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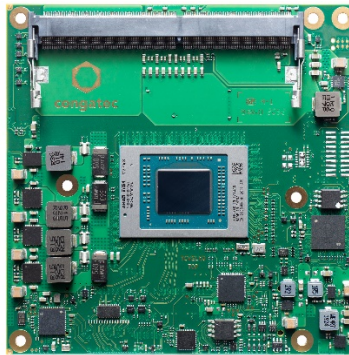


Datasheet

congatec

conga-TCV2

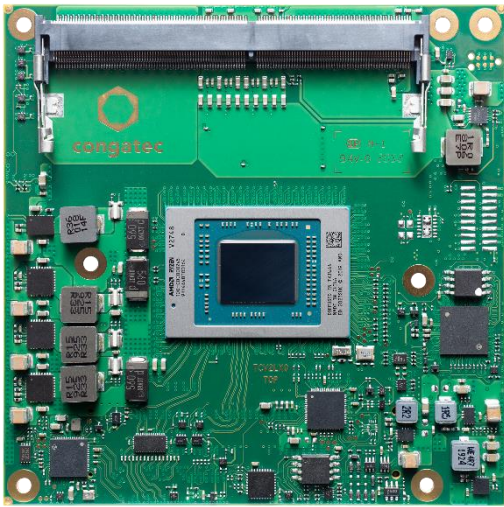
COM Express® Compact Module with AMD Ryzen® V2000 Embedded Processor



