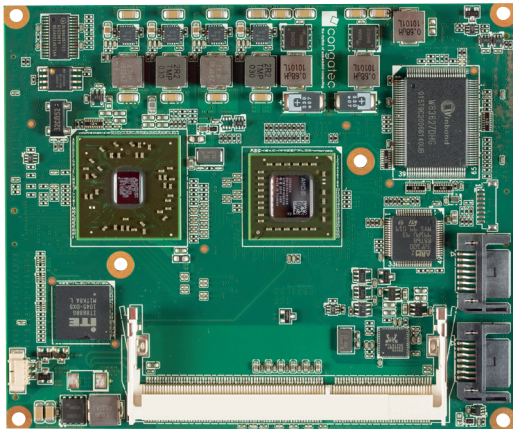


# HIGH GRAPHICS PERFORMANCE WITH LOW POWER CONSUMPTION

## conga-EAF

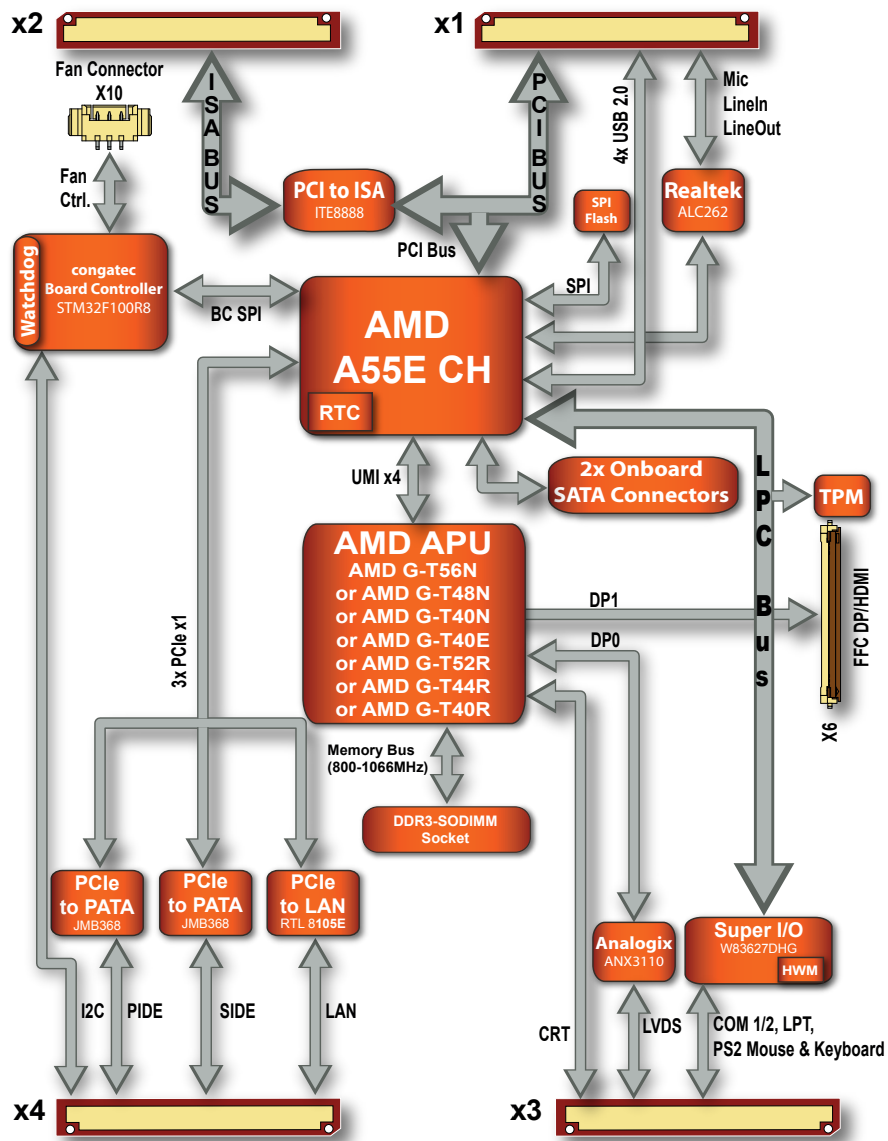


- Based on AMD Embedded G-Series Processors
- Best price/performance ratio
- High performance graphics

