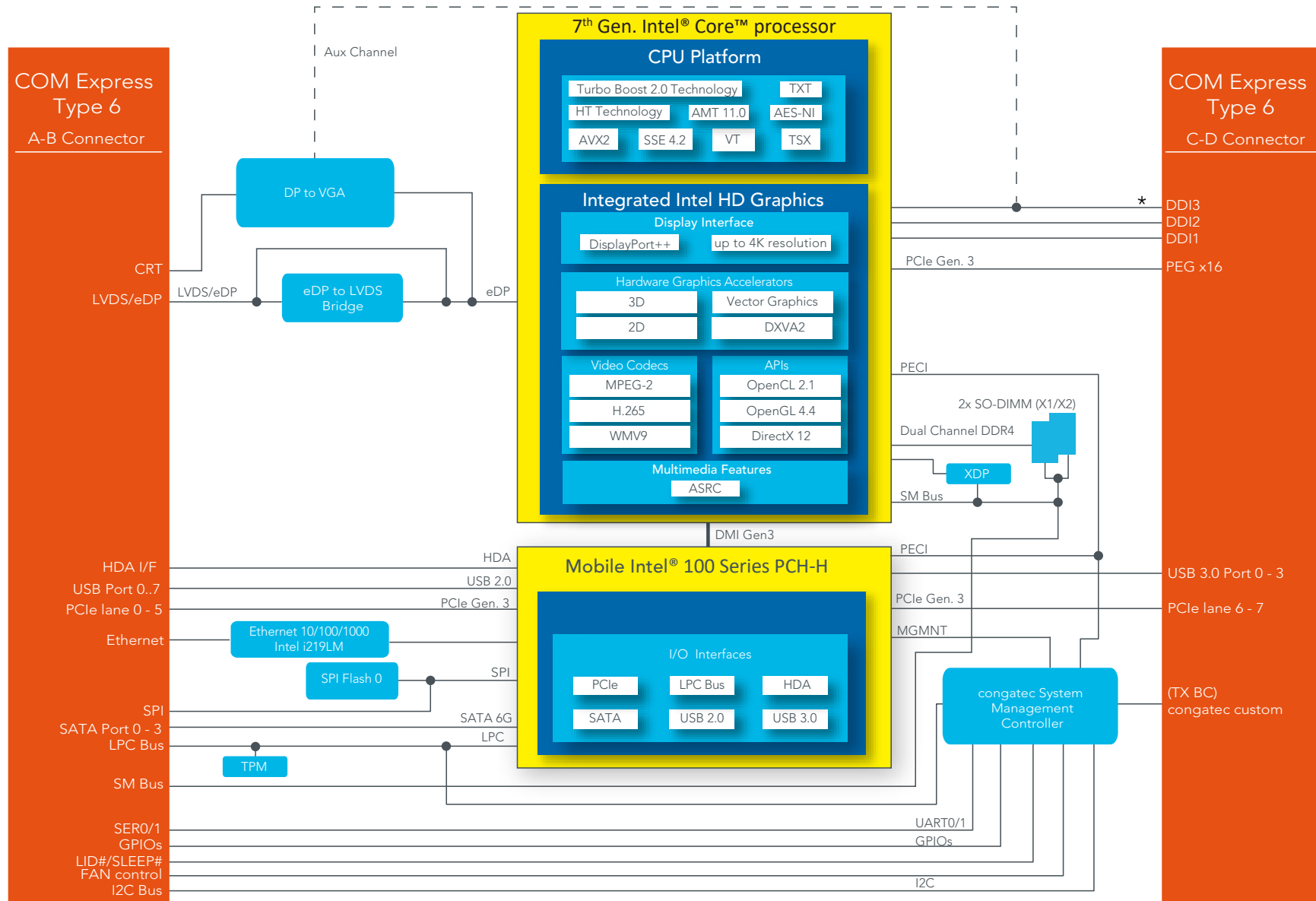


- 7th Generation Intel® Core™ processor
- Intel® Xeon® processors for data center applications
- Intel® Optane™ memory can be connected via PCI Express Gen 3.0
- ECC memory support
- Up to 32 GByte dual channel DDR4 memory



| | | | | | | |
|---------------------------------|--|---------------------------------|-----------|-----------|---------------|--|
| Formfactor | COM Express® Basic, (95 x 125 mm), Type 6 Connector Pinout | | | | | |
| CPU | Intel® Xeon® E3-1505M v6 | 4.0 GHz (Burst) 3.0 GHz Clock | Quad Core | 8MB cache | 45W / 35W TDP | |
| | Intel® Xeon® E3-1505L v6 | 3.0 GHz (Burst) 2.2 GHz Clock | Quad Core | 8MB cache | 25W TDP | |
| | Intel® Core™ i7-7820EQ | 3.7 GHz (Burst) 3.0 GHz Clock | Quad Core | 8MB cache | 45W / 35W TDP | |
| | Intel® Core™ i5-7440EQ | 3.6 GHz (Burst) 2.9 GHz Clock | Quad Core | 6MB cache | 45W / 35W TDP | |
| | Intel® Core™ i5-7442EQ | 2.9 GHz (Burst) 2.1 GHz Clock | Quad Core | 6MB cache | 25W TDP | |
| | Intel® Core™ i3-7100E | 2.9 GHz Clock | Dual Core | 3MB cache | 35W TDP | |
| | Intel® Core™ i3-7102E | 2.1 GHz Clock | Dual Core | 3MB cache | 25W TDP | |
| | 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 34,1 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 2400 MT/s and 32GByte dual channel, optionally with ECC support | | | | | |
| Chipset | Mobile Intel® 100 Series Chipset | | | | | |
| Ethernet | Intel® 219-LM GbE LAN Controller with AMT 11.6 support | | | | | |
| I/O Interfaces | 8x PCI Express™ gen. 3.0 lanes 4x Serial ATA® Gen 3 4x USB 3.0 (XHCI) 8x USB 2.0 (XHCI) 1x PEG x16 Gen 3 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 | OpenCL 2.0/2.1, OpenGL 4.4/4.5 and DirectX12 (for Windows 10) support up to three independent displays: 3x DDI 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) | 3x TMDS/DisplayPort 1.2 with support for Multi-Stream Transport (MST) resolutions up to 4k VGA | | | | | |
| 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-TS175 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 (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-TS175 | Block diagram



* See manual for limitations.

conga-TS175 | Order Information

| Article | PN | Description |
|------------------------|--------|---|
| conga-TS175/i7-7820EQ | 045950 | COM Express Type 6 Basic module with Intel® Core™ i7-7820EQ quad core processor with 3GHz up to 3.7GHz, 8MB Intel® Smart Cache, GT2 graphics and 2400MT/s dual channel DDR4 memory interface (Intel Kaby Lake-H). Chipset QM175 with support for Intel® Optane™ memory. |
| conga-TS175/i5-7440EQ | 045951 | COM Express Type 6 Basic modul Intel® Core™ i5-7440EQ quad core processor with 2.9GHz up to 3.6GHz, 6MB Intel® Smart Cache, GT2 graphics and 2400MT/s dual channel DDR4 memory interface (Intel Kaby Lake-H). Chipset QM175 with support for Intel® Optane™ memory. |
| conga-TS175/i5-7442EQ | 045952 | COM Express Type 6 Basic module with Intel® Core™ i5-7442EQ quad core processor with 2.1GHz up to 2.9GHz, 6MB Intel® Smart Cache, GT2 graphics and 2400MT/s dual channel DDR4 memory interface (Intel Kaby Lake-H). Chipset QM175 with support for Intel® Optane™ memory. |
| conga-TS175/i3-7100E | 045953 | COM Express Type 6 Basic module with Intel® Core™ i3-7100E dual core processor with 2.9GHz, 3MB Intel® Smart Cache, GT2 graphics and 2400MT/s dual channel DDR4 memory interface (Intel Kaby Lake-H). Chipset HM175 with support for Intel® Optane™ memory. |
| conga-TS175/i3-7102E | 045954 | COM Express Type 6 Basic module with Intel® Core™ i3-7102E dual core processor with 2.1GHz, 3MB Intel® Smart Cache, GT2 graphics and 2400MT/s dual channel DDR4 memory interface (Intel Kaby Lake-H). Chipset HM175 with support for Intel® Optane™ memory. |
| conga-TS175/E3-1505MV6 | 045955 | COM Express Type 6 Basic module with Intel® Xeon® E3-1505M V6 quad core processor with 3GHz up to 4GHz, 8MB Intel® Smart Cache, GT2 graphics and 2400MT/s dual channel DDR4 memory interface (Intel Kaby Lake-H). Chipset CM238 with ECC memory support. |
| conga-TS175/E3-1505LV6 | 045956 | COM Express Type 6 Basic module with Intel® Xeon® E3-1505L V6 quad core processor with 2.2GHz up to 3GHz, 8MB Intel® Smart Cache, GT2 graphics and 2400MT/s dual channel DDR4 memory interface (Intel Kaby Lake-H). Chipset CM238 with ECC memory support. |

| Article | PN | Description |
|-----------------------------|--------|---|
| conga-TS170/HSP-HP-B | 045934 | Standard heatspreader 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 heatspreader for high performance COM Express modules conga-TS170/TS175 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 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/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. |
| 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 |
| DDR4-SODIMM-2400 ECC (4GB) | 068795 | 4 GByte DDR4 ECC SODIMM memory module with 2400 MT/s |
| DDR4-SODIMM-2400 ECC (8GB) | 068796 | 8 GByte DDR4 ECC SODIMM memory module with 2400 MT/s |
| DDR4-SODIMM-2400 ECC (16GB) | 068797 | 16 GByte DDR4 ECC SODIMM memory module with 2400 MT/s |
| 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 |

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