

Intel® Core™ Processors Series 3

conga-TC300



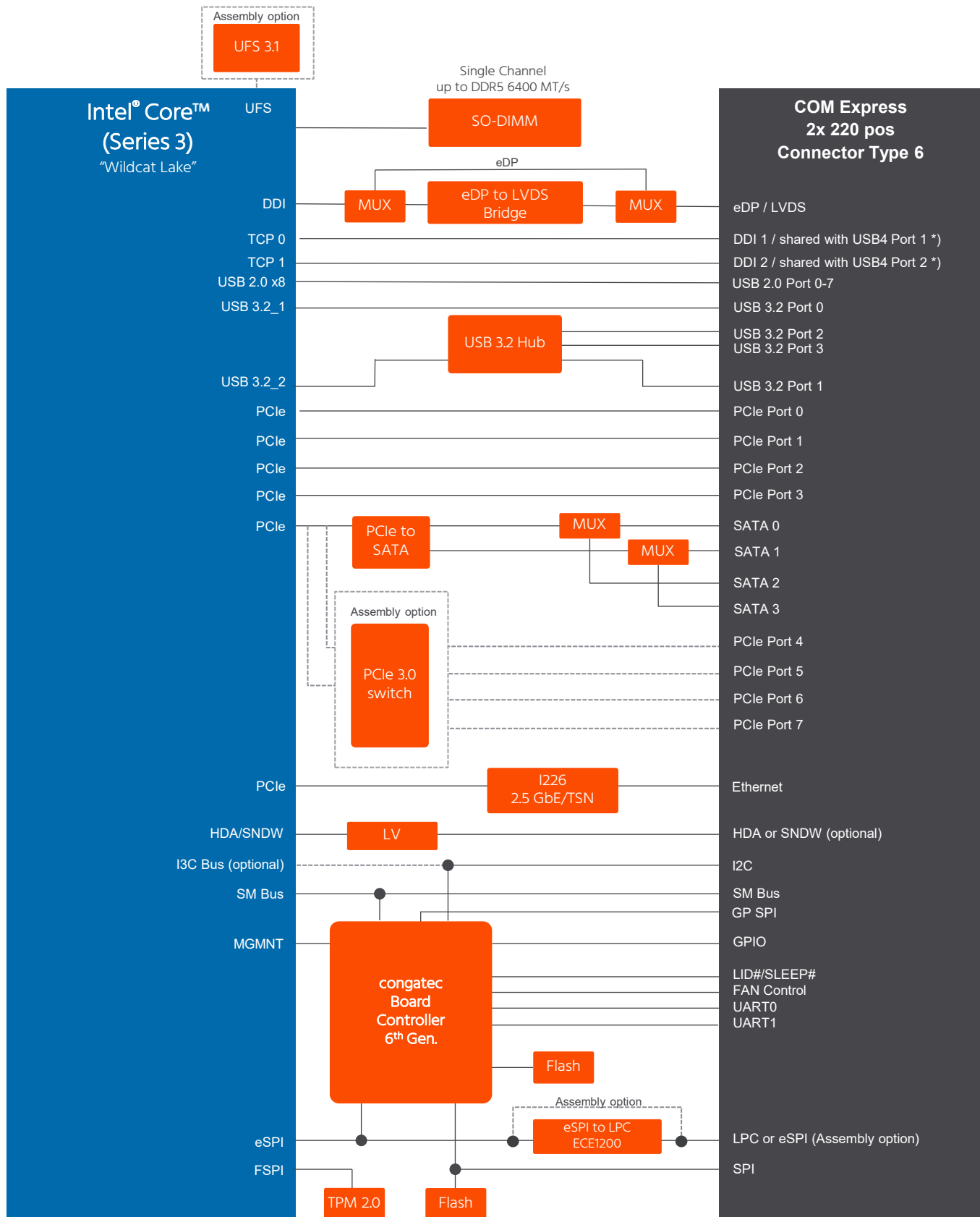
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- Intel® performance hybrid architecture supporting up to 6 CPU cores
- Latest X^{e3} GPU architecture with XMX systolic arrays
- Variants with Integrated NPU 5.0 with up to 18 TOPS for dedicated, low power AI inferencing
- Options with PCIe switch for additional PCIe lanes




