

COM Express® Basic Type 6 Module

conga-TS77

Highest Performance COM Express Type 6

3rd Generation Intel® Core™ processor-based platform

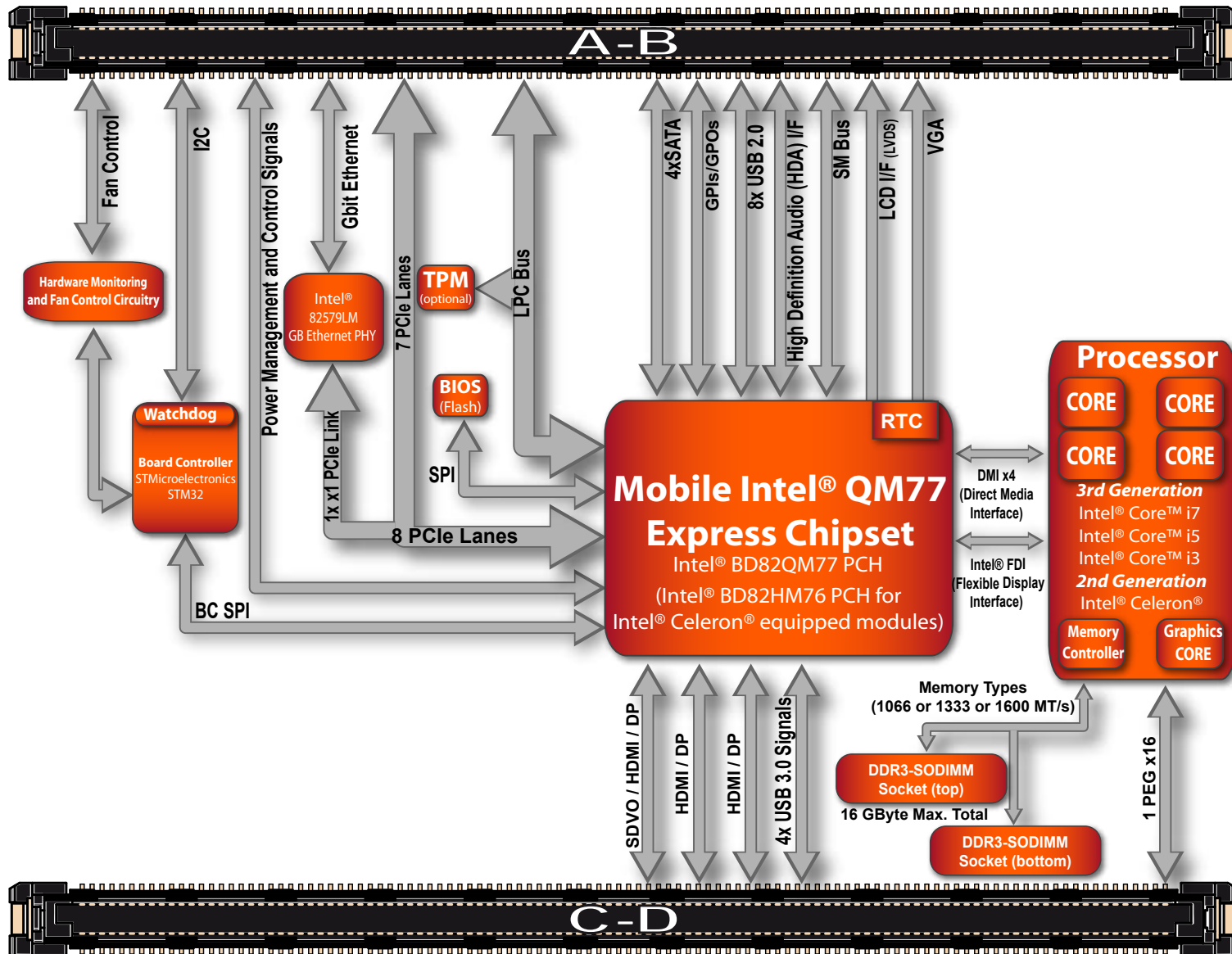
Better transcode HD-HD, HD Video Conferencing

Improved Graphics Performance, DirectX®11



| Formfactor | Formfactor COM Express™ Basic, (95 x 125 mm), Type 6 Connector Layout |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CPU | Intel® Core™ i7-3615QE (4x 2.3 GHz, 6MB Cache, TDP 45W) Intel® Core™ i7-3612QE (4x 2.1 GHz, 6MB Cache, TDP 35W) Intel® Core™ i7-3555LE (2x 2.5 GHz, 4MB Cache, TDP 25W) Intel® Core™ i7-3517UE (2x 1.7 GHz, 4MB Cache, TDP 17W) Intel® Core™ i5-3610ME (2x 2.7 GHz, 3MB Cache, TDP 35W) Intel® Core™ i3-3120ME (2x 2.4 GHz, 3MB Cache, TDP 35W) Intel® Core™ i3-3217UE (2x 1.6 GHz, 3MB Cache, TDP 17W) Intel® Celeron® 847E (2x 1.1 GHz, 2 MB Cache, 17 W) Intel® Celeron® 827E (1x 1.4 GHz, 1.5 MB Cache, 17 W) Intel® Celeron® 1020E (2x 2.2 GHz, 2 MB Cache, 35 W) Intel® Celeron® 1047UE (2x 1.4 GHz, 2 MB Cache, 17 W) Intel® Celeron® 927UE (1x 1.5 GHz, 1 MB Cache, 17 W) Intel® Turbo Boost Technology 2.0, Intel® Hyper-Threading Technology, Integrated dual channel memory controller, up to 25.6 GByte/sec. memory bandwidth Integrated Intel® HD Graphics 4000 with dynamic frequency up to 1.0GHz, Intel® Clear Video HD Technology |
| DRAM | 2 Sockets, SO-DIMM DDR3 up to 1600MT/s and 16 GByte |
| Chipset | Mobile Intel® 7 Series Chipset: Intel® BD82QM77 PCH (Intel® BD82HM76 PCH for Intel® Celeron® equipped modules) |
| Ethernet | Intel® 82579 GbE LAN Controller with AMT 8.0 support |
| I/O Interfaces | 7x PCI Express™ GEN. 2.0 lanes, 1x PEG GEN 3.0 (8GT/s), 2x Serial ATA® with 6 Gb/s, 2x Serial ATA® with 3 Gb/s, RAID 0/1/5/10 support, 2x ExpressCard®, 4x USB 3.0 (XHCI), 8x USB 2.0 (EHCI), LPC bus, I²C bus (fast mode, 400 kHz, multi-master) |
| Sound | Digital High Definition Audio Interface with support for multiple audio codecs |
| Graphics | Intel® Flexible Display Interface (FDI), OpenCL 1.1, OpenGL 3.1 and DirectX11 support, Three simultaneous independent displays. High performance hardware MPEG-2 decoding, WMV9 (VC-1) and H.264 (AVC) support Blu-ray support @ 40 MBit/s, hardware motion compensation |
| LVDS | Dual channel LVDS transmitter, Supports flat panels 2x24 Bit interface, VESA mappings, resolutions up to 1920x1200, Automatic Panel Detection via EDID/EPI |
| Digital Display Interface (DDI) | 1x SDVO / DisplayPort 1.1 / TMDS (DVI, HDMI) 2x DisplayPort 1.1 / TMDS (DVI, HDMI) |
| CRT Interface | 340.4 MHz RAMDAC, resolutions up to QXGA (2048x1536 @75Hz) |
| 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 MByte serial SPI firmware flash |
| Security | The conga-TS77 can be optionally equipped with a discrete "Trusted Platform Module" (TPM). 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 | Typ. application: tbd., see manual for full details, CMOS Battery Backup |
| Temperature: | Operating: 0 .. +60°C Storage: -20 .. +80°C |
| Humidity Operating: | 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-TS77 - Block diagram



conga-TS77 - Order information

| Article | PN | Description |
|-------------------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| conga-TS77/i7-3615QE | 046506 | COM Express Type 6 Basic modul with Intel® Core™ i7-3615QE quad core processor with 2.3GHz, 6MB L2 cachea and Processor TDP 45W. |
| conga-TS77/i7-3612QE | 046501 | COM Express Type 6 Basic modul with Intel® Core™ i7-3612QE quad core processor with 2.1GHz, 6MB L2 cache andProcessor TDP 35W. |
| conga-TS77/i7-3555LE | 046502 | COM Express Type 6 Basic modul with Intel® Core™ i7-3555LE dual core processor with 2.5GHz, 4MB L2 cache and Processor TDP 25W. |
| conga-TS77/i7-3517UE | 046503 | COM Express Type 6 Basic modul with Intel® Core™ i7-3517UE dual core processor with 1.7 GHz, 4MB L2 cache and Processor TDP 17W. |
| conga-TS77/i5-3610ME | 046504 | COM Express Type 6 Basic modul with Intel® Core™ i5-3610ME dual core processor with 2.7GHz, 3MB L2 cache and Processor TDP 35W. |
| conga-TS77/i3-3120ME | 046507 | COM Express Type 6 Basic module with Intel® Core™ i3-3120ME dual core processor with 2.4GHz, 3MB L2 cache and Processor TDP 35W. |
| conga-TS77/i3-3217UE | 046505 | COM Express Type 6 Basic module with Intel® Core™ i3-3217UE dual core processor with 1.6GHz, 3MB L2 cache and Processor TDP 17W. |
| conga-TS77/827E | 046508 | COM Express Type 6 Basic module with Intel® Celeron™ 827E single core processor with 1.4GHz and 1.5MB L3 cache. |
| conga-TS77/847E | 046509 | COM Express Type 6 Basic module with Intel® Celeron™ 847E dual core processor with1.1GHz and 2MB L2 cache. |
| conga-TS77/1020E | 046511 | COM Express Type 6 Basic module with Intel® Celeron™ 1020E dual core processor with 2.2GHz and 2MB L2 cache. |
| conga-TS77/1047UE | 046510 | COM Express Type 6 Basic module with Intel® Celeron™ 1047UE dual core processor with 1.4GHz and 2MB cache. |
| conga-TS77/927UE | 046512 | COM Express Type 6 Basic module with Intel® Celeron™ 927UE single core processor with 1.5GHz, 1MB cache and without PEG port. |
| conga-TS67/HSP-HP-B | 046450 | Standard heatspreader for conga-TS77 with integrated heat pipes. 2.7mm bore hole standoffs. |
| conga-TS67/HSP-HP-T | 046451 | Standard heatspreader for conga-TS77 with integrated heat pipes. M2.5mm thread standoffs. |
| conga-TS67/CSP-HP-B | 046452 | Standard passive cooling solution for conga-TS77 with integrated heat pipes, 15mm silver fins and 20mm overall heat sink height. All standoffs are with 2.7mm bore hole. |
| conga-TS67/CSP-HP-T | 046453 | Standard passive cooling solution for conga-TS67 and TS77 with integrated heat pipes, 15mm silver fins and 20mm overall heat sink height. All standoffs are M2.5mm thread. |
| conga-TS67/CSA-HP-B | 046454 | Standard active cooling solution for conga-TS77 with integrated heat pipes, 15mm silver fins, 20mm overall heat sink height and integrated 12V fan. All standoffs are with 2.7mm bore hole. |
| conga-TS67/CSA-HP-T | 046455 | Standard active cooling solution for conga-TS77 with integrated heat pipes, 15mm silver fins, 20mm overall heat sink height and integrated 12V fan. All standoffs are M2.5mm thread. |
| DDR3L-SODIMM-1600 (2GB) | 068755 | DDR3L SODIMM memory module with 1600 MT/s (PC3L-12800S) and 2GB RAM |
| DDR3L-SODIMM-1600 (4GB) | 068756 | DDR3L SODIMM memory module with 1600 MT/s (PC3L-12800S) and 4GB RAM |
| DDR3L-SODIMM-1600 (8GB) | 068757 | DDR3L SODIMM memory module with 1600 MT/s (PC3L-12800S) and 8GB RAM |

Engineering Tools / Accessories for COM Express*

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

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Rev. Juli 28, 2014 BLU