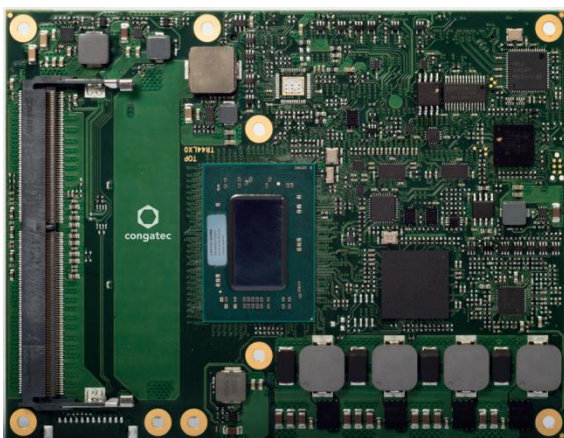


# HIGH SPEED GRAPHICS

## conga-TR4

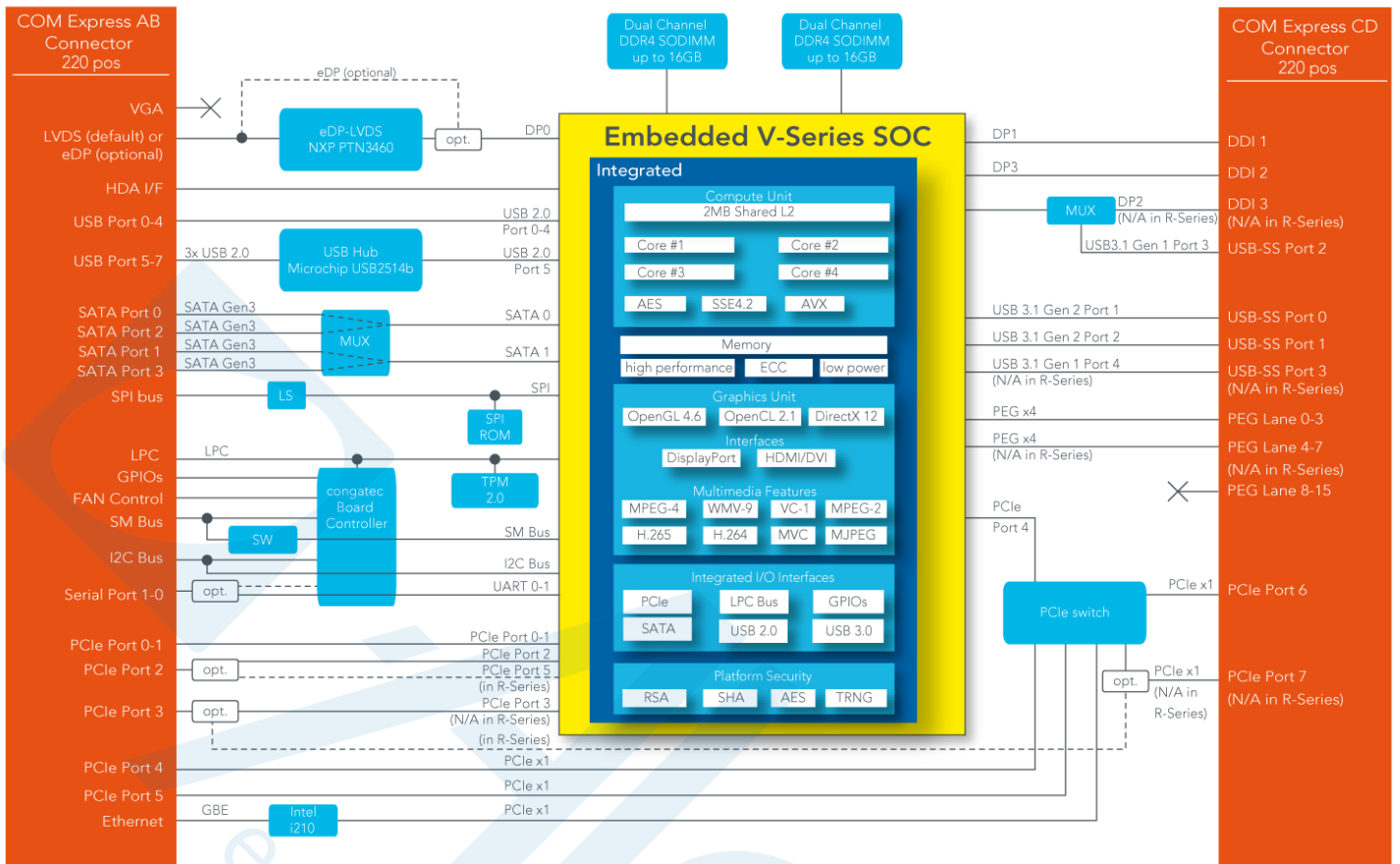


- AMD's Next Gen V1000 processor Series
- "Zen" core architecture with up to 4 cores
- Improved graphic performance with "Vega" GPU
- Up to 32GByte dual channel DDR4 3200MT/s memory
- TDP scalable down to 12W
- up to 4 x 4K DP / eDP

