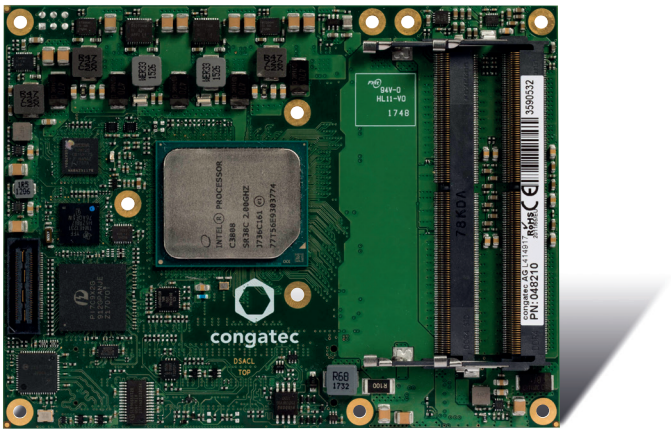
SERVER ON MODULE

conga-B7AC

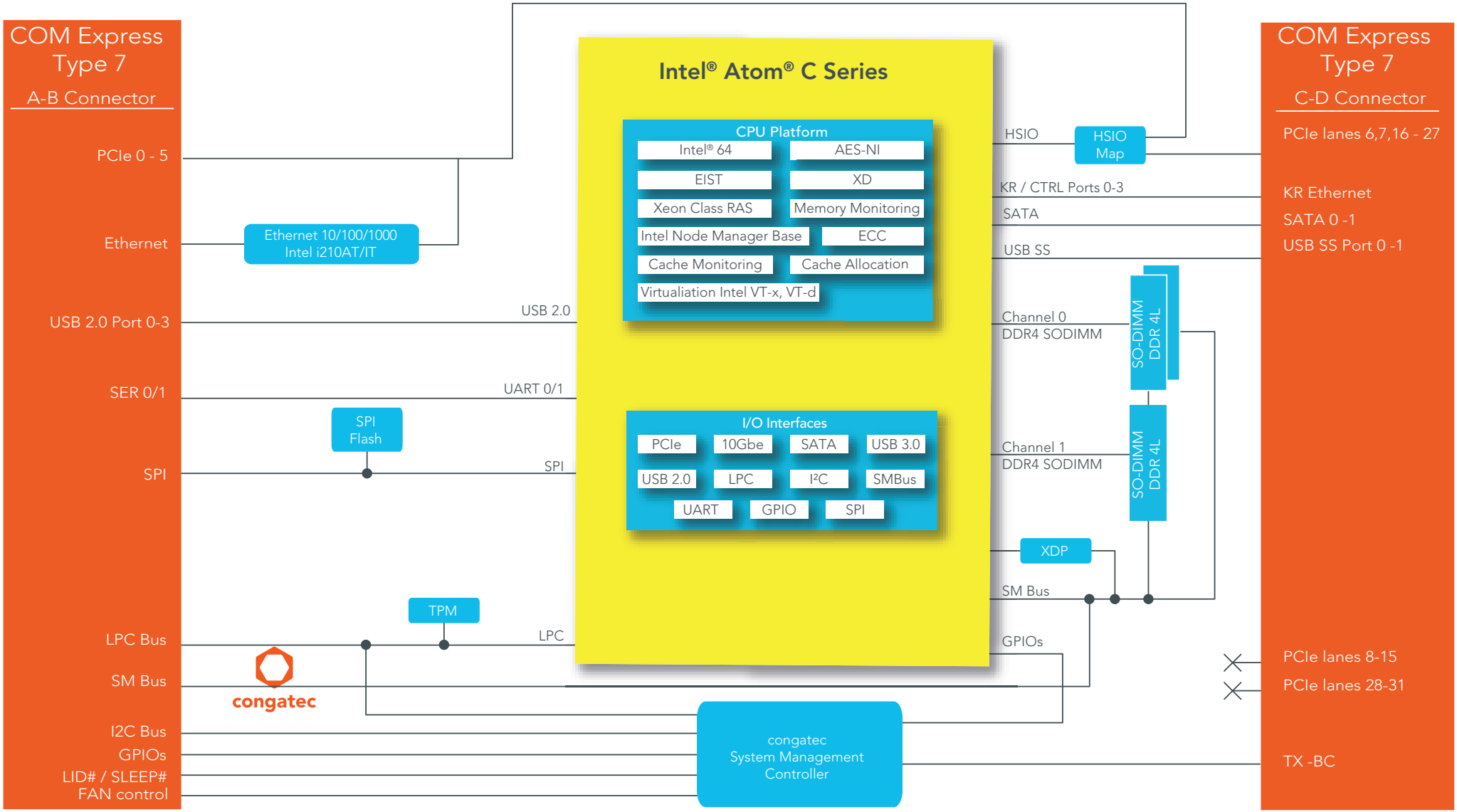


- COM Express Type 7
- Up to Intel® Atom™ C3958 with 16 Cores and 16MB Cache
- 4x 10 Gigabit Ethernet KR Interface
- 20 PCI Express lanes
- Industrial grade variants
- Server Class Features (RAS, QoS, Virtualization, Security, Manageability)

COM Express®

Formfactor	Formfactor COM Express® Basic | (95 x 125 mm) | Type 7 Connector Pinout
CPU	**Commercial versions** Intel® Atom™ C3958 — 2.0 GHz — 16 Cores — 16MB cache — 31W TDP Intel® Atom™ C3858 — 2.0 GHz — 12 Cores — 12MB cache — 25W TDP Intel® Atom™ C3758 — 2.2 GHz — 8 Cores — 16MB cache — 25W TDP Intel® Atom™ C3558 — 2.2 GHz — 4 Cores — 8MB cache — 16W TDP Intel® Atom™ C3538 — 2.1 GHz — 4 Cores — 8MB cache — 15W TDP Intel® Atom™ C3308 — 1.6 GHz — 2 Cores — 4 MB cache — 9.5W TDP **Industrial versions** Intel® Atom™ C3808 — 2.0 GHz — 12 Cores — 12 MB cache — 25W TDP Intel® Atom™ C3708 — 1.7 GHz — 8 Cores — 16 MB cache — 17W TDP Intel® Atom™ C3508 — 1.6 GHz — 4 Cores — 8 MB cache — 11.5W TDP
DRAM	up to 3 SO-DIMM sockets for DDR4 memory modules up to 16 GByte each (96 GByte total) with 2400 MT/s | ECC and non-ECC supported
Chipset	Integrated in SoC
Ethernet	4x 10GbE with KR interface support
I/O Interfaces	12x PCIe Gen3 | 8x PCIe Gen2 | 2x USB 3.0 | 4x USB 2.0 | 2x SATA III (6Gb/s) | LPC | SPI | I²C bus (fast mode 400 kHz, multi-master) | 2x UART | SMBus
Mass 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 | I²C 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) | 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 Microsoft® Windows Server 2008 R2 SP1 Microsoft® Windows 10 Enterprise Microsoft® Windows 8.1 64b **Open Source OS & Frameworks** RHEL 6.6 & 7.1 SuSE 11 SP4 & 12 SP1 Fedora 22 Ubuntu 14.10 CentOS 6.6 & 7.1 FreeBSD **Other** VMware Hyper-V Xen ESXi
Power Consumption	see user's guide for full details | CMOS Battery Backup
Temperature	Industrial: Operating: -40 to +85°C Storage: -40 to +85°C 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 125 mm (3.74" x 4.92")

conga-B7AC Block diagram



conga-B7AC | Order Information

Article	PN	Description
conga-B7AC/A-C3958	048200	COM Express Type 7 Basic module with Intel® Atom™ C3958 processor with 16 Cores, 2.0GHz core frequency, 16MB Cache and 2400 MT/s dual channel DDR4 memory interface for up to 48GB. Features four 10GbE KR interface ports. 31W TDP, commercial temperature range.
conga-B7AC/A-C3858	048201	COM Express Type 7 Basic module with Intel® Atom™ C3858 processor with 12 Cores, 2.0 GHz core fequency, 12MB Cache and 2400 MT/s dual channel DDR4 memory interface for up to 48GB. Features four 10GbE KR interface ports. 25W TDP, commercial temperature range.
conga-B7AC/A-C3758	048202	COM Express Type 7 Basic module with Intel® Atom™ C3758 processor with 8 Cores, 2.2 GHz core frequency, 16MB Cache and 2400 MT/s dual channel DDR4 memory interface for up to 48GB. Features four 10GbE KR interface ports. 25W TDP, commercial temperature range.
conga-B7AC/A-C3558	048203	COM Express Type 7 Basic module with Intel® Atom™ C3558 processor with 4 Cores, 2.2 GHz core frequency, 8MB Cache and 2133 MT/s dual channel DDR4 memory interface for up to 48GB. Features two 2.5GbE and two 10GbE KR interface ports. 16W TDP, commercial temperature range.
conga-B7AC/A-C3538	048204	COM Express Type 7 Basic module with Intel® Atom™ C3538 processor with 4 Cores, 2.1 GHz core frequency, 8MB Cache and 2133 MT/s dual channel DDR4 memory interface for up to 48GB. Features two 2.5GbE and two 10GbE KR interface ports. 15W TDP, commercial temperature range.
conga-B7AC/A-C3308	048205	COM Express Type 7 Basic module with Intel® Atom™ C3308 processor with 2 Cores, 1.6 GHz core frequency, 4MB Cache and 2133 MT/s dual channel DDR4 memory interface for up to 48GB. Features two 2.5GbE and two 10GbE KR interface ports. 9.5W TDP, commercial temperature range.
conga-B7AC/i-A-C3808	048210	COM Express Type 7 Basic module with Intel® Atom™ C3808 processor with 12 Cores, 2.0 GHz core frequency, 12MB Cache and 2133 MT/s dual channel DDR4 memory interface for up to 48GB. Features four 10GbE KR interface ports. 24W TDP, industrial temperature range.
conga-B7AC/i-A-C3708	048211	COM Express Type 7 Basic module with Intel® Atom™ C3708 processor with 8 Cores, 1.7 GHz core frequency, 16MB Cache and 2133 MT/s dual channel DDR4 memory interface for up to 48GB. Features four 10GbE KR interface ports. 17W TDP, industrial temperature range.
conga-B7AC/i-A-C3508	048213	COM Express Type 7 Basic module with Intel® Atom™ C3508 processor with 4 Cores, 1.6 GHz core fequency, 8MB Cache and 1866 MT/s dual channel DDR4 memory interface for up to 48GB. Features four 2.5GbE KR interface ports. 11W TDP, industrial temperature range.
conga-B7AC/HSP-Cu-B	048251	conga-B7AC/HSP-Cu-B 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-2400 ECC (4GB)	068765	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) / 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-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

Accessories		
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).
COM Express Connector AB, High Speed, Type 7	41500615	COM Express Connector AB, High Speed (10Gbs), Type 7

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