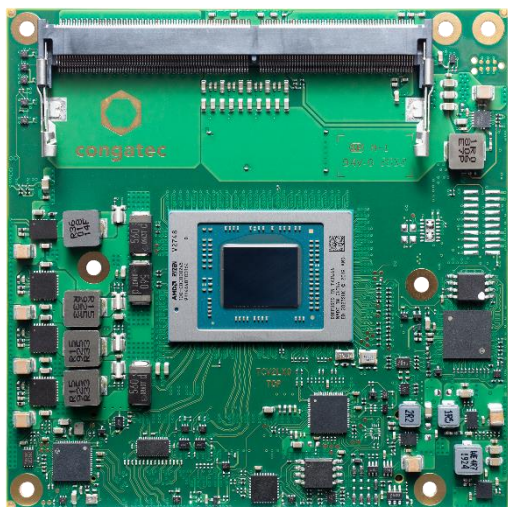


# AMD RYZEN™ EMBEDDED V2000

## conga-TCV2

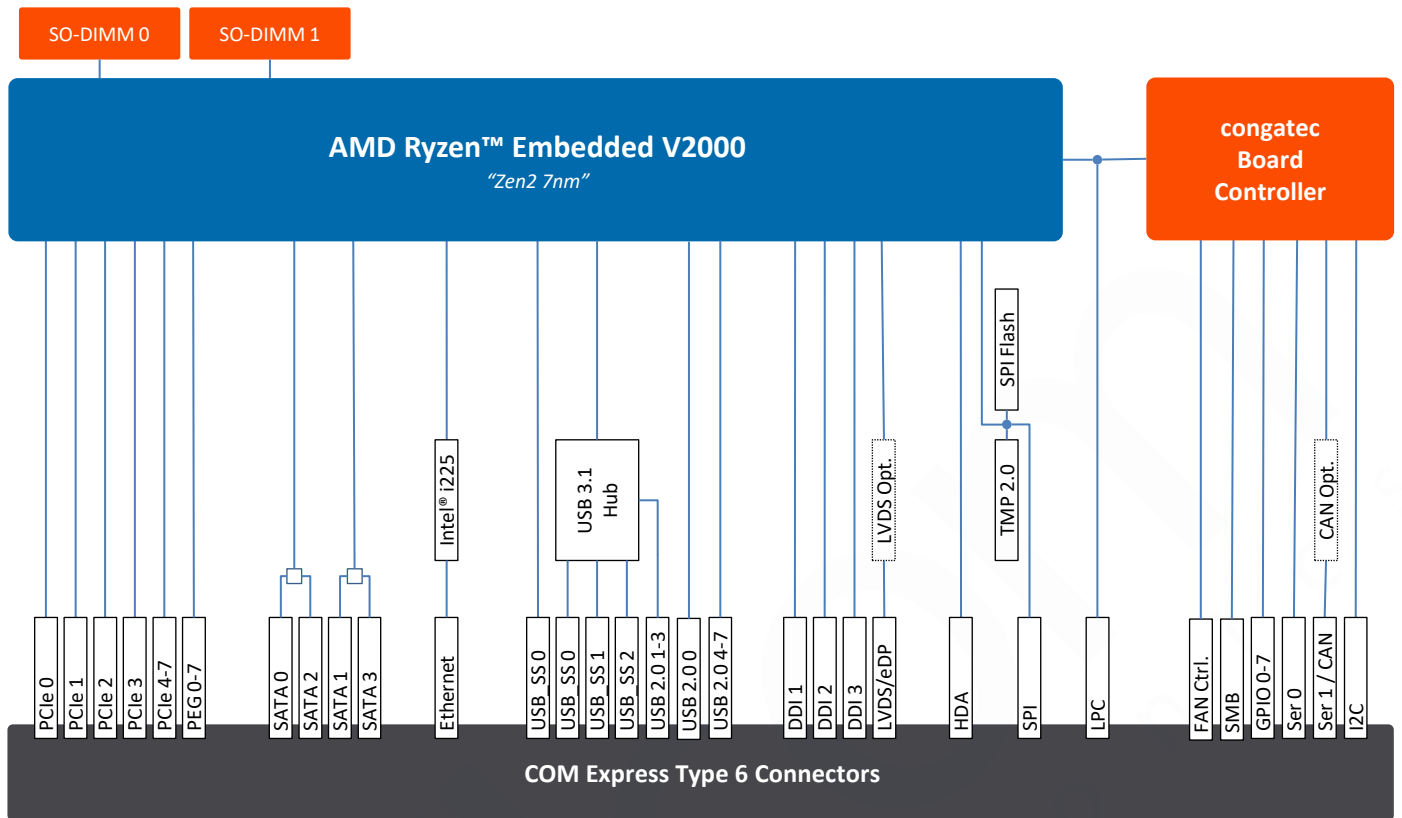


**COM**  **Express**®

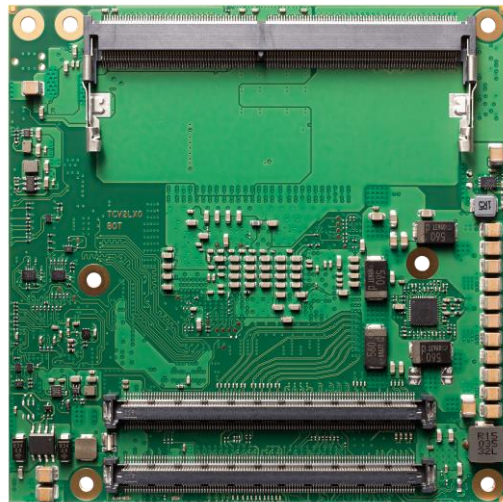
- High-performance Zen 2 CPU & VEGA GPU
- TDP Range 10-54W
- Supporting 4 simultaneous 4K displays
- Up to 64GByte dual channel DDR4 3200MT/s
- AMD Secure Processor with AMD Memory Guard

<b>Formfactor</b>	COM Express® Compact, (95 x 95 mm)   Type 6 connector pinout			
<b>CPU</b>	<b>General Embedded Versions</b> AMD Ryzen™ Embedded V2748      8 Cores   16 Threads      4 MB L2   8 MB L3 cache      7 GPU CU      35-54 W TDP AMD Ryzen™ Embedded V2718      8 Cores   16 Threads      4 MB L2   8 MB L3 cache      7 GPU CU      10-25 W TDP AMD Ryzen™ Embedded V2546      6 Cores   12 Threads      3 MB L2   8 MB L3 cache      6 GPU CU      35-54 W TDP AMD Ryzen™ Embedded V2516      6 Cores   12 Threads      3 MB L2   8 MB L3 cache      6 GPU CU      10-25 W TDP			
<b>DRAM</b>	Up to 2 SO-DIMM sockets for DDR4 memory modules up to 32 GByte each (64 GByte total) with 3200 MT/s and ECC support			
<b>Graphics</b>	Integrated Radeon™ graphics engine with up to 7 Compute Units   Supporting 4 independent display units (4x 4K)   DirectX 12 support   VCN2.2 (H.264/AVC HW 8b   H.265/HEVC HW 8/10b   VP9 HW 8/10b)   DP 1.4			