**ETX<sup>®</sup>**

Formfactor	ETX <sup>®</sup> Spec 3.02				
CPU	AMD G-T56N	1.6 GHz	Dual Core	L2 cache 512kB x2	TDP 18 W
	AMD G-T40N	1.0 GHz	Dual Core	L2 cache 512kB x2	TDP 9W
	AMD G-T40R	1.0 GHz	Single Core	L2 cache 512kB x2	TDP 5.5 W
	AMD G-T40E	1.0 GHz	Dual Core	L2 cache 512kB x2	TDP 6.5 W
	AMD G-T16R	615 MHz	Single Core	L2 cache 512kB x2	TDP 4.5 W
	AMD Embedded G-Series Processors				
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 <sup>®</sup>   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 <sup>®</sup> 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 I <sup>2</sup> 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-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 <sup>®</sup> Windows8   Microsoft <sup>®</sup> Windows7   Microsoft <sup>®</sup> Windows XP   Microsoft <sup>®</sup> Windows <sup>®</sup> embedded Standard   Microsoft <sup>®</sup> 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")				

# conga-EAF | Block diagram



# conga-EAF | Order Information

Article	PN	Description
conga-EAF/T56N	041071	AMD G-Series 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 G-Series dual core processor T40N with 1.0GHz   1MB L2 cache and 1066MT/s DDR3 SODIMM memory interface for up to 4GB
conga-EAF/T52R	041074	AMD G-Series single core processor T52R with 1.5GHz   512kB L2 cache and 1066MT/s DDR3 SODIMM memory interface for up to 4GB
conga-EAF/T44R	041075	AMD G-Series single core processor T44R with 1.2GHz   512kB L2 cache and 1066MT/s DDR3 SODIMM memory interface for up to 4GB
conga-EAF/T40R	041076	AMD G-Series single core processor T40R with 1.0GHz   5.5W   1MB L2 cache and 1066MT/s DDR3 SODIMM memory interface for up to 4GB
conga-EAF/T40E	041077	AMD G-Series dual core processor T40E with 1.0GHz   6.5W   1MB L2 cache and 1066MT/s DDR3 SODIMM memory interface for up to 4GB
conga-EAF/T16R	041078	AMD G-Series single core processor T16R with 615MHz   4.5W   512MB L2 cache and 1066MT/s DDR3 SODIMM memory interface for up to 4GB
conga-XAF/HSP-B	041050	Standard heatspreader for XTX module conga-XAF and EAF. All standoffs are with 2.7mm bore hole
conga-XAF/HSP-T	041051	Standard heatspreader for XTX module conga-XAF and EAF. All standoffs are M2.5mm thread
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-1066 (1GB)	068750	DDR3 SODIMM memory module with 1066MT/s and 1GB RAM
DDR3L-SODIMM-1600 (2GB)	068755	DDR3L SODIMM memory module with 1600 MT/s (PC3L-12800S) and 2GB RAM
DDR3L-SODIMM-1600 (4GB)	068756	DDR3L SODIMM memory module with 1600 MT/s (PC3L-12800S) and 4GB RAM

## Accessories

conga-Xeval	019482	Evaluation carrier board for XTX-modules
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
XTX/HDMI/DP	500020	HDMI to DisplayPort convertor for XTX modules including flat foil cable.
SBM3 License and Design Kit	025487	SMART Battery Manager Module Design Kit. Including license agreement for customer intergration   Hardware design files (Schematics / Bill of Material)   Battery Manager Firmware (incl. commented source code) and design review by congatec