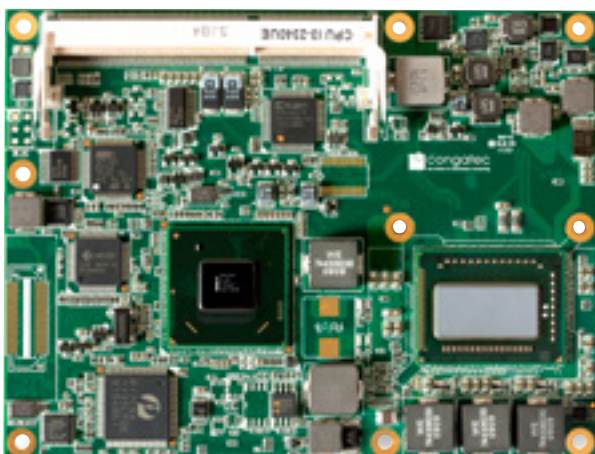


# conga-BP77

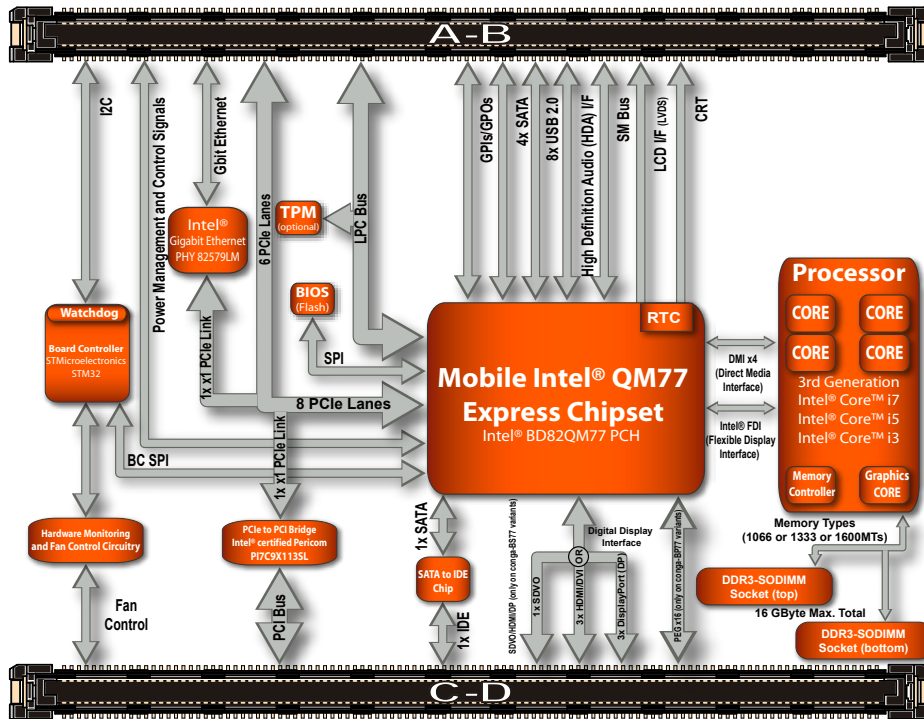


- Highest Performance COM Express Type 2
- 3rd Generation Intel® Core™ processor-based platform
- Better transcode HD-HD, HD Video Conferencing
- Improved Graphics Performance, DirectX®11

**COM**  **Express®**

|                           |  |            |              |         |
|---------------------------|--|------------|--------------|---------|
| Formfactor                | Formfactor COM Express™ Basic   (95 x 125 mm)   Type II Connector Layout   |            |              |         |
| CPU                       | 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 L2 cache | TDP 17W |
|                           | Intel® Core™ i5-3610ME   | 2x 2.7 GHz | 3MB cache    | TDP 35W |
|                           | Intel® Core™ i3-3120ME   | 2x 2.4 GHz | 3MB L2 Cache | TDP 35W |
|                           | Integrated dual channel memory controller   up to 25,6 GByte/sec. memory bandwidth<br>Integrated Intel® HD Graphics with dynamic frequency up to 1100 MHz   Intel® Clear Video HD Technology   |            |              |         |
| DRAM                      | 2 Sockets   SO-DIMM DDR3 1600 MT/s   up to 16 GByte  |            |              |         |
| Chipset                   | Mobile Intel® 7 Series Chipset: Intel® QM77  |            |              |         |
| Ethernet                  | Intel® 82579 GbE LAN Controller with AMT 8.0 support (optional)  |            |              |         |
| I/O Interfaces            | 6x PCI Express™ GEN 2.0 lanes   4x Serial ATA® (AHCI) with RAID support   1x EIDE (UDMA-66/100) optional   8x USB 2.0 (EHCI)<br>PCI Bus 33 MHz Rev. 2.3   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)   OpenGL 3.1 and DirectX11 support   Three simultaneous independent displays. High performance hardware<br>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<br>Detection via EDID/EPI  |            |              |         |
| PEG                       | PCI Express Graphic Generation 3.0 (8GT/s)   |            |              |         |
| CRT Interface             | 350 MHz RAMDAC   resolutions up to QXGA (2048x1536)  |            |              |         |
| SDVO                      | 1 x Intel compliant SDVO ports with 200MPixel/sec. Supports external DVI   |            |              |         |
| congatec Board Controller | Multi Stage Watchdog   non-volatile User Data Storage   Manufacturing and Board Information   Board Statistics   BIOS Setup Data Backup<br>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-BS77 can be optionally equipped with a discrete "Trusted Platform Module" (TPM). It is capable of calculating efficient hash and<br>RSA algorithms with key lengths up to 2,048 bits and includes a real random number generator. Security sensitive applications such as gaming and<br>e-commerce will benefit also with improved authentication   integrity and confidence levels. |            |              |         |
| Power Management          | ACPI 3.0 with battery support  |            |              |         |
| Operating Systems         | Microsoft® Windows 8   Microsoft® Windows7   Microsoft® Windows® embedded Standard   Microsoft® Windows XP   Linux   |            |              |         |
| Power Consumption         | Typ. application: Processor TDP: 17 .. 25 W   see manual 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 125 mm (3.74" x 4.92")  |            |              |         |

