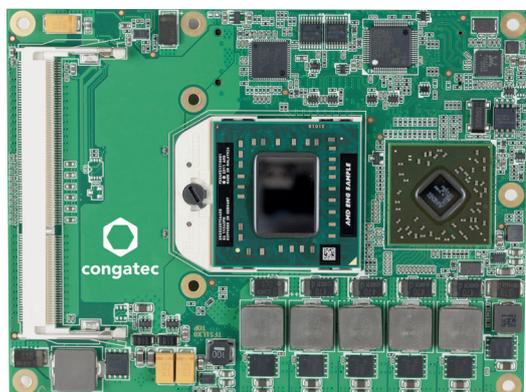


# conga-TFS

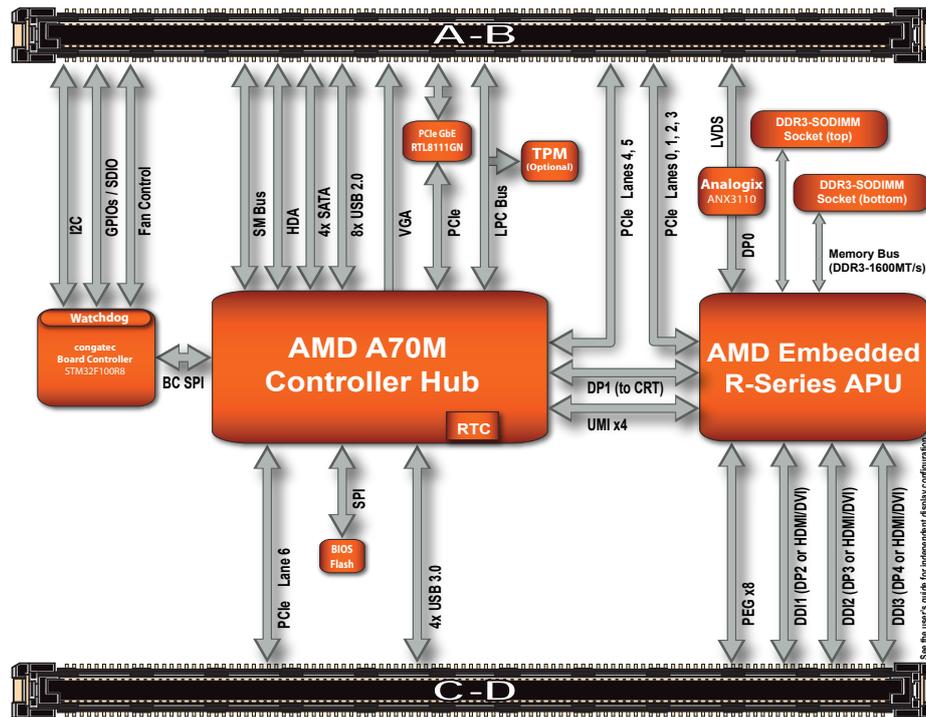


- Power efficient high-performance x86 processing
- Unprecedented integrated graphics performance
- High performance parallel processing support

**COM**  **Express**<sup>®</sup>

Formfactor	COM Express™ Basic   (95 x 125 mm)   Type 6 Connector Layout					
CPU	AMD Embedded R-464L	AMD Radeon™ HD 7660G Graphics	Quad-Core 2.3	3.2 GHz	TDP 35 W	PGA
	AMD Embedded R-460H	AMD Radeon™ HD 7640G Graphics	Quad-Core 1.9	2.8 GHz	TDP 35 W	PGA
	AMD Embedded R-272F	AMD Radeon™ HD 7520G Graphics	Dual-Core 2.7	3.2 GHz	TDP 35 W	PGA
	AMD Embedded R-Series processors					
DRAM	Two 1.5V/1.35V DDR3 SO-DIMMs up to 1600MT/s and 8 GByte					
Chipset	AMD A70M Controller Hub					
Ethernet	Realtek RTL8111E GbE LAN Controller					
I/O Interfaces	7x PCI Express™ 2.0 lane   PCI Express™ 2.0 x8 link   4x SATA 6Gb/s with RAID 0/1   4x USB 3.0   8x USB 2.0   2x Express™Card   LPC bus   SDHC   I²C bus					
Sound	High Definition Audio Interface					
Graphics	High performance DirectX®11 GPU supports OpenCL™ 1.1 and OpenGL 4.2   Three Independent Display Controllers   Dedicated Hardware (UVD) for H.264 MPEG4 Part 2 VC-1 and MPEG2 decode   Dedicated Hardware (VCE) assisted encoding of HD video streams to H.264					
LVDS	18/24-bit Single/Dual Channel Interface   resolutions up to 1920x1200@60Hz   VESA standard or JEIDA data mapping   Automatic Panel Detection via EDID/EPI					
DisplayPort	Three DisplayPort 1.2					
HDMI or DVI	Two Ports support one HDMI1.4a and two Single-Link DVI					
VGA	One Port supports resolutions up to 1920x1200@60Hz					
congatec Board Controller	Multi Stage Watchdog   non-volatile User Data Storage   Manufacturing and Board Information   Board Statistics   BIOS Setup Data Backup   I2C bus   Power Loss Control					
Embedded BIOS Features	AMI Aptio® UEFI firmware					
Security	The conga-TFS 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® Windows 8   Microsoft® Windows 7   Linux   Microsoft® Windows® embedded Standard					
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")					

# conga-TFS | Block diagram



# conga-TFS | Order Information

Article	PN	Description
conga-TFS/R-464L	041101	AMD embedded R-Series R-464L quad core processor with 2.3GHz   2x2MB L2 cache and 1600MT/s DDR3 SODIMM memory interface for up to 16GB
conga-TFS/R-460H	041102	AMD embedded R-Series R-460H quad core processor with 1.9GHz   2x2MB L2 cache and 1600MT/s DDR3 SODIMM memory interface for up to 16GB
conga-TFS/R-272F	041103	AMD embedded R-Series R-272F dual core processor with 2.7GHz   1MB L2 cache and 1600MT/s DDR3 SODIMM memory interface for up to 16GB
conga-TFS/HSP-B	041150	Standard heatspreader for high performance COM Express module conga-TFS with integrated flat heat pipe. All standoffs are with 2.7mm bore hole
conga-TFS/HSP-T	041151	Standard heatspreader for high performance COM Express module conga-TFS with integrated flat heat pipe. All standoffs are M2.5mm thread
conga-TFS/CSA-B	041154	Standard active cooling solution for high performance COM Express module conga-TFS with integrated flat heat pipe   15mm fins 20mm overall heat sink height and integrated 12V fan. All standoffs are with 2.7mm bore hole
conga-TFS/CSA-T	041155	Standard active cooling solution for high performance COM Express module conga-TFS with integrated flat heat pipe   15mm fins 20mm overall heat sink height and integrated 12V fan. All standoffs are M2.5mm thread
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
<b>Accessories</b>		
conga-TEVAL	065800	Evaluation carrier board for Type 6 COM-Express-modules
conga-Cdebug	047854	COM-Express debugging platform   Including cable for COM   PS/2 and VGA.
conga-LDVI/EPI	011115	LVDS to DVI converter board for digital flat panels with onboard EEPROM
conga-HDMI/Display Port adapter 4k	500030	The conga-DP/HDMI adapter 4k is used for evaluation of the DP/HDMI graphics interface of x86 Qseven and COM Express modules in combination with the congatec evaluation carrier boards conga-QEVAL and conga-TEVAL. It supports full 4k display resolution.
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