**COM Express®**

<b>Formfactor</b>	COM Express® Basic, (95 x 125 mm)   Type 6 connector pinout					
<b>CPU</b>	<b>Commercial Versions</b>					
	AMD V1807B	4 Cores   8 Threads	3.35   3.8 GHz (boost)	2 MB cache	11 GPU CU	35-54W TDP
	AMD V1756B	4 Cores   8 Threads	3.25   3.6 GHz (boost)	2 MB cache	8 GPU CU	35-54W TDP
	AMD V1605B	4 Cores   8 Threads	2.0   3.6 GHz (boost)	2 MB cache	8 GPU CU	12-25W TDP
	AMD V1202B	2 Cores   4 Threads	2.3   3.2 GHz (boost)	1 MB cache	3 GPU CU	12-25W TDP
	AMD R1606G	2 Cores   4 Threads	2.6   3.5 GHz (boost)	1 MB cache	3 GPU CU	12-25W TDP
	AMD R1505G	2 Cores   4 Threads	2.4   3.3 GHz (boost)	1 MB cache	3 GPU CU	12-25W TDP
	<b>Industrial Versions</b>					
	AMD V1404I	4 Cores   8 Threads	1.6*/2.0   2.8*/3.6 GHz (boost)	2 MB cache	8 GPU CU	12-25W TDP
			* Performance in the -40 to 0°C temp range			
<b>DRAM</b>	Dual channel DDR4 up to 3200 MT/s   2x SO-DIMM   up to 2x 16 GByte (optionally with ECC support)					
<b>Chipset</b>	Integrated in SoC					
<b>Ethernet</b>	1x Gigabit Ethernet					
<b>I/O Interfaces</b>	4x PCI Express™ 3.0 lanes   4x PCI Express™ 2.0 lanes   1x PEG 3.0 x8   2x USB 3.1 Gen2   2x USB 3.1 Gen1   8x USB 2.0 2x SATA® 6 Gb/s   I²C bus (fast mode, 400 kHz, multi-master)   SD   LPC Bus   SPI   SM-Bus   2x UART					
<b>Sound</b>	High Definition Audio Interface					
<b>Graphics</b>	Integrated AMD Radeon™ Graphics supports DirectX 12   OpenGL 4.6 and OpenCL™ 2.1   up to 4 simultaneous Displays Unified Video Decoder 6 (H.265, H.264, MVC, MPEG4, MPEG2, VC-1, WMV and MJPEG) Video Compression Engine 3.1 (dual, H.264, SVC)					
<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 AptioV® UEFI 2.x firmware   8 MByte serial SPI firmware flash					
<b>Security</b>	Trusted Platform Module (TPM 2.0)   AMD Secure Processor™.					
<b>Power Management</b>	ACPI 5.0 with battery support					
<b>Operating Systems</b>	Microsoft® Windows 10   Microsoft® Windows 10 IoT Enterprise   Linux   opt. Microsoft® Windows 7					
<b>Power Consumption</b>	See user's guide for full details					
<b>Temperature</b>	Industrial:	Operating: -40 to +85°C	Storage: -40 to +85°C			
	Commercial:	Operating: 0 to +60°C	Storage: -40 to +85°C			
<b>Extended Temperature</b>	Screening service on request:		-25 to +80°C (burn-in & cold-soak) -40 to +85°C (burn-in & cold-soak)			
<b>Humidity</b>	Operating: 10 - 90% r. H. non cond.		Storage: 5 - 95% r. H. non cond.			
<b>Size</b>	95 x 125 mm (3.74" x 4.92")					

