COM Express® Basic Module

High graphics performance with low power consumption

conga-BAF

Based on AMD Embedded G-Series Processors

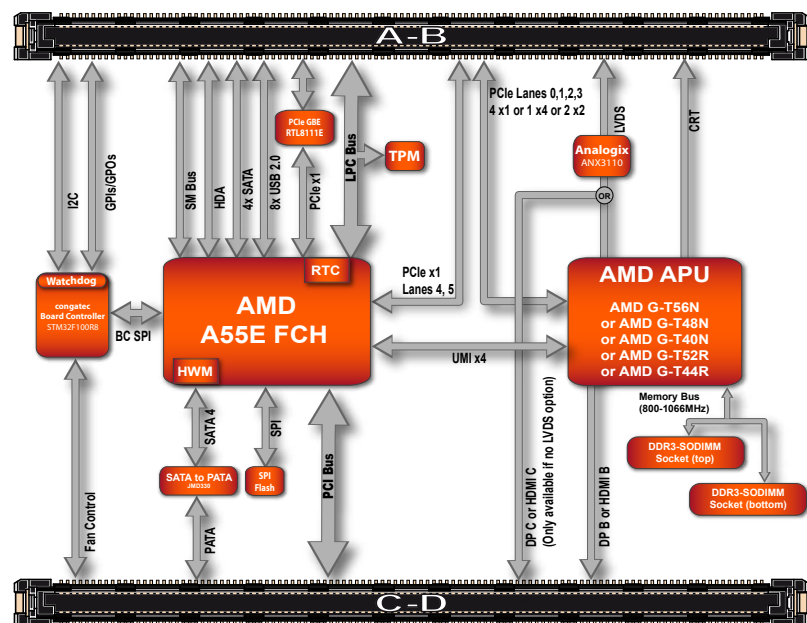**Best price/performance ratio**

High performance graphics

COM Express®

AMD **Fusion**
FAMILY OF APUs
EMBEDDED TECHNOLOGY

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 (L1 cache 64KB, L2 cache 512kB x2, 18 W) AMD G-T48N 1.4 GHz Dual Core (L1 cache 64KB, L2 cache 512kB x2, 18W) AMD G-T40N 1.0 GHz Dual Core (L1 cache 64KB, L2 cache 512kB x2, 9W) AMD G-T52R 1.5 GHz Single Core (L1 cache 64KB, L2 cache 512kB, 18W) AMD G-T44R 1.2 GHz Single Core (L1 cache 64KB, L2 cache 512kB, 9W)
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, I²C bus (fast mode, 400 kHz, multi-master), Power Loss Controll
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® Windows7, Microsoft® Windows XP, Microsoft® Windows® embedded Standard, Linux 2.6
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")

congatec the rhythm of embedded computing

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Article	PN	Description
conga-BAF/T56N	041001	AMD Dual Core Processor T56N with 1.6GHz, 1MB L2 cache and 1066MT/s DDR3 SODIMM memory interface for up to 8GB.
conga-BAF/T48N	041002	AMD Dual Core Processor T48N with 1.4GHz, 1MB L2 cache and 1066MT/s DDR3 SODIMM memory interface for up to 8GB.
conga-BAF/T40N	041003	AMD Dual Core Processor T40N with 1.0GHz, 1MB L2 cache and 1066MT/s DDR3 SODIMM memory interface for up to 8GB.
conga-BAF/T52R	041004	AMD Single Core Processor T52R with 1.5GHz, 512kB L2 cache and 1066MT/s DDR3 SODIMM memory interface for up to 8GB.
conga-BAF/T44	041005	AMD Single Core Processor T44R with 1.2GHz, 512kB 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/TSSX	041022	Thermal stack set for conga-BAF. This set includes two thermal stacks for CPU and AMD A55E Controller Hub
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®		
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 costumer 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 fo 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

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Contradata is a distributor of embedded computer technology and covers the entire Italian territory. The local sales staff is fully capable of helping customers to define their products and configurations. Support is supplied by a strong engineering team whose solid technical background can provide essential assistance to its customers. They're not only limited to hardware solutions but can also provide software assistance when dealing with todays most common operating systems i.e. WinCE, WinXPE and Linux.