

# COM Express® Basic Type 6 Module

## conga-TM67

COM Express Type 6

up to Intel® Core™ i7 Processors 2.16 GHz  
Quadcore

High end graphics performance

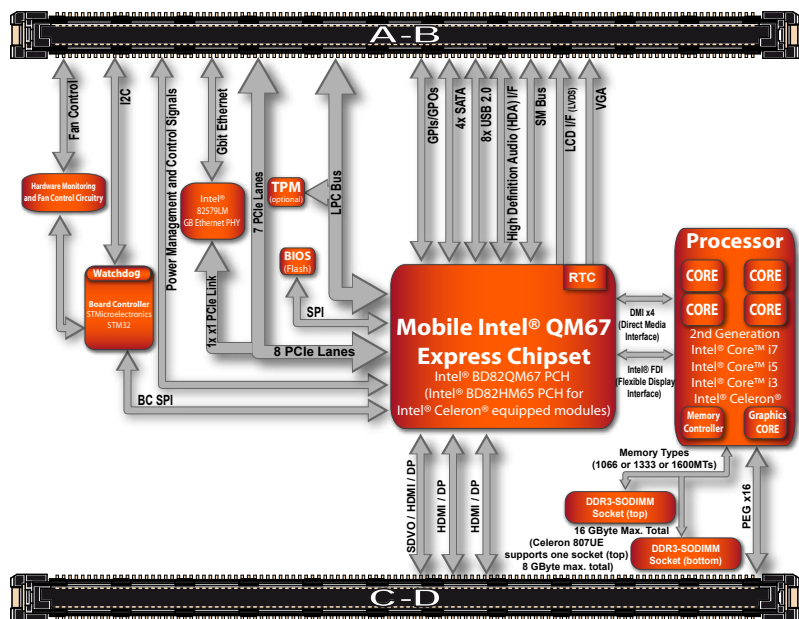
Intel® Turbo Boost Technology 2.0



<b>Formfactor</b>	<b>Formfactor COM Express™ Basic, (95 x 125 mm), Type 6 Connector Layout</b>
<b>CPU</b>	Intel® Core™ i7-2710QE, (4 x 2.1GHz, 8 Threads, 6 MB cache, 1600 MT/s, TDP 45 W, PGA package) Intel® Core™ i5-2510E (2 x 2.5GHz, 4 Threads, 3 MB cache, 1333 MT/s, TDP 35 W, PGA package) Intel® Core™ i3-2330E (2 x 2.2GHz, 4 Threads, 3 MB cache, 1333 MT/s, TDP 35 W, PGA package) Intel® Celeron™ B810 (2 x 1.6GHz, 2 Threads, 2 MB cache, 1333 MT/s, TDP35 W, PGA package)  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 3000 with dynamic frequency up to 1.2GHz, Intel® Clear Video HD Technology
<b>DRAM</b>	2 Sockets, SO-DIMM DDR3 up to 1600MT/s and 16 GByte
<b>Chipset</b>	Mobile Intel® 6 Series Chipset: Intel® QM67 / Intel® HM65 (Intel® Celeron™ version)
<b>Ethernet</b>	Intel® 82579 GbE LAN Controller with AMT 7.0 support
<b>I/O Interfaces</b>	7x PCI Express™ GEN. 2.0 lanes, 1x PEG, 2x Serial ATA® with 6 Gb/s, 2x Serial ATA® with 3 Gb/s (AHCI) RAID 0/1/5/10 support, 2x ExpressCard®, 8x USB 2.0 (EHCI), LPC bus, I²C bus (fast mode, 400 kHz, multi-master)
<b>Sound</b>	Digital High Definition Audio Interface with support for multiple audio codecs
<b>Graphics</b>	Intel® Flexible Display Interface (FDI), OpenGL 3.0 and DirectX10.1 support, Two independent pipelines for full dual view support optional High performance hardware MPEG-2 decoding, WMV9 (VC-1) and H.264 (AVC) support Blu-ray support @ 40 MBit/s, hardware motion compensation
<b>LVDS</b>	Dual channel LVDS transmitter, Supports flat panels 2x24 Bit interface, VESA mappings, resolutions up to 1920x1200, Automatic Panel Detection via EDID/EPI
<b>Display Port (DP)</b>	3x DisplayPorts 1.1
<b>HDMI or DVI</b>	3x ports shared with DVI, HDMI 1.4 (with 3D)
<b>CRT Interface</b>	350 MHz RAMDAC, resolutions up to QXGA (2048x1536)
<b>AUX Output</b>	Supports one SDVO port shared with HDMI and DisplayPort capable of driving a 200MP pixel rate
<b>congatec Board Controller</b>	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
<b>Embedded BIOS Features</b>	AMI Aptio® UEFI 2.x firmware, 8 MByte serial SPI firmware flash , High Accessible Program (HAP)
<b>Security</b>	The conga-TM67 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.
<b>Power Management</b>	ACPI 4.0 with battery support
<b>Operating Systems</b>	Microsoft® Windows7, Microsoft® Windows XP, Microsoft® Windows® embedded Standard, Embedded POS Ready (WEPOS), Linux 3.0
<b>Power Consumption</b>	Typ. application: tbd., see manual for full details, CMOS Battery Backup
<b>Temperature:</b>	Operating: 0 .. +60°C Storage: -20 .. +80°C
<b>Humidity Operating:</b>	Operating: 10 - 90% r. H. non cond. Storage: 5 - 95% r. H. non cond.
<b>Size</b>	95 x 125 mm (3.74" x 4.92")