Form factor	COM Express® Compact Type 6 connector pinout	
CPUs	Intel® Core™ Processors (Series 3) Wildcat Lake	
DRAM	SO-DIMM socket for DDR5 memory modules up to 64 GB up to 6400 MT/s	
Mass Storage	UFS 3.1 (optional)	
Graphics	Intel X ^{e3} Graphics Up to 18 TOPS Intel® XMX Matrix Engines	
AI Acceleration	Integrated NPU 5.0 with up to 18 TOPS (only on selected product variants)	
Display	Up to 2x DDI (shared with USB4) LVDS or eDP	
Ethernet	2.5 GbE via Intel® i226 Ethernet controller series Supporting TSN – Time Sensitive Networking (only on selected product variants)	
I/O Interfaces	4x PCIe Gen4 additional 4x PCIe Gen3 (optional via PCIe switch) up to 2x USB4 (dedicated BIOS required) 4x USB 3.2 (incl. USB 2.0) + 4x USB 2.0 2x SATA 2x UART GPIOs GP SPI LPC or eSPI (optional) SM Bus I2C or I3C (optional)	
Audio	HDA Soundwire (optional)	
congatec Board controller	Next Gen 6 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 Feature	AMI Aptio® UEFI firmware 64 Mbyte serial SPI with congatec Embedded BIOS feature OEM Logo OEM CMOS default settings LCD Control Display Auto Detection Backlight Control Flash Update	
Security	Trusted Platform Module (TPM 2.0)	
Power Management	ACPI 6.0 with battery support	
Operating Systems	Microsoft® Windows 11 IoT Enterprise Microsoft® Windows 11 Linux Ubuntu	
Hypervisor	conga-zones	
Temperature Range	Operating 0°C to 60°C	Storage -20°C to 80°C
Humidity	Operating 10% to 85% r. H. non cond.	Storage 5% to 85% r. H. non cond.
Size	95 x 95 mm	

conga-TC300 | Block Diagram



NOTES

 = Assembly option
Only available on request

*) Support of USB4 requires a separate BIOS

conga-TC300 | Modules Order Information

Article	PN	Description
conga-TC300/7-350	052301	COM Express Type 6 Compact module based on Intel® Core™ 7 350 processor with 2 P-cores and 4 LPE-cores Integrated NPU 6MB Intel® Smart Cache (L3) Intel® Graphics with 32 Execution Units Single channel SODIMM DDR5 memory interface with up to 6400 MT/s and up to 64 GB memory capacity Commercial grade temperature range from 0°C to 60°C Intel code name Wildcat Lake
conga-TC300/5-320	052302	COM Express Type 6 Compact module based on Intel® Core™ 5 320 processor with 2 P-cores and 4 LPE-cores Integrated NPU 6MB Intel® Smart Cache (L3) Intel® Graphics with 32 Execution Units Single channel SODIMM DDR5 memory interface with up to 6400 MT/s and up to 64 GB memory capacity Commercial grade temperature range from 0°C to 60°C Intel code name Wildcat Lake
conga-TC300/3-305	052303	COM Express Type 6 Compact module based on Intel® Core™ 3 305 processor with 2 P-cores and 4 LPE-cores 6MB Intel® Smart Cache (L3) Intel® Graphics with 16 Execution Units Single channel SODIMM DDR5 memory interface with up to 6400 MT/s and up to 64 GB memory capacity Commercial grade temperature range from 0°C to 60°C Intel code name Wildcat Lake

conga-TC300 | Accessories Order Information

Article	PN	Description
conga-TC300/CSP-B	052350	Standard passive cooling solution for COM Express module conga-TC300. All standoffs are with 2.7mm bore hole.
conga-TC300/CSP-T	052351	Standard passive cooling solution for COM Express module conga-TC300. All standoffs are M2.5mm threaded.
conga-TC300/HSP-B	052352	Standard heatspreader for COM Express module conga-TC300. All standoffs are with 2.7mm bore hole.
conga-TC300/HSP-T	052353	Standard heatspreader for COM Express module conga-TC300. All standoffs are M2.5mm threaded.
conga-TEVAL/COMe 3.1	065820	Evaluation carrier board for COM Express Type 6 revision 3.1 modules.