

# COM Express® Basic Module

## High graphics performance with low power consumption

### conga-BAF

Based on AMD Embedded G-Series Processors

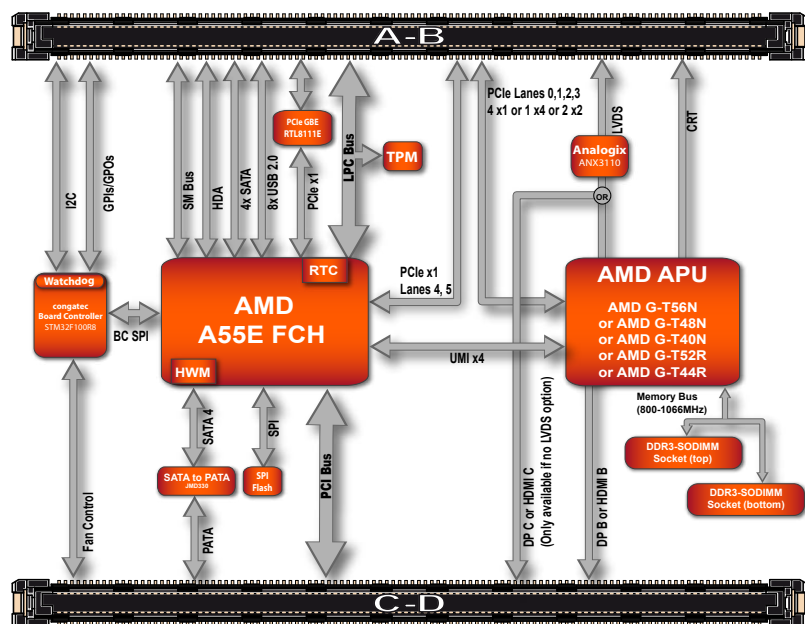
Best price/performance ratio

High performance graphics



<b>Formfactor</b>	<b>COM Express™ Basic, (95 x 125 mm), Type II Connector Layout</b>
<b>CPU</b>	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)
<b>DRAM</b>	Single channel up to two 4 GB DDR3 SO-DIMM memory (up to 1066 MHz)
<b>Chipset</b>	AMD A55E Controller Hub
<b>Ethernet</b>	Gigabit Ethernet, Realtek RTL8111E
<b>I/O Interfaces</b>	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
<b>Sound</b>	High Definition Audio Interface
<b>Graphics</b>	Integrated High Performance Video, DirectX™11 graphics with UVD 3.0, Integrated VGA DAC, Dual Simultaneous Display Support, no PEG support
<b>LVDS</b>	2x24 Bit, 800x600 to 1920x1200@60Hz; VESA standard or JEDIA data mapping; Automatic Panel Detection via EDID/EPI
<b>DisplayPort</b>	2x DisplayPort 1.1a shared with HDMI ports, second port multiplexed with LVDS resolutions up to 2560x1600 - 18W APU, 1920x1200 - 9W APU
<b>HDMI or DVI</b>	2x HDMI 1.3 Ports, shared with DisplayPort, second port multiplexed with LVDS, resolutions up to 1920x1080 / 1920x1200 for DVI mode
<b>CRT</b>	400 MHz RAMDAC, resolutions up to 2560x1600 - 18W APU, 1920x1200 - 9W APU
<b>congatec Board Controller</b>	Multi Stage Watchdog, non-volatile User Data Storage, Manufacturing and Board Information, Board Statistics, BIOS Setup Data, Backup, I <sup>2</sup> C bus (fast mode, 400 kHz, multi-master), Power Loss Control
<b>Embedded BIOS Features</b>	AMI-Aptio UEFI BIOS with congatec Embedded BIOS features
<b>Security</b>	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.
<b>Power Management</b>	ACPI 3.0 with battery support
<b>Operating Systems</b>	Microsoft® Windows8, Microsoft® Windows7, Microsoft® Windows XP, Microsoft® Windows® embedded Standard, Microsoft® Windows® CE 6.0, Microsoft® Windows Embedded Compopt 7, Linux
<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</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-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