

ETX® Module

High graphics performance with low power consumption

conga-EAF

Based on AMD Embedded G-Series Processors

Best price/performance ratio

High performance graphics

ETX®

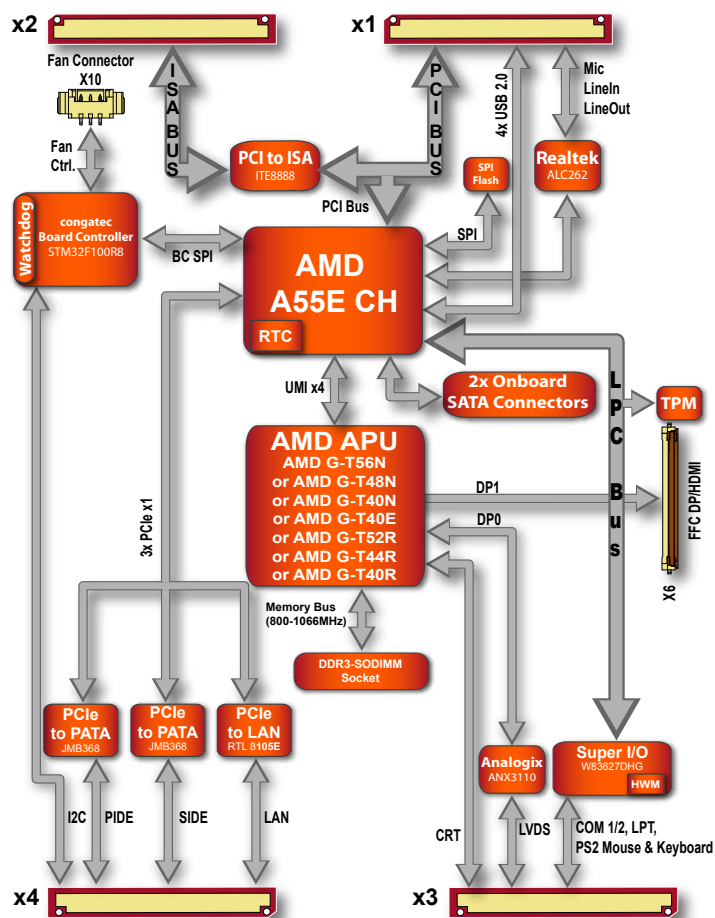


AMD Fusion
FAMILY OF APUS
EMBEDDED TECHNOLOGY

Formfactor	ETX® Spec 3.02
CPU	AMD Embedded G-Series Processors AMD G-T56N 1.6 GHz Dual Core (L2 cache 512kB x2, 18 W) AMD G-T40N 1.0 GHz Dual Core (L2 cache 512kB x2, 9W) AMD G-T40R 1.0 GHz Single Core (L2 cache 512kB, 5.5 W) AMD G-T40E 1.0 GHz Dual Core (L2 cache 512kB x2, 6.5 W) AMD G-T16R 615 MHz Single Core (L2 cache 512kB, 4.5 W)
DRAM	Single channel up to one 4 GB DDR3 SO-DIMM memory (up to 1066 MHz)
Chipset	AMD A55E Controller Hub
Ethernet	10/100M Fast Ethernet, Realtek RTL8105E
I/O Interfaces	2x Serial ATA®, 2x EIDE (up to UDMA-66/100), 4x USB 2.0, PCI Bus (Rev. 2.3), ISA Bus, I2C (Fast Mode, 400 kHz, Multi Master), Floppy, LPT, 2x COM, PS/2
Sound	High Definition Audio Interface and Analog MIC, Line In, Line Out by on-module HDA codec
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
CRT	400 MHz RAMDAC, resolutions up to 2560x1600 - 18W APU, 1920x1200 - 9W APU
DisplayPort	1x DisplayPort 1.1a shared with HDMI port, resolutions up to 2560x1600 - 18W APU, 1920x1200 - 9W APU
HDMI or DVI	1x HDMI 1.3 Port, shared with DisplayPort, resolutions up to 1920x1080 / 1920x1200 for DVI mode
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 BIOS with congatec Embedded BIOS features
Security	The conga-EAF 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, Windows Embedded Compact 7, Linux
Power Consumption	Typ. application: 9 .. 18 W., 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 114 mm (3.7" x 4.5")

© 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. AMD, Fusion and eonaria are registered trademarks of AMD. Microsoft®, Windows®, Windows NT®, Windows CE and Windows XP are registered trademarks of Microsoft corporation. ETX is a registered trademark of Kontron Embedded Modules GmbH.
Rev. January 17, 2013 KS

Block Diagram conga-EAF



Order Information conga-EAF

Article	PN	Description
conga-EAF/T56N	041071	AMD Dual Core Processor T56N with 1.6GHz, 1MB L2 cache and 1066MT/s DDR3 SODIMM memory interface for up to 4GB.
conga-EAF/T40N	041073	AMD Dual Core Processor T40N with 1.0GHz, 1MB L2 cache and 1066MT/s DDR3 SODIMM memory interface for up to 4GB.
conga-EAF/T16R	041078	Standard ETX module with AMD Ontario™ Single Core Processor T16R with 615MHz, 4.5W, 512kB L2 cache and 1066MT/s DDR3 SODIMM memory interface for up to 4GB.
conga-EAF/T40R	041076	AMD Ontario™ Single Core Processor T40R 1.0GHz, 1MByte L2 cache and 1066MT/s DDR3 SODIMM memory interface for up to 4GB
conga-EAF/T40E	041077	AMD Ontario™ Dual Core Processor T40E 1.0GHz, 1MByte 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.
conga-XAF/CSP-B	041055	Standard passive cooling solution for modules conga-XAF and EAF. All standoffs are with 2.7mm bore hole.
conga-XAF/CSP-T	041056	Standard passive cooling solution for modules conga-XAF and EAF. All standoffs are M2.5mm thread.
conga-XAF/CSA-B	041057	Standard active cooling solution for modules conga-XAF and EAF. Integrated 12V fan. All standoffs are with 2.7mm bore hole.
conga-XAF/CSA-T	041058	Standard active cooling solution for modules conga-XAF and EAF. 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 ETX®

conga-EEVAL	033269	Evaluation carrier board for ETX-modules
conga-FPA2	047250	Flatpanel prototype adapter to develop your own flatpanel adapter Including cables set.
XTX/ETX-carrierboard-socket-3	400006	Connector for ETX and XTX carrier boards, height 3.0 mm, packing unit 8 pieces
XTX/ETX-carrierboard-socket-9.5	400009	Connector for ETX and XTX carrier boards, height 9.5 mm, packing unit 8 pieces