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AMD RYZEN™ EMBEDDED V2000

conga-TCV2

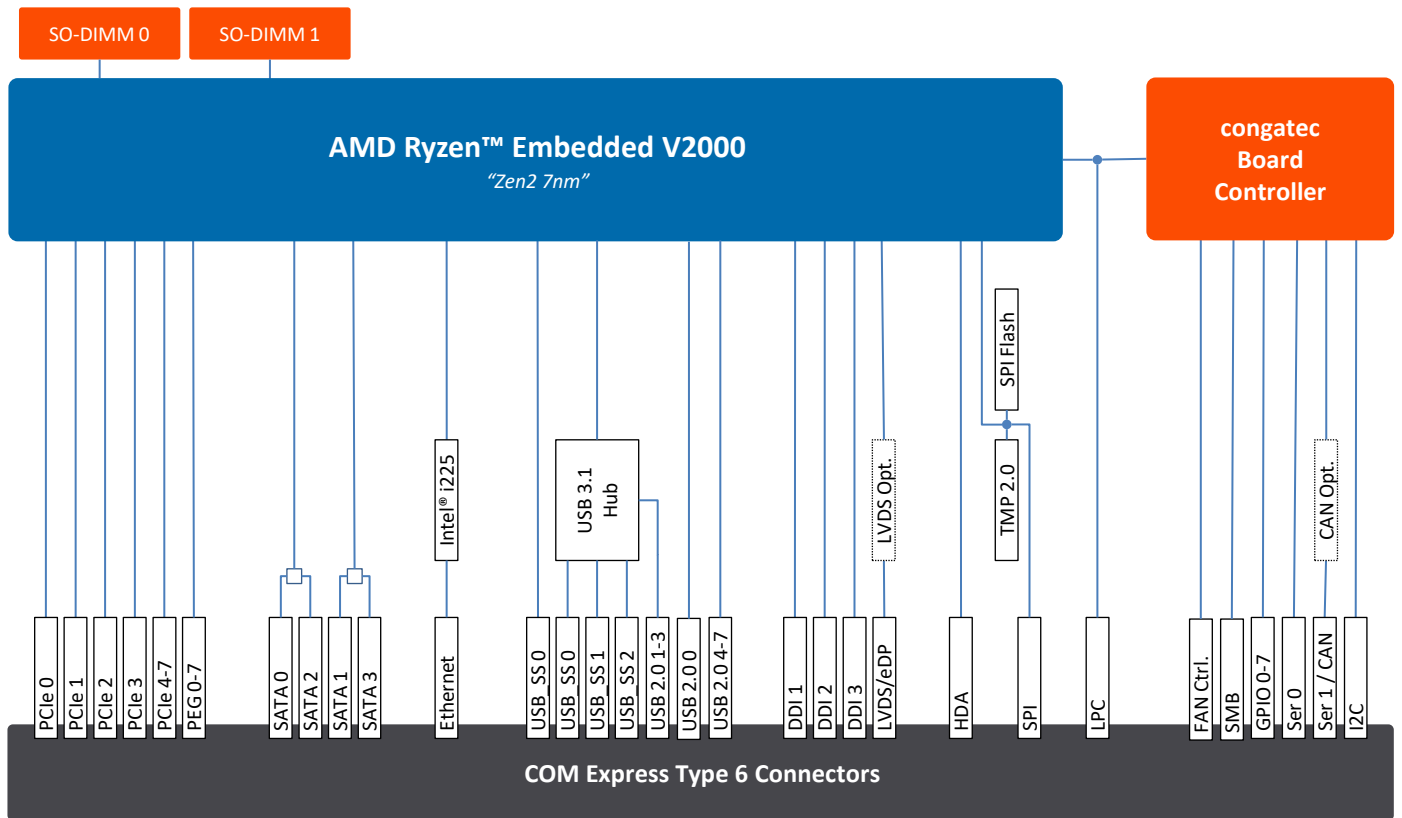


COM  **Express**®

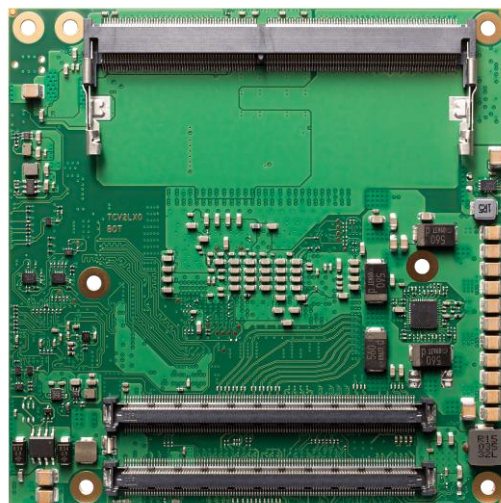
- High-performance Zen 2 CPU & VEGA GPU
- TDP Range 10-54W
- Supporting 4 simultaneous 4K displays
- Up to 64GByte dual channel DDR4 3200MT/s
- AMD Secure Processor with AMD Memory Guard

Formfactor	COM Express® Compact, (95 x 95 mm) Type 6 connector pinout			
CPU	General Embedded Versions 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			
DRAM	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			
Graphics	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			
Display	3x DP/DP++ eDP/LVDS			
Ethernet	1x Gigabit Ethernet via Intel® i225			
I/O Interfaces	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			
Audio	HD-Audio over DP++ ports HDA interface			
congatec Board Controller	Multi Stage Watchdog non-volatile User Data Storage Manufacturing and Board Information Board Statistics I ² C bus (fast mode, 400 kHz, multi-master) Power Loss Control Hardware Health Monitoring POST Code redirection			
Embedded BIOS Features	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			
Security	Trusted Platform Module (TPM 2.0) AMD Secure Processor AMD Memory Guard			
Power Management	ACPI 5.0 with battery support			
Operating Systems	Microsoft® Windows 10 Microsoft® Windows 10 IoT Enterprise Ubuntu Linux LTS Yocto RTS Hypervisor			
Temperature Range	Commercial:	Operating: 0 to +60°C	Storage: -40 to +85°C	
Humidity	Operating:	10 - 90% r. H. non cond.		
	Storage:	5 - 95% r. H. non cond.		
Size	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.

Our company network supports you worldwide with offices in Germany, Austria, Switzerland, the UK and the USA. For more information please contact:

Headquarters

Germany



FORTEC Elektronik AG

Augsburger Str. 2b
82110 Germering

Phone: +49 89 894450-0
E-Mail: info@fortecaq.de
Internet: www.fortecaq.de

Fortec Group Members

Austria



Distec GmbH Office Vienna

Nuschinggasse 12
1230 Wien

Phone: +43 1 8673492-0
E-Mail: info@distec.de
Internet: www.distec.de

Germany



Distec GmbH

Augsburger Str. 2b
82110 Germering

Phone: +49 89 894363-0
E-Mail: info@distec.de
Internet: www.distec.de

Switzerland



ALTRAC AG

Bahnhofstraße 3
5436 Würenlos

Phone: +41 44 7446111
E-Mail: info@altrac.ch
Internet: www.altrac.ch

United Kingdom



Display Technology Ltd.

Osprey House, 1 Osprey Court
Hichingbrooke Business Park
Huntingdon, Cambridgeshire, PE29 6FN

Phone: +44 1480 411600
E-Mail: info@displaytechnology.co.uk
Internet: www.displaytechnology.co.uk

USA



Apollo Display Technologies, Corp.

87 Raynor Avenue,
Unit 1 Ronkonkoma,
NY 11779

Phone: +1 631 5804360
E-Mail: info@apolloDisplays.com
Internet: www.apolloDisplays.com