

COM Express® Basic Module

High graphics performance with low power consumption

conga-BAF

Based on AMD Embedded G-Series Processors

Best price/performance ratio

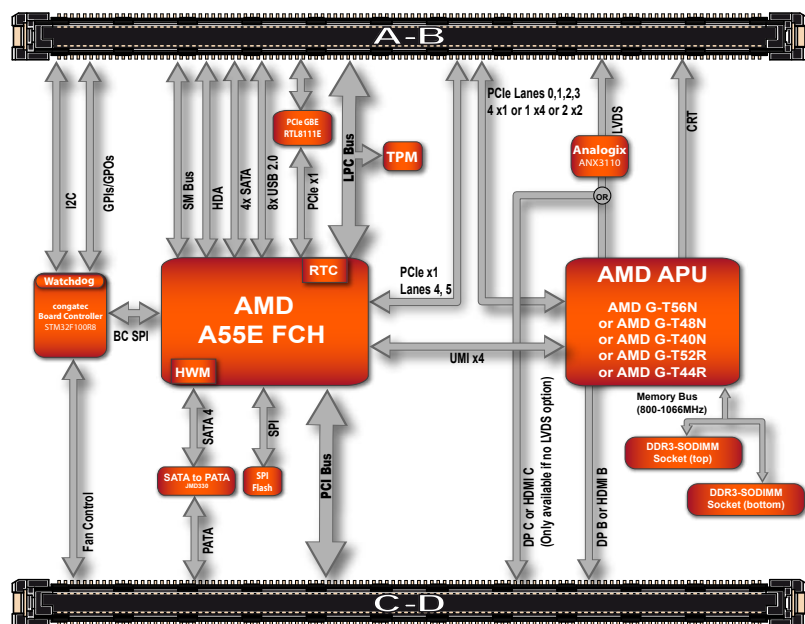
High performance graphics



Formfactor	COM Express™ Basic, (95 x 125 mm), Type II Connector Layout
CPU	AMD Embedded G-Series Processors AMD G-T56N 1.6 GHz Dual Core (cache 512kB x2, 18 W) AMD G-T40N 1.0 GHz Dual Core (cache 512kB x2, 9W) AMD G-T44R 1.2 GHz Single Core (cache 512kB, 9W) AMD G-T40E 1.0 GHz Dual Core (cache 512kB x2, 6.4W) AMD G-T40R 1.0 GHz Single Core (cache 512kB, 5.5W)
DRAM	Single channel up to two 4 GB DDR3 SO-DIMM memory (up to 1066 MHz)
Chipset	AMD A55E Controller Hub
Ethernet	Gigabit Ethernet, Realtek RTL8111E
I/O Interfaces	6x PCI Express™ x1 lanes, 4x Serial ATA*, 1x EIDE (up to UDMA 6), 8x USB 2.0, PCI Bus (Rev. 2.3 compliant, 33 MHz), 2x Express™ Card
Sound	High Definition Audio Interface
Graphics	Integrated High Performance Video, DirectX™11 graphics with UVD 3.0, Integrated VGA DAC, Dual Simultaneous Display Support, no PEG support
LVDS	2x24 Bit, 800x600 to 1920x1200@60Hz; VESA standard or JEDIA data mapping; Automatic Panel Detection via EDID/EPI
DisplayPort	2x DisplayPort 1.1a shared with HDMI ports, second port multiplexed with LVDS resolutions up to 2560x1600 - 18W APU, 1920x1200 - 9W APU
HDMI or DVI	2x HDMI 1.3 Ports, shared with DisplayPort, second port multiplexed with LVDS, resolutions up to 1920x1080 / 1920x1200 for DVI mode
CRT	400 MHz RAMDAC, resolutions up to 2560x1600 - 18W APU, 1920x1200 - 9W APU
congatec Board Controller	Multi Stage Watchdog, non-volatile User Data Storage, Manufacturing and Board Information, Board Statistics, BIOS Setup Data, Backup, I ² C bus (fast mode, 400 kHz, multi-master), Power Loss Control
Embedded BIOS Features	AMI-Aptio UEFI BIOS with congatec Embedded BIOS features
Security	The conga-BAF 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® Windows8, Microsoft® Windows7, Microsoft® Windows XP, Microsoft® Windows® embedded Standard, Microsoft® Windows® CE 6.0, Microsoft® Windows Embedded Compopt 7, 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")

© 2013 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. September 24, 2013 MD

Block Diagram conga-BAF



Order Information conga-BAF

Article	PN	Description
conga-BAF/T56N	041001	AMD G-Series Dual Core Processor T56N 1.6GHz, 1MB L2 cache and 1333MT/s DDR3 SODIMM memory interface for up to 8GB.
conga-BAF/T40N	041003	AMD G-Series Dual Core Processor T40N 1.0GHz, 1MB L2 cache and 1066MT/s DDR3 SODIMM memory interface for up to 8GB.
conga-BAF/T44R	041005	AMD G-Series Single Core Processor T44R 1.2GHz, 512kB L2 cache and 1066MT/s DDR3 SODIMM memory interface for up to 8GB.
conga-BAF/T40R	041006	AMD G-Series Single Core Processor T40R 1.0GHz, 5.5W, 1MB L2 cache and 1066MT/s DDR3 SODIMM memory interface for up to 8GB.
conga-BAF/T40E	041007	AMD G-Series Dual Core Processor T40E 1.0GHz, 6.5W, 1MB L2 cache and 1066MT/s DDR3 SODIMM memory interface for up to 8GB.
conga-BAF/HSP-B	041020	Standard Heatspreader. All stand-offs are with 2.7mm bore hole.
conga-BAF/HSP-T	041021	Standard Heatspreader. All stand-offs are M2.5mm threaded.
conga-BAF/CSP-B	041025	Standard passive cooling solution for module conga-BAF. All standoffs are with 2.7mm bore hole.
conga-BAF/CSP-T	041026	Standard passive cooling solution for module conga-BAF. All standoffs are M2.5mm thread.
conga-BAF/CSA-B	041027	Standard active cooling solution for module conga-BAF. Integrated 12V fan. All standoffs are with 2.7mm bore hole.
conga-BAF/CSA-T	041028	Standard active cooling solution for module conga-BAF. Integrated 12V fan. All standoffs are M2.5mm thread.
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-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