

COM Express® Basic Type 6 Module Preliminary

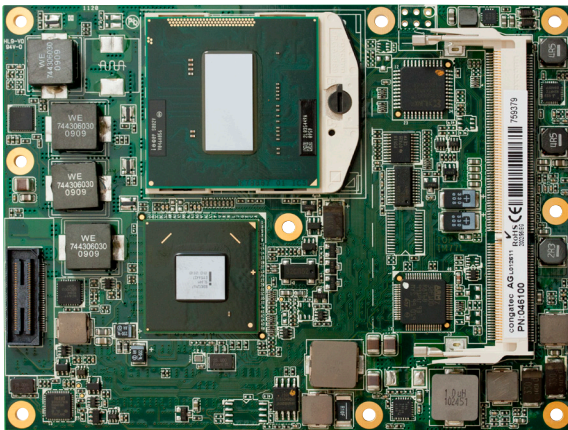
conga-TM67

COM Express Type 6

up to Intel® Core™ i7 Processors 2.5 GHz

High end graphics performance

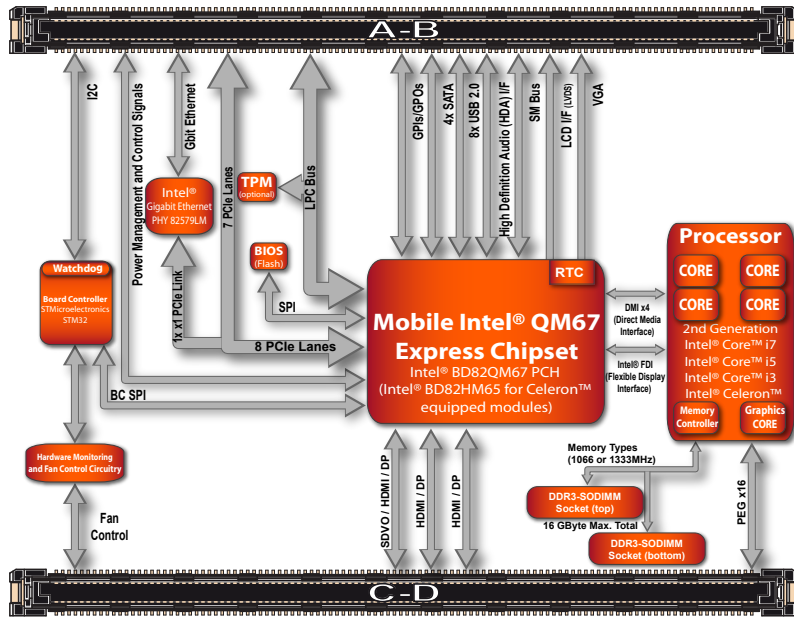
Intel® Turbo Boost Technology 2.0



Formfactor	Formfactor COM Express™ Basic, (95 x 125 mm), Type 6 Connector Layout
CPU	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
DRAM	2 Sockets, SO-DIMM DDR3 up to 1600MT/s and 16 GByte
Chipset	Mobile Intel® 6 Series Chipset: Intel® QM67 / Intel® HM65 (Intel® Celeron™ version)
Ethernet	Intel® 82579 GbE LAN Controller with AMT 7.0 support
I/O Interfaces	7x PCI Express™ Rev. 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)
Sound	Digital High Definition Audio Interface with support for multiple audio codecs
Graphics	Intel® Flexible Display Interface (FDI), OpenGL 3.0 and DirectX10.1 support, Two independent pipelines for full dual view support 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
Display Port (DP)	3x DisplayPorts 1.1
HDMI or DVI	3x ports shared with DVI, HDMI 1.4 (with 3D)
CRT Interface	350 MHz RAMDAC, resolutions up to QXGA (2048x1536)
AUX Output	Supports one SDVO port shared with HDMI and DisplayPort capable of driving a 200MP pixel rate
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-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.
Power Management	ACPI 4.0 with battery support
Operating Systems	Microsoft® Windows7, Microsoft® Windows XP, Microsoft® Windows® embedded Standard, Embedded POS Ready (WEPOS), Linux 3.0
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")

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.
DDR3-SODIMM (1GB)	068750	DDR3-SODIMM memory module with 1 GB RAM
DDR3-SODIMM (2GB)	068760	DDR3-SODIMM memory module with 2 GB RAM
DDR3-SODIMM (4GB)	068765	DDR3-SODIMM memory module with 4 GB RAM
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 M2.5mm threaded
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 M2.5mm threaded
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 M2.5mm threaded

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-SBM²C-module	014141	SMART Battery Manager Module for COM Express
conga-SBM²C-kit	029874	Starterkit to evaluate SBM-Features for COM Express with SMART-Battery Manager Module and cable set
conga-SBM²C Licence and Design Kit	025478	SMART Battery Manager Module Design Kit for COM including licence agreement for customer integration, Hardware design files (Schematics, Bill of Material), Battery Manager Firmware (incl. commented source code), AVR-Programming Tool AT90 JTAG ICE MKII
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.
conga-FPA2	047250	Flatpanel prototype adapter to develop your own flatpanel adapter including cables set.
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