

SERVER ON MODULE

conga-B7XD