# conga-TR4 | Block diagram



# conga-TR4 | Order Information – COM Express® Module

Article	PN	Description
conga-TR4/V1807B	041600	COM Express Type 6 Basic module based on AMD embedded V-Series V1807B 4-core processor with 3.35 GHz up to 3.8 GHz turbo boost, 2MB L2 Cache and dual channel DDR4 3200MT/s memory interface (formerly Great Horned Owl). Features AMD Radeon™ Vega integrated graphics core with 11 CU.
conga-TR4/V1756B	041601	COM Express Type 6 Basic module based on AMD embedded V-Series V1756B 4-core processor with 3.25 GHz up to 3.6 GHz turbo boost, 2MB L2 Cache and dual channel DDR4 3200MT/s memory interface (formerly Great Horned Owl). Features AMD Radeon™ Vega integrated graphics core with 8 CU.
conga-TR4/V1605B	041602	COM Express Type 6 Basic module based on AMD embedded V-Series V1605B 4-core processor with 2.0 GHz up to 3.6 GHz turbo boost, 2MB L2 Cache and dual channel DDR4 2400MT/s memory interface (formerly Great Horned Owl). Features AMD Radeon™ Vega integrated graphics core with 8 CU.
conga-TR4/V1202B	041603	COM Express Type 6 Basic module based on AMD embedded V-Series V1202B 2-core processor with 2.3 GHz up to 3.2 GHz turbo boost, 1MB L2 Cache and dual channel DDR4 2400MT/s memory interface (formerly Great Horned Owl). Features AMD Radeon™ Vega integrated graphics core with 3 CU.
conga-TR4/i-V1404I	041610	COM Express Type 6 Basic module based on AMD embedded V-Series V1404B 4-core processor with 1.6*   2.0 GHz up to 2.8*   3.6 GHz turbo boost, 2MB L2 Cache and dual channel DDR4 2400MT/s memory interface (formerly Great Horned Owl). Features AMD Radeon™ Vega integrated graphics core with 8 CU.
		* Performance in the -40 to 0° C temperature range
conga-TR4/R1606G	041620	COM Express Type 6 Basic module based on AMD embedded R-Series R1606G 2-core processor with 2.6 GHz up to 3.5 GHz turbo boost, 1MB L2 Cache and dual channel DDR4 2400MT/s memory interface (formerly Great Horned Owl). Features AMD Radeon™ Vega integrated graphics core with 3 CU.
conga-TR4/R1505G	041621	COM Express Type 6 Basic module based on AMD embedded R-Series R1505G 2-core processor with 2.4 GHz up to 3.3 GHz turbo boost, 1MB L2 Cache and dual channel DDR4 2400MT/s memory interface (formerly Great Horned Owl). Features AMD Radeon™ Vega integrated graphics core with 3 CU.

# conga-TR4 | Order Information – Accessory

Article	PN	Description
conga-TR4/HSP-HP-B	041651	Standard heatspreader for high performance COM Express module conga-TR4 with integrated heat pipes. All standoffs are with 2.7mm bore hole.
conga-TR4/HSP-HP-T	041652	Standard heatspreader for high performance COM Express module conga-TR4 with integrated heat pipes. All standoffs are M2.5mm thread.
conga-TR4/CSP-HP-B	041653	Standard passive cooling solution for high performance COM Express module conga-TR4 with integrated heat pipes, 15mm fins and 20mm overall heat sink height. All standoffs are with 2.7mm bore hole.
conga-TR4/CSP-HP-T	041654	Standard passive cooling solution for high performance COM Express module conga-TR4 with integrated heat pipes, 15mm fins and 20mm overall heat sink height. All standoffs are M2.5mm thread.
conga-TR4/CSA-HP-B	041655	Standard active cooling solution for high performance COM Express module conga-TR4 with integrated heat pipes, 15mm fins, 20mm overall heat sink height and integrated 12V fan. All standoffs are with 2.7mm bore hole.
conga-TR4/CSA-HP-T	041656	Standard active cooling solution for high performance COM Express module conga-TR4 with integrated heat pipes, 15mm fins, 20mm overall heat sink height and integrated 12V fan. All standoffs are M2.5mm thread.
DDR4-SODIMM-3200 ECC (4GB)	068736	DDR4 ECC SODIMM memory module with 3200 MT/s and 4GB RAM
DDR4-SODIMM-3200 ECC (8GB)	068737	DDR4 ECC SODIMM memory module with 3200 MT/s and 8GB RAM
DDR4-SODIMM-3200 ECC (16GB)	068738	DDR4 ECC SODIMM memory module with 3200 MT/s and 16GB RAM
DDR4-SODIMM-3200 (4GB)	068793	DDR4 SODIMM memory module with 3200 MT/s and 4GB RAM
DDR4-SODIMM-3200 (8GB)	068794	DDR4 SODIMM memory module with 3200 MT/s and 8GB RAM
DDR4-SODIMM-3200 (16GB)	068798	DDR4 SODIMM memory module with 3200 MT/s and 16GB RAM
DDR4-SODIMM-2400 ECC (4GB)	068795	DDR4 ECC SODIMM memory module with 2400 MT/s and 4GB RAM
DDR4-SODIMM-2400 ECC (8GB)	068796	DDR4 ECC SODIMM memory module with 2400 MT/s and 8GB RAM
DDR4-SODIMM-2400 ECC (16GB)	068797	DDR4 ECC SODIMM memory module with 2400 MT/s and 16GB RAM
DDR4-SODIMM-2400 (4GB)	068790	DDR4 SODIMM memory module with 2400 MT/s and 4GB RAM
DDR4-SODIMM-2400 (8GB)	068791	DDR4 SODIMM memory module with 2400 MT/s and 8GB RAM
DDR4-SODIMM-2400 (16GB)	068792	DDR4 SODIMM memory module with 2400 MT/s and 16GB RAM
conga-TEVAL	065810	Evaluation carrier board for Type 6 COM Express modules
conga-LDVI/EPI	011115	LVDS to DVI converter board for digital flat panels with onboard EEPROM

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April 2020 BAN