

# XTX™ Module

## High graphics performance with low power consumption

### conga-XAF

Based on AMD Embedded G-Series Processors

Best price/performance ratio

High performance graphics

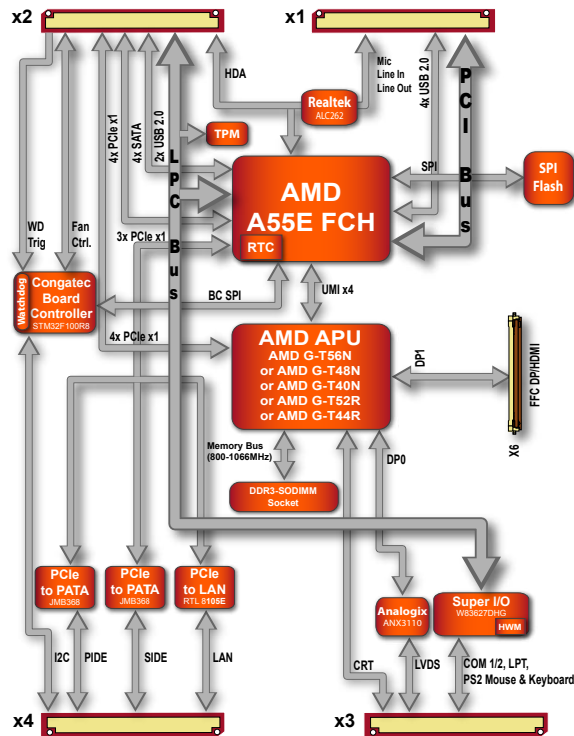


Formfactor	ETX® Spec 2.7. without ISA Support, XTX™ Extensions
<b>CPU</b>	AMD Embedded G-Series Processors AMD G-T56N 1.6 GHz Dual Core (L1 cache 64KB, L2 cache 512kB x2, 18 W) AMD G-T48N 1.4 GHz Dual Core (L1 cache 64KB, L2 cache 512kB x2, 18W) AMD G-T40N 1.0 GHz Dual Core (L1 cache 64KB, L2 cache 512kB 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) AMD G-T40R 1.0 GHz Single Core (L1 cache 64KB, L2 cache 512kB, 5.5 W) AMD G-T40E 1.0 GHz Dual Core (L1 cache 64KB, L2 cache 512kB x2, 6.5 W)
<b>DRAM</b>	Single channel up to one 4 GB DDR3 SO-DIMM memory (up to 1066 MHz)
<b>Chipset</b>	AMD A55E Controller Hub
<b>Ethernet</b>	10/100M Fast Ethernet, Realtek RTL8105E
<b>I/O Interfaces</b>	4x PCI Express™ x1 lanes, 4x Serial ATA®, 2x EIDE (up to UDMA-66/100), 6x USB 2.0, PCI Bus (Rev. 2.3 compliant, 33 MHz), 2x Express Card, LPC Bus, I²C (Fast Mode, 400 kHz Multi Maser), Floppy, LPT, 2x COM, PS/2
<b>Sound</b>	High Definition Audio Interface and Analog MIC, Line In, Line Out by on-module HDA codec
<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>	1x DisplayPort 1.1a shared with HDMI port, resolutions up to 2560x1600 - 18W APU, 1920x1200 - 9W APU
<b>HDMI or DVI</b>	1x HDMI 1.3 Port, shared with DisplayPort, 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, I²C 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-XAF 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® Windows7, Microsoft® Windows XP, Microsoft® Windows® embedded Standard, Linux 2.6
<b>Power Consumption</b>	Typ. application: 9 .. 18 W., 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.

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# Block Diagram conga-XAF

# Order Information conga-XAF



Article	PN	Description
conga-XAF/T56N	041031	AMD Dual Core Processor T56N with 1.6GHz, 1MB L2 cache and 1066MT/s DDR3 SODIMM memory interface for up to 4GB.
conga-XAF/T48N	041032	AMD Dual Core Processor T48N with 1.4GHz, 1MB L2 cache and 1066MT/s DDR3 SODIMM memory interface for up to 4GB.
conga-XAF/T40N	041033	AMD Dual Core Processor T40N with 1.0GHz, 1MB L2 cache and 1066MT/s DDR3 SODIMM memory interface for up to 4GB.
conga-XAF/T52R	041034	AMD Single Core Processor T52R with 1.5GHz, 512kB L2 cache and 1066MT/s DDR3 SODIMM memory interface for up to 4GB.
conga-XAF/T44R	041035	AMD Single Core Processor T44R with 1.2GHz, 512kB L2 cache and 1066MT/s DDR3 SODIMM memory interface for up to 4GB.
conga-XAF/HSP-B	041050	Standard Heatspreader. All stand-offs are with 2.7mm bore hole.
conga-XAF/HSP-T	041051	Standard Heatspreader. All stand-offs are M2.5mm threaded.
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 XTX®		
conga-Xeval	019482	Evaluation carrier board for XTX-modules
conga-XKIT	077441	XTX-Starterkit with conga-XEVAL, conga-Xdebug, conga-FPA1 (024241), conga-XDVI, Power supply, USB-Stick, ...Without XTX-module
conga-ITX/X	057891	Baseboard for XTX-modules. Formfactor mini-ITX, ...
conga-XDVI	098637	Evaluation platform to convert SDVO to DVI-D
conga-Xdebug	041784	XTX debugging platform. Including cable for COM, PS/2 and VGA
conga-FPA2	047250	Flatpanel prototype adapter to develop your own flatpanel adapter including cables set
XTX/ETX-baseboard-socket-3	400006	Connector for ETX and XTX carrier boards, height 3.0 mm, packing unit 8 pieces
XTX/ETX-baseboard-socket-9.5	400009	Connector for ETX and XTX carrier boards, height 9.5 mm, packing unit 8 pieces
conga-SBM²-module	088774	SMART Battery Manager Module
conga-SBM²-2nd accu	096582	Second Smart Battery, only for the conga-SBM²-Kit.
conga-SBM²-KIT	026571	Starterkit to evaluate SBM-Features. With SMART-Battery Manager Module and cable set
conga-SBM² Licence and Design Kit	052741	SMART Battery Manager Module Design Kit 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 adapter board for digital fl of panels with a graphics resolution up to 1280x1024 pixel