

COM Express® Basic Module

Maximum Computing Performance

conga-BS57

Power-Efficient Processors

up to Intel® Core™ i7
Processor 2.0 GHZ

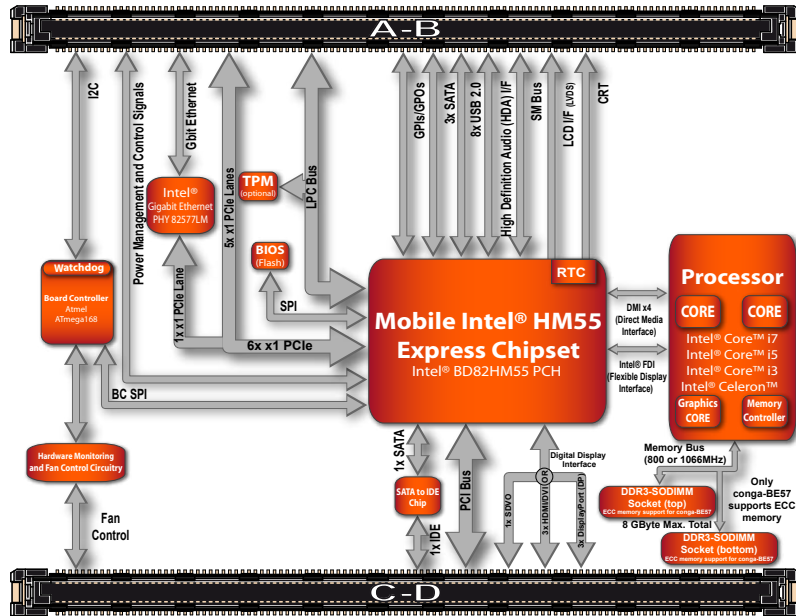
Intel® Clear Video HD Technology



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|----------------------------------|---|
| 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® Windows7, Microsoft® Windows XP, Microsoft® Windows® embedded Standard, Linux 2.6, QNX 6.x |
| 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") |

Block Diagram conga-BS57

Order Information conga-BS57



| Article | PN | Description |
|---------------------------|--------|---|
| conga-BS57/i7-620LE (BGA) | 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 (BGA) | 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 (BGA) | 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. |
| DDR3-SODIMM-1066 (1GB) | 068750 | DDR3-SODIMM memory module with 1 GB RAM (1066 MT/s) |
| DDR3-SODIMM-1066 (2GB) | 068760 | DDR3-SODIMM memory module with 2 GB RAM (1066 MT/s) |
| DDR3-SODIMM-1066 (4GB) | 068765 | DDR3-SODIMM memory module with 4 GB RAM (1066 MT/s) |

Engineering Tools / Accessories for COM Express®

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|------------------------------------|--------|---|
| 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-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 |