<b>Display</b>	3x DP/DP++   eDP/LVDS			
<b>Ethernet</b>	1x Gigabit Ethernet via Intel® i225			
<b>I/O Interfaces</b>	5x PCIe Gen3 (8 lanes)   PEG support x8 4x USB 3.1 Gen 2   8/4x USB 2.0 2x SATA III (6Gb/s)   2x UART   8x GPIO   LPC			
<b>Audio</b>	HD-Audio over DP++ ports   HDA interface			
<b>congatec Board Controller</b>	Multi Stage Watchdog   non-volatile User Data Storage   Manufacturing and Board Information Board Statistics   I <sup>2</sup> C bus (fast mode, 400 kHz, multi-master)   Power Loss Control Hardware Health Monitoring   POST Code redirection			
<b>Embedded BIOS Features</b>	AMI Aptio® UEFI firmware   16 Mbyte serial SPI with congatec Embedded BIOS feature   OEM Logo OEM CMOS Defaults   LCD Control   Display Auto Detection   Backlight Control   Flash Update			
<b>Security</b>	Trusted Platform Module (TPM 2.0)   AMD Secure Processor   AMD Memory Guard			
<b>Power Management</b>	ACPI 5.0 with battery support			
<b>Operating Systems</b>	Microsoft® Windows 10   Microsoft® Windows 10 IoT Enterprise Ubuntu Linux LTS   Yocto   RTS Hypervisor			
<b>Temperature Range</b>	Commercial:	Operating: 0 to +60°C	Storage: -40 to +85°C	
<b>Humidity</b>	Operating:	10 - 90% r. H. non cond.		
	Storage:	5 - 95% r. H. non cond.		
<b>Size</b>	95 x 95 mm			