# Block Diagram conga-TM67

# Order Information conga-TM67



Article	PN	Description
conga-TM67/i7-2710QE	046301	COM Express Type 6 Basic modul with Intel® Core™ i7-2710QE Quad Core Processor with 2.1GHz, 6MB L2 cache and 1600MT/s dual channel DDR3 memory interface.
conga-TM67/i5-2510E	046302	COM Express Type 6 Basic modul with Intel® Core™ i5-2510E dual core processor with 2.5GHz, 3MB L2 cache and 1333MT/s dual channel DDR3 memory interface.
conga-TM67/i3-2330E	046303	COM Express Type 6 Basic modul with Intel® Core™ i3-2330E dual core processor with 2.2GHz, 3MB L2 cache and 1333MT/s dual channel DDR3 memory interface.
conga-TM67/B810	046304	COM Express Type 6 Basic modul with Intel® Celeron™ B810 dual core processor with 1.6GHz, 2MB L2 cache and 1333MT/s dual channel DDR3 memory interface.
conga-TM67/CSA-HP-B	046054	Standard active cooling solution with integrated heat pipes, 15mm fins and 20mm overall heat sink height and integrated 12V fan. All stand-offs are with 2.7mm bore hole
conga-TM67/CSA-HP-T	046055	Standard active cooling solution with integrated heat pipes, 15mm fins and 20mm overall heat sink height and integrated 12V fan. All stand-offs are with 2.7mm bore hole
conga-TM67/CSP-HP-B	046052	Standard passive cooling solution with integrated heat pipes, 15mm fins and 20mm overall heat sink height. All stand-offs are with 2.7mm bore hole
conga-TM67/CSP-HP-T	046053	Standard passive cooling solution with integrated heat pipes, 15mm fins and 20mm overall heat sink height. All stand-offs are with 2.7mm bore hole
conga-TM67/HSP-HP-B	046050	Standard heatspreader with integrated heat pipes. All stand-offs are with 2.7mm bore hole
conga-TM67/HSP-HP-T	046051	Standard heatspreader with integrated heat pipes. All stand-offs are with 2.7mm bore hole
DDR3-SODIMM-1333 (1GB)	068751	DDR3 SODIMM memory module with 1333 MT/s (PC3-10600) and 1GB RAM
DDR3-SODIMM-1333 (2GB)	068761	DDR3 SODIMM memory module with 1333 MT/s (PC3-10600) and 2GB RAM
DDR3-SODIMM-1333 (4GB)	068764	DDR3 SODIMM memory module with 1333 MT/s (PC3-10600) and 4GB RAM

## Engineering Tools / Accessories for COM Express\*

conga-TEVAL	065800	Evaluation carrier board for Type 6 COM-Express-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 to convert the chipset graphic ports Port-B, Port-C and Port-D to the HDMI or DisplayPort Interface
DVI-D ADD2 Card	058500	ADD2 display adapter card with single DVI-D digital output. Suitable for all Intel based platforms that support Serial Digital Display Outputs (SDVO) on the standard, x16 PCI Express Graphics (PEG) port.
Dual DVI-D ADD2 Card	013226	ADD2 display adapter card with dual independent DVI-D output. Suitable for all Intel based platforms that support Serial Digital Display Outputs (SDVO) on the standard, x16 PCI Express Graphics (PEG) port.
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