COM Express® Basic Module

Maximum Computing Performance

conga-BS57

Power-Efficient Processors

up to Intel® Core™ i7
Processor 2.0 GHZ

Intel® Clear Video HD Technology

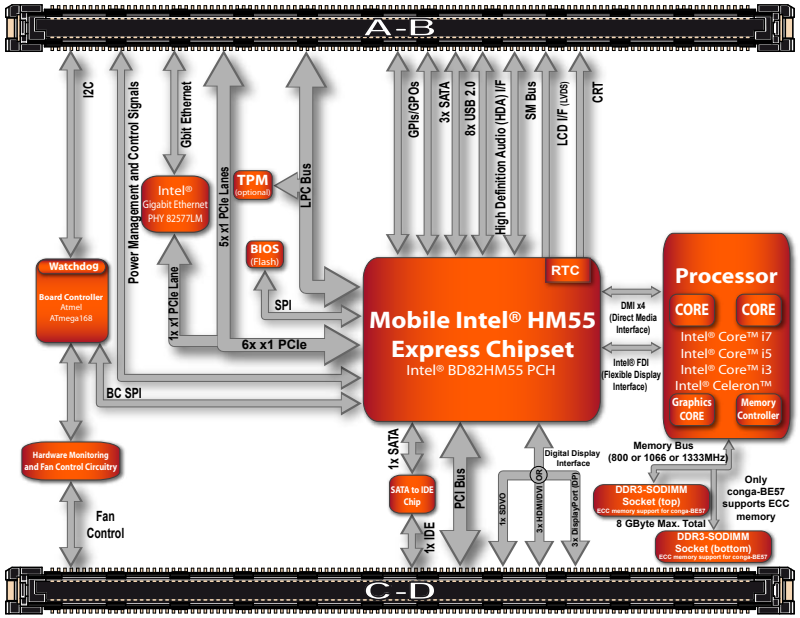
COM Express®

Formfactor	**COM Express™ Basic, (95 x 125 mm), Type II Connector Layout**
Processor	Intel® Core™ i7-620LE, 2.0 GHz (32 nm process, 4MB cache, 1066 MHz, TDP 25 W, BGA package) Intel® Core™ i7-620UE, 1.06 GHz (32 nm process, 4MB cache, 800 MHz, TDP 18 W, BGA package) Intel Core™ i3-330E, 2.13 GHz (32 nm process, 3MB cache, 1066 MHz, TDP 35 W, BGA package) Intel® Celeron® U3405, 1.07 (32 nm process, 2MB cache, 1066 MHz, TDP 18 W, BGA package) Integrated dual channel memory controller, up to 17.1 GByte/sec. memory bandwidth Integrated Intel® HD Graphics with dynamic frequency up to 667 MHz, Intel® Clear Video HD Technology
DRAM	2 Sockets, SO-DIMM DDR3 1333 MHz, up to 8 GByte
Chipset	Intel® 5 Series Chipset: Intel® HM55
Ethernet	Intel® 82577LM Ethernet PHY
I/O Interfaces	5x PCI Express™ lanes, 3x Serial ATA® (AHCI) no RAID support, 1x EIDE (UDMA-66/100) optional, 2x ExpressCard®, 8x USB 2.0 (EHCI), 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	Processor integrated Mobile Intel® 5 Series HD graphics, OpenGL 2.1 and DirectX10 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, no PEG support
LVDS	Dual channel LVDS transmitter, Supports flat panels 2x24 Bit interface, VESA mappings, resolutions up to 1920x1200, Automatic Panel Detection via EDID/EPI
DisplayPort (DP)	3x DisplayPorts 1.1 shared with HDMI
HDMI	3x ports shared with DisplayPorts
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, 4 MByte serial SPI firmware flash
Security	The conga-BS57 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 3.0 with battery support
Operating Systems	Microsoft® Windows 8, Microsoft® Windows 7, Microsoft® Windows XP, Microsoft® Windows® embedded Standard, Linux
Power Consumption	Typ. application: tbd., see manual for full details, CMOS Battery Backup
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")