# conga-TCV2 | Block Diagram



# conga-TCV2 | Bottom Side View



## conga-TCV2 | Order Information

Article	PN	Description
conga-TCV2/V2748	050500	COM Express Type 6 Compact module based on AMD Ryzen™ Embedded V2748 8-core processor with 2.9GHz up to 4.25GHz boost freq., 4MB L2 cache, Radeon™ Vega Graphics with 7 CU and dual channel DDR4 3200 MT/s memory interface with ECC support. Commercial temperature range.
conga-TCV2/V2546	050501	COM Express Type 6 Compact module based on AMD Ryzen™ Embedded V2546 6-core processor with 3.0GHz up to 3.95GHz boost freq., 3MB L2 cache, Radeon™ Vega Graphics with 6 CU and dual channel DDR4 3200 MT/s memory interface with ECC support. Commercial temperature range.
conga-TCV2/V2718	050502	COM Express Type 6 Compact module based on AMD Ryzen™ Embedded V2718 8-core processor with 1.7GHz up to 4.15GHz boost freq., 4MB L2 cache, Radeon™ Vega Graphics with 7 CU and dual channel DDR4 3200 MT/s memory interface with ECC support. Commercial temperature range.
conga-TCV2/V2516	050503	COM Express Type 6 Compact module based on AMD Ryzen™ Embedded V2516 6-core processor with 2.1GHz up to 3.95GHz boost freq., 3MB L2 cache, Radeon™ Vega Graphics with 6 CU and dual channel DDR4 3200 MT/s memory interface with ECC support. Commercial temperature range.
conga-TCV2/CSA-HP-B	050550	Standard active cooling solution for high performance COM Express module conga-TCV2 with integrated heat pipes, 25.5mm overall heat sink height and integrated 12V fan. All standoffs are with 2.7mm bore hole.
conga-TCV2/CSA-HP-T	050551	Standard active cooling solution for high performance COM Express module conga-TCV2 with integrated heat pipes, 25.5mm overall heat sink height and integrated 12V fan. All standoffs are M2.5mm thread.
conga-TCV2/CSP-HP-B	050552	Standard passive cooling solution for high performance COM Express module conga-TCV2 with integrated heat pipes, 24.3mm overall heat sink height. All standoffs are with 2.7mm bore hole.
conga-TCV2/CSP-HP-T	050553	Standard passive cooling solution for high performance COM Express module conga-TCV2 with integrated heat pipes, 24.3mm overall heat sink height. All standoffs are M2.5mm thread.
conga-TCV2/HSP-HP-B	050554	Standard heatspreader for high performance COM Express module conga-TCV2 with integrated heat pipes, 11mm overall heat sink height. All standoffs are with 2.7mm bore hole.
conga-TCV2/HSP-HP-T	050555	Standard heatspreader for high performance COM Express module conga-TCV2 with integrated heat pipes, 11mm overall heat sink height. All standoffs are M2.5mm thread.
conga-TEVAL/COMe 3.0	65810	Evaluation Carrier Board for COM Express Type 6 modules.