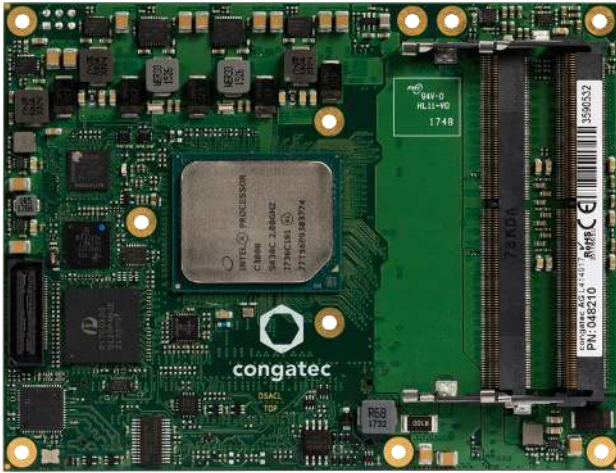


SERVER ON MODULE

conga-B7AC



- COM Express Type 7
- Up to Intel® Atom™ C3958 with 16 Cores and 16MB Cache
- 4x 10 Gigabit Ethernet KR Interface
- Up to 96 Gbyte DDR4 memory
- 20 PCI Express lanes
- Industrial grade variants
- Server Class Features (RAS, QoS, Virtualization, Security, Manageability)



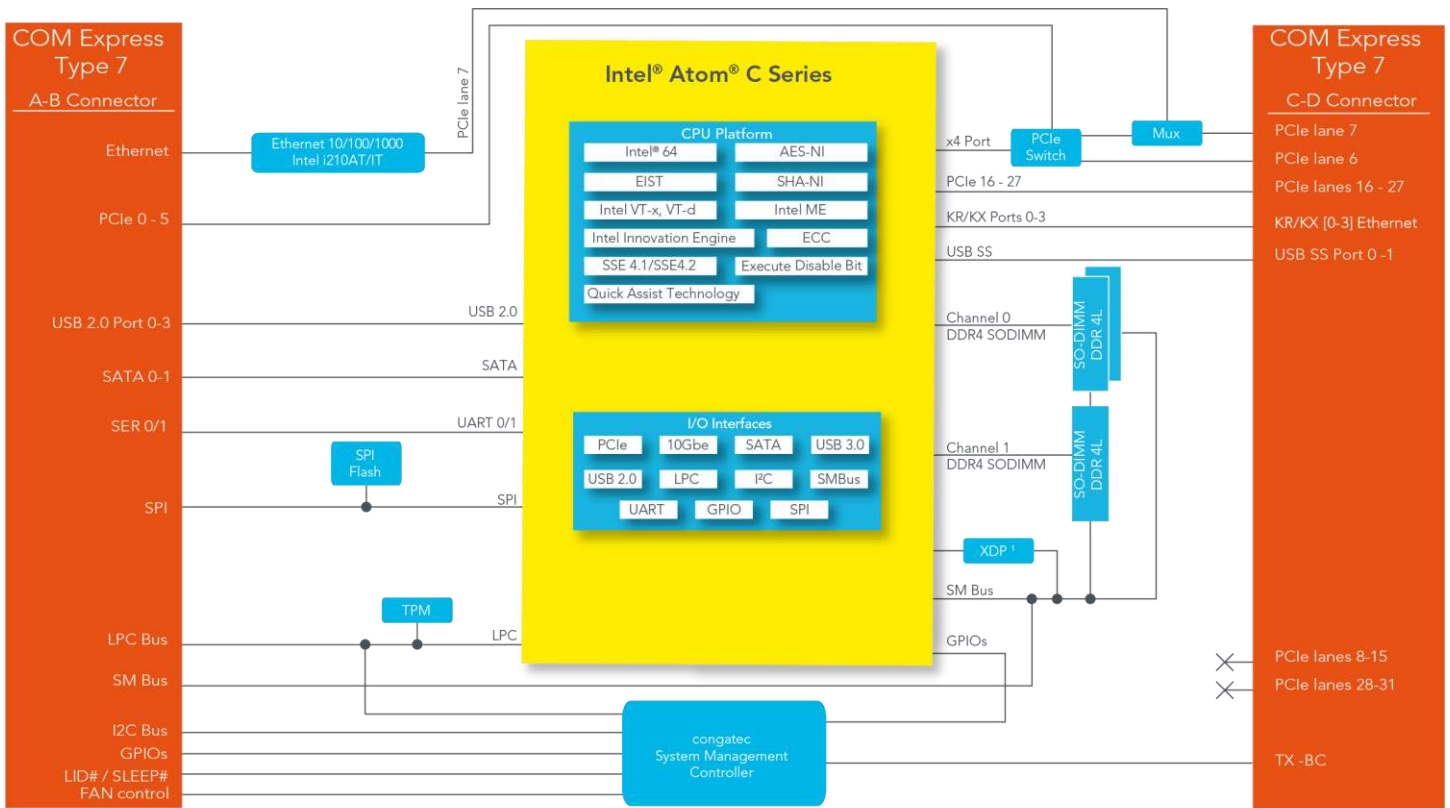
Formfactor

COM Express® Basic, (95 x 125 mm) | Type 7 connector pinout

CPU	Commercial Versions Intel® Atom™ C3958 16 Cores / 16 Threads 2.0 / 2.0 GHz 16 MB cache 31W TDP Intel® Atom™ C3858 12 Cores / 12 Threads 2.0 / 2.0 GHz 12 MB cache 25W TDP Intel® Atom™ C3758 8 Cores / 8 Threads 2.2 / 2.2 GHz 16 MB cache 25W TDP Intel® Atom™ C3558 4 Cores / 4 Threads 2.2 / 2.2 GHz 8 MB cache 16W TDP Intel® Atom™ C3538 4 Cores / 4 Threads 2.1 / 2.1 GHz 8 MB cache 15W TDP Intel® Atom™ C3308 2 Cores / 2 Threads 1.6 / 2.1 GHz 4 MB cache 9.5W TDP Industrial Versions Intel® Atom™ C3808 12 Cores / 12 Threads 2.0 / 2.0 GHz 12 MB cache 25W TDP Intel® Atom™ C3708 8 Cores / 8 Threads 1.7 / 1.7 GHz 16 MB cache 17W TDP Intel® Atom™ C3508 4 Cores / 4 Threads 1.6 / 1.6 GHz 8 MB cache 11.5W TDP			
DRAM	Dual channel DDR4 up to 2400 MT/s 3x SO-DIMM up to 3x 32 GByte (optionally with ECC support)			
Chipset	Integrated in SoC			
Ethernet	Up to 4x 10GbE with KR interface support 1x Gigabit Ethernet			
I/O Interfaces	12x PCIe Gen3 max. 8x PCIe Gen2 2x USB 3.0 4x USB 2.0 2x SATA III (6Gb/s) LPC SPI 2x UART SMBus			
Storage	eMMC 5.0 onboard flash up to 128 GByte (optional)			
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	OEM Customization Flash Update based on AMI Aptio UEFI			
Security	Trusted Platform Module (TPM 2.0) Hash and RSA algorithms key lengths up to 2048 bits real random number generator			
Power Management	ACPI 5.0 with battery support			
Operating Systems	Windows 64 bit OS Microsoft® Windows Server 2016 Microsoft® Windows Server 2012 R2 Microsoft® Windows Server 2012	Open Source OS & Frameworks RHEL 7.2 & 7.3 SuSE Linux Enterprise Server 12 SP1 Fedora 23 and 24 Ubuntu 16.04 LTS CentOS 7.2	Other VMWare ESXi 6.0 Hyper-V Linux KVM 6.8 & 7.3	
Power Consumption	See user's guide for full details CMOS Battery Backup			
Temperature	Industrial: Operating: -40 to +85°C Commercial: Operating: 0 to +60°C	Storage: -40 to +85°C Storage: -40 to +85°C		
Extended Temperature	Screening service on request:		-25 to +80°C (burn-in & cold-soak) -40 to +85°C (burn-in & cold-soak)	
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-B7AC | Block diagram



conga-B7AC | Order Information – COM Express® Module

Article	PN	Description
conga-B7AC/A-C3958	048200	COM Express Type 7 Basic module based on Intel® Atom™ C3958 16-core processor with 2.0 GHz, 16MB Cache and dual channel DDR4 2400 MT/s memory interface for up to 96 GByte (formerly Denverton). Features four 10GbE KR interface ports. Commercial temperature range.
conga-B7AC/A-C3858	048201	COM Express Type 7 Basic module based on Intel® Atom™ C3858 12-core processor with 2.0 GHz, 12MB Cache and dual channel DDR4 2400 MT/s memory interface for up to 96 GByte (formerly Denverton). Features four 10GbE KR interface ports. Commercial temperature range.
conga-B7AC/A-C3758	048202	COM Express Type 7 Basic module based on Intel® Atom™ C3758 8-core processor with 2.2 GHz, 16MB Cache and dual channel DDR4 2400 MT/s memory interface for up to 96 GByte (formerly Denverton). Features four 10GbE KR interface ports. Commercial temperature range.
conga-B7AC/A-C3558	048203	COM Express Type 7 Basic module based on Intel® Atom™ C3558 4-core processor with 2.2 GHz, 8MB Cache and dual channel DDR4 2133 MT/s memory interface for up to 96 GByte (formerly Denverton). Features two 2.5GbE KX and two 10GbE KR interface ports. Commercial temperature range.
conga-B7AC/A-C3538	048204	COM Express Type 7 Basic module based on Intel® Atom™ C3538 4-core processor with 2.1 GHz, 8MB Cache and dual channel DDR4 2133 MT/s memory interface for up to 96 GByte (formerly Denverton). Features two 2.5GbE KX and two 10GbE KR interface ports. Commercial temperature range.
conga-B7AC/A-C3308	048205	COM Express Type 7 Basic module based on Intel® Atom™ C3538 2-core processor with 1.6 GHz, 4MB Cache and dual channel DDR4 2133 MT/s memory interface for up to 64 GByte (formerly Denverton). Features four 2.5GbE KX interface ports. Commercial temperature range.
conga-B7AC/i-A-C3808	048210	COM Express Type 7 Basic module based on Intel® Atom™ C3808 12-core processor with 2.0 GHz, 12MB Cache and dual channel DDR4 2133 MT/s memory interface for up to 96 GByte (formerly Denverton). Features four 10GbE KR interface ports. Industrial temperature range.
conga-B7AC/i-A-C3708	048211	COM Express Type 7 Basic module based on Intel® Atom™ C3708 8-core processor with 1.7 GHz, 16MB Cache and dual channel DDR4 2133 MT/s memory interface for up to 96 GByte (formerly Denverton). Features four 10GbE KR interface ports. Industrial temperature range.
conga-B7AC/i-A-C3508	048213	COM Express Type 7 Basic module based on Intel® Atom™ C3508 4-core processor with 1.6 GHz, 8MB Cache and dual channel DDR4 1866 MT/s memory interface for up to 96 GByte (formerly Denverton). Features four 2.5GbE KX interface ports. Industrial temperature range.

conga-B7AC | Order Information – Accessory

Article	PN	Description
conga-B7AC/HSP-Cu-B	048251	Standard heatspreader for COM Express Basic Type 7 module conga-B7AC with integrated copper plate. Intended for modules with TDP up to 17W (Cu = Copper plate B = Bore hole standoffs)
conga-B7AC/HSP-Cu-T	048252	Standard heatspreader for COM Express Basic Type 7 module conga-B7AC with integrated copper plate. Intended for versions up to 17W TDP (Cu = Copper plate T = M2.5 threaded standoffs)
conga-B7AC/CSA-Cu-B	048253	Standard active cooling solution for COM Express Basic Type 7 module conga-B7AC with integrated copper plate, 15mm fins, 20mm overall heat sink height and integrated 12V fan. (Cu = Copper plate B = 2.7mm Bore hole standoffs)
conga-B7AC/CSA-Cu-T	048254	Standard active cooling solution for COM Express Basic Type 7 module conga-B7AC with integrated copper plate, 15mm fins, 20mm overall heat sink height and integrated 12V fan. (Cu = Copper plate T = M2.5 threaded standoffs)
conga-B7AC/CSP-Cu-B	048255	Standard passive cooling solution for COM Express Basic Type 7 module conga-B7AC with integrated copper plate, 15mm fins and 20mm overall heat sink height. (Cu = copper plate B = Bore hole standoffs)
conga-B7AC/CSP-Cu-T	048256	Standard passive cooling solution for high performance COM Express Basic Type 7 module conga-B7AC with integrated copper plate, 15mm fins and 20mm overall heat sink height. (Cu = copper plate T = M2.5 Threaded standoffs)
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
DDR4-SODIMM-2666 (32GB)	068806	DDR4 SODIMM memory module with 2666 MT/s and 32GB 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-2666 ECC (32GB)	068805	DDR4 ECC SODIMM memory module with 2666 MT/s and 32GB RAM
DDR4-SODIMM-2400 (4GB)/ i-temp	068714	Industrial DDR4 SODIMM memory module with 2400 MT/s and 4GB RAM
DDR4-SODIMM-2400 (8GB)/ i-temp	068715	Industrial DDR4 SODIMM memory module with 2400 MT/s and 8GB RAM
DDR4-SODIMM-2400 (16GB)/ i-temp	068716	Industrial DDR4 SODIMM memory module with 2400 MT/s and 16GB RAM
DDR4-SODIMM-2666 (32GB)/ i-temp	068807	Industrial DDR4 SODIMM memory module with 2666 MT/s and 32GB RAM
DDR4-SODIMM-2400 ECC (4GB) / i-temp	068717	Industrial DDR4 ECC SODIMM memory module with 2400 MT/s and 4GB RAM
DDR4-SODIMM-2400 ECC (8GB) / i-temp	068718	Industrial DDR4 ECC SODIMM memory module with 2400 MT/s and 8GB RAM
DDR4-SODIMM-2400 ECC (16GB) / i-temp	068719	Industrial DDR4 ECC SODIMM memory module with 2400 MT/s and 16GB RAM
DDR4-SODIMM-2666 ECC (32GB) / i-temp	068808	Industrial DDR4 ECC SODIMM memory module with 2666 MT/s and 32GB RAM
conga-x7EVAL	065420	Evaluation Carrier Board for COM Express Type 7 modules with up to four 10GbE SFP+ fiber/copper ports implemented via Intel Cortina 10GbE Phy's. The carrier features an Aspeed AST2500 Board Management Controller (BMC).