© 2014 congatec AG. All rights reserved. All data is for information purposes only. Although all the information contained within this document is carefully checked, no guarantee of correctness is implied or expressed. The products may include software. Use of the software is subject to the terms and conditions set out in the respective owner's license agreements, which are available at www.congatec.com and/or upon request. Product names, logos, brands, and other trademarks featured or referred to within this datasheet, or the congatec website, are the property of their respective trademark holders. These trademark holders are not affiliated with congatec AG, our products, or our website.
Rev. July 28, 2014 BLU

congatec AG, Auwiesenstraße 5, 94469 Deggendorf, Germany
Phone +49 (991) 2700-0, Fax +49 (991) 2700-111, info@congatec.com

Block Diagram conga-BS57



Order Information conga-BS57

Article	PN	Description
conga-BS57/i7-620LE	040100	Intel® Core™ I7-620LE Processor with 2.0 GHz (BGA) (Max. Turbo Frequency 2.8GHz), 4MB L2 cache, 1066MT/s dual channel DDR3 SODIMM memory interface for up to 8GB.
conga-BS57/I7-620UE	040105	Intel® Core™ i7-620UE Processor with 1.06GHz (BGA) (Max Turbo Frequency 2.13 GHz), 4MB L2 cache, 800MT/s dual channel DDR3 SODIMM memory interface for up to 8GB.
conga-BS57/i3-330E	040106	Intel® Core™ i3-330E Processor with 2.13GHz (BGA), 3MB L2 cache, 1066MT/s dual channel DDR3 SODIMM memory interface for up to 8GB.
conga-BS57/U3405	040107	Intel® Celeron® U3405 Processor with 1.06 GHz (BGA), 2MB L2 cache, dual channel DDR3 SODIMM memory interface for up to 8GB.
conga-BS57/HSP-HP-B	040120	Standard heatspreader for high performance COM Express modules conga-BS57 and BE57 with integrated heat pipes. All standoffs are with 2.7mm bore hole.
conga-BS57/HSP-HP-T	040121	Standard heatspreader for high performance COM Express modules conga-BS57 and BE57 with integrated heat pipes. All standoffs are M2.5mm thread.
conga-BS57/CSP-HP-B	046026	Standard passive cooling solution for high performance COM Express modules conga-BS57 and BE57 with integrated heat pipes, 15mm silver fins and 20mm overall heat sink height. All standoffs are with 2.7mm bore hole.
conga-BS57/CSP-HP-T	046027	Standard passive cooling solution for high performance COM Express modules conga-BS57 and BE57 with integrated heat pipes, 15mm silver fins and 20mm overall heat sink height. All standoffs are M2.5mm thread.
conga-BS57/CSA-HP-B	046028	Standard active cooling solution for high performance COM Express modules conga-BS57 and BE57 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-BS57/CSA-HP-T	046029	Standard active cooling solution for high performance COM Express modules conga-BS57 and BE57 with integrated heat pipes, 15mm silver fins, 20mm overall heat sink height and integrated 12V fan. All standoffs are M2.5mm thread.
DDR3-SODIMM-1066 (1GB)	068750	DDR3 SODIMM memory module with 1066 MT/s and 1GB RAM
DDR3-SODIMM-1066 (2GB)	068760	DDR3 SODIMM memory module with 1066 MT/s and 2GB RAM
DDR3-SODIMM-1066 (4GB)	068765	DDR3 SODIMM memory module with 1066 MT/s and 4GB RAM

Engineering Tools / Accessories for COM Express®		
conga-CEVAL	065749	Evaluation carrier board for COM-Express-modules
conga-Cdebug	047854	COM-Express debugging platform. Including cable for COM, PS/2 and VGA.
conga-CKIT	064714	COM-Express-Starterkit, incl. conga-CEVAL, conga-CDEBUG, conga-FPA1 (PN: 024241), Dual DVI-D ADD2 card, Power supply, USB-Stick, ... Without COM Express-module
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
Single 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

congatec AG, Auwiesenstraße 5, 94469 Deggendorf, Germany
Phone +49 (991) 2700-0, Fax +49 (991) 2700-111, info@congatec.com