

FAST AND COMPACT

conga-TC170



- 6th Generation Intel® Core™ SOC processor
- Intel® Gen9 HD Graphics with HEVC (H.265) support
- Low power consumption (TDP 15W, cTDP 8.5W)
- Up to 32 GByte dual channel DDR4 memory
- COM Express Compact Type 6 module 95x95 mm²

COM  **Express**®

| | | | | | | |
|---------------------------------|--|-------------------|---------------------|------------|---------|-----|
| Formfactor | COM Express® Compact, (95 x 95 mm), Type 6 Connector Pinout | | | | | |
| CPU | Intel® Core™ i7-6600U | 2.6 GHz Dual Core | Turbo Boost 3.4 GHz | 4 MB Cache | TDP 15W | GT2 |
| | Intel® Core™ i5-6300U | 2.4 GHz Dual Core | Turbo Boost 3.0 GHz | 3 MB Cache | TDP 15W | GT2 |
| | Intel® Core™ i3-6100U | 2.3 GHz Dual Core | | 3 MB Cache | TDP 15W | GT2 |
| | Intel® Celeron® 3955U | 2.0 GHz Dual Core | | 2 MB Cache | TDP 15W | GT1 |
| | 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 support | | | | | |
| I/O Interfaces | 8x PCI Express GEN. 3.0 lanes 3x Serial ATA® Gen 3 4x USB 3.0 (XHCI) 8x USB 2.0 (XHCI) LPC bus (no DMA) I ² C 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 and DirectX12 (for Windows 10) support up to three independent displays: HDMI 1.4a / DisplayPort 1.2 / eDP 1.3 High performance hardware MPEG-2 decoding WMV9 (VC-1) and H.265 (HEVC) support Blu-ray support @ 40 MBit/s HEVC, VP8, 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 TMDS (HDMI) / 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 I ² C 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-TC170 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 8.1 Microsoft® Windows 7 Linux Microsoft® Windows embedded Standard | | | | | |
| Power Consumption | See User's Guide for full details | | | | | |
| Temperature | Operating: 0 .. +60°C Storage: -20 .. +80°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-TC170 | Block diagram



conga-TC170 | Order Information

| Article | PN | Description |
|-------------------------|--------|---|
| conga-TC170/i7-6600U | 045200 | COM Express Type 6 Compact module with Intel® Core™ i7-6600U dual core processor with 2.6GHz, 4MB L2 cache, 2133MT/s dual channel DDR4 memory interface |
| conga-TC170/i5-6300U | 045201 | COM Express Type 6 Compact module with Intel® Core™ i5-6300U dual core processor with 2.4GHz, 3MB L2 cache, 2133MT/s dual channel DDR4 memory interface |
| conga-TC170/i3-6100U | 045202 | COM Express Type 6 Compact module with Intel® Core™ i3-6100U dual core processor with 2.3GHz, 3MB L2 cache, 2133MT/s dual channel DDR4 memory interface |
| conga-TC170/3955U | 045203 | COM Express Type 6 Compact module with Intel® Celeron® 3955U dual core processor with 2.0GHz, 2MB L2 cache, 2133MT/s dual channel DDR4 memory interface |
| conga-TC87/HSP-B* | 046953 | Standard heatspreader for COM Express module conga-TC170, all standoffs are with 2.7mm bore hole |
| conga-TC87/HSP-T* | 046954 | Standard heatspreader for COM Express module conga-TC170, all standoffs are M 2.5 threaded |
| conga-TC87/CSP-B* | 046951 | Standard passive cooling solution for COM Express module conga-TC170, all standoffs are with 2.7mm bore hole |
| conga-TC87/CSP-T* | 046952 | Standard passive cooling solution for COM Express module conga-TC170, all standoffs are M 2.5 threaded |
| 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 |

* cooling solutions also for conga-TC170

| 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 |
| COMe-carrier-socket-5 | 400007 | Connector for COM-Express carrier boards, height 5mm, packing unit 4 pieces |
| COMe-carrier-socket-8 | 400004 | Connector for COM-Express carrier boards, height 8mm, packing unit 4 pieces |

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- Защита от снятия компонента с производства.



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