# conga-BP77 | Block diagram



# conga-BP77 | Order Information

| Article                         | PN     | Description   |
|---------------------------------|--------|---|
| conga-BP77/i7-3612QE            | 046700 | Intel® Core™ i7-3612QE quad core processor with 2.1GHz   6MB L3 cache and 1600MT/s dual channel DDR3 memory interface. Features PCI Express Graphics port   |
| conga-BP77/i5-3610ME            | 046701 | Intel® Core™ i5-3610ME dual core processor with 2.7GHz   3MB L3 cache and 1600MT/s dual channel DDR3 memory interface. Features PCI Express Graphics port   |
| conga-BP77/i7-3555LE            | 046702 | Intel® Core™ i7-3555LE dual core processor with 2.5GHz   4MB L3 cache and 1600MT/s dual channel DDR3 memory interface. Features PCI Express Graphics port   |
| conga-BP77/i3-3120ME            | 046703 | Intel® Core™ i3-3120ME dual core processor with 2.4GHz   3MB L3 cache and 1600MT/s dual channel DDR3 memory interface. Features PCI Express Graphics port   |
| conga-BP77/i7-3517UE            | 046704 | Intel® Core™ i7-3517UE dual core processor with 1.7GHz   4MB L3 cache and 1600MT/s dual channel DDR3 memory interface. Features PCI Express Graphics port   |
| conga-BS67/HSP-HP-B             | 046170 | Standard heatspreader for high performance COM Express modules conga-BS67   BS77 and BP77 with integrated heat pipes. All standoffs are with 2.7mm bore hole  |
| conga-BS67/HSP-HP-T             | 046171 | Standard heatspreader for high performance COM Express modules conga-BS67   BS77 and BP77 with integrated heat pipes. All standoffs are M2.5mm thread   |
| conga-BS67/CSP-HP-B             | 046172 | Standard passive cooling solution for high performance COM Express modules conga-BS67   BS77 and BP77 with integrated heat pipes   15mm silver fins and 20mm overall heat sink height. All standoffs are with 2.7mm bore hole                     |
| conga-BS67/CSP-HP-T             | 046173 | Standard passive cooling solution for high performance COM Express modules conga-BS67   BS77 and BP77 with integrated heat pipes   15mm silver fins and 20mm overall heat sink height. All standoffs are M2.5mm thread                            |
| conga-BS67/CSA-HP-B             | 046174 | Standard active cooling solution for high performance COM Express modules conga-BS67   BS77 and BP77 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-BS67/CSA-HP-T             | 046175 | Standard active cooling solution for high performance COM Express module conga-BS67   BS77 and BP77 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   |
| <b>Accessories</b>              |        |   |
| conga-CEVAL                     | 065749 | Evaluation Carrier Board for COM Express Type 2 modules   |
| conga-Cdebug                    | 047854 | COM-Express debugging platform. Including cable for COM   PS/2 and VGA  |
| conga-LDVI/EPI                  | 011115 | LVDS to DVI converter board for digital flat panels with onboard EEPROM   |
| conga-HDMI/Display Port adapter | 500014 | The conga-HDMI/DisplayPort adapter is used fo convert the chipset graphic ports Port-B   Port-C and Port-D to the HDMI or DisplayPort Interface   |
| conga-FPA2                      | 047250 | Flatpanel prototype adapter to develop your own flatpanel adapter Including cables set  |

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