FAST AND COMPACT
conga-TC97

- 5th Gen. Intel® Core™ i7 dual core processor
- 15W nominal TDP
- 3x DisplayPort 1.2, up to 4k resolution
- Intel® AVX 2.0 Vector extension for improved floating point computing
- COM Express Compact Type 6 module

Formfactor
COM Express® Compact, (95 x 95 mm), Type 6 Connector Layout

CPU
Intel® Core™ i7-5650U 2.2 GHz Dual Core
Intel® Core™ i5-5350U 1.8 GHz Dual Core
Intel® Core™ i3-5010U 2.1 GHz Dual Core
Intel® Celeron® 3765U 1.9 GHz Dual Core

Intel® Turbo Boost 2.0 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 25.6 GByte/sec. memory bandwidth | Integrated Intel® HD Graphics 6000 series with dynamic frequency up to 1.0 GHz | Intel® Clear Video HD Technology

Intel® Virtualization Technology (Intel® VT) | Intel® Trusted Execution Technology (Intel® TXT) | Intel® Streaming SIMD Extensions 4.2 (Intel® SSE4.2) | PCLMULQDQ Instruction | Intel® Secure Key, Intel® Transactional Synchronization Extensions (Intel® TSX)

DRAM
2 Sockets, SO-DIMM DDR3L@1.35V up to 1600MT/s and 32GByte

Chipset
Integrated PCH-LP

Ethernet
Intel® I218-LM GbE LAN Controller with AMT 10 support

I/O Interfaces
4x PCI Express™ Gen. 2.0 lanes | 4x Serial ATA® RAID 0/1/5/10 support
2x ExpressCard® | 2x USB 3.0 (XHCI) | 8x USB 2.0 (EHCI) | LPC bus | PC bus (fast mode, 400 kHz, multi-master)

Sound
Digital High Definition Audio Interface with support for multiple audio codecs

Graphics
Next Generation Intel® HD Graphics with OpenCL 2.0, OpenGL 4.3 and DirectX12 support | up to three independent displays: HDMI 1.4, DVI, DisplayPort 1.2 | High performance hardware MPEG-2 decoding, WMV9 (VC-1) and H.264 (AVC) support Bluray support @ 40 MBit/s

LVDS (eDP optional)
Dual channel LVDS transmitter | Supports flat panels 2x24 Bit interface | VESA and OpenLDI color mapping | resolutions up to 1920x1200, Automatic Panel Detection via EDID/EPI

Digital Display Interface (DDI)
2x TMDS (HDMI) / DisplayPort 1.2a with support for Multi-Stream Transport (MST), resolutions up to 4k

congatec Board Controller
Multi Stage Watchdog | non-volatile User Data Storage | Manufacturing and Board Information | Board Statistics | LVDS backlight control
PC 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-TC97 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 8 | Microsoft® Windows 7 | Linux | Microsoft® Windows embedded Standard

Power Consumption
See User’s Guide for full details | CMOS Battery Backup
Ultra low standby power, support for CPU power states up to C10

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”)

www.congatec.com
**conga-TC97** | Block diagram

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**conga-TC97** | Order Information

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<tr>
<th>Article</th>
<th>PN</th>
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<tbody>
<tr>
<td>conga-TC97/i7-5650U</td>
<td>045103</td>
<td>COM Express Type 6 Compact module with Intel® Core™ i7-5650U dual core processor with 2.2GHz, 4MB L2 cache and 1600MT/s dual channel DDR3L memory interface.</td>
</tr>
<tr>
<td>conga-TC97/i5-5350U</td>
<td>045104</td>
<td>COM Express Type 6 Compact module with Intel® Core™ i5-5350U dual core processor with 1.8GHz, 3MB L2 cache and 1600MT/s dual channel DDR3L memory interface.</td>
</tr>
<tr>
<td>conga-TC97/i3-5010U</td>
<td>045105</td>
<td>COM Express Type 6 Compact module with Intel® Core™ i3-5010U dual core processor with 2.1GHz, 3MB L2 cache and 1600MT/s dual channel DDR3L memory interface.</td>
</tr>
<tr>
<td>conga-TC97/3765U</td>
<td>045106</td>
<td>COM Express Type 6 Compact module with Intel® Celeron® 3765U dual core processor with 1.9GHz, 2MB L2 cache and 1600MT/s dual channel DDR3L memory interface.</td>
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<tr>
<td>conga-TC87/HSP-B</td>
<td>046953</td>
<td>Standard heatspreader for COM Express module conga-TC97. All standoffs are with 2.7mm bore hole.</td>
</tr>
<tr>
<td>conga-TC87/HSP-T</td>
<td>046954</td>
<td>Standard heatspreader for COM Express module conga-TC97. All standoffs are M 2.5 threaded.</td>
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<tr>
<td>conga-TC87/CSP-B</td>
<td>046951</td>
<td>Standard passive cooling solution for COM Express module conga-TC97. All standoffs are with 2.7mm bore hole.</td>
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<tr>
<td>conga-TC87/CSP-T</td>
<td>046952</td>
<td>Standard passive cooling solution for COM Express module conga-TC97. All standoffs are M 2.5 threaded.</td>
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<tr>
<td>DDR3L-SODIMM-1600 (2GB)</td>
<td>068755</td>
<td>DDR3L SODIMM memory module with 1600MT/s (PC3L-12800S) and 2GB RAM</td>
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<tr>
<td>DDR3L-SODIMM-1600 (4GB)</td>
<td>068756</td>
<td>DDR3L SODIMM memory module with 1600MT/s (PC3L-12800S) and 4GB RAM</td>
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<tr>
<td>DDR3L-SODIMM-1600 (8GB)</td>
<td>068757</td>
<td>DDR3L SODIMM memory module with 1600MT/s (PC3L-12800S) and 8GB RAM</td>
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**Accessories**

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<tr>
<td>conga-TEVAL</td>
<td>065800</td>
<td>Evaluation carrier board for Type 6 COM-Express-modules</td>
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<tr>
<td>conga-LDVI/EPI</td>
<td>011115</td>
<td>LVDS to DVI converter board for digital flat panels with onboard EEPROM</td>
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<tr>
<td>COM-Express-carrier-board-Socket-5</td>
<td>400007</td>
<td>Connector for COM-Express carrier boards, height 5mm, packing unit 4 pieces</td>
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<tr>
<td>COM-Express-carrier-board-Socket-8</td>
<td>400004</td>
<td>Connector for COM-Express carrier boards, height 8mm, packing unit 4 pieces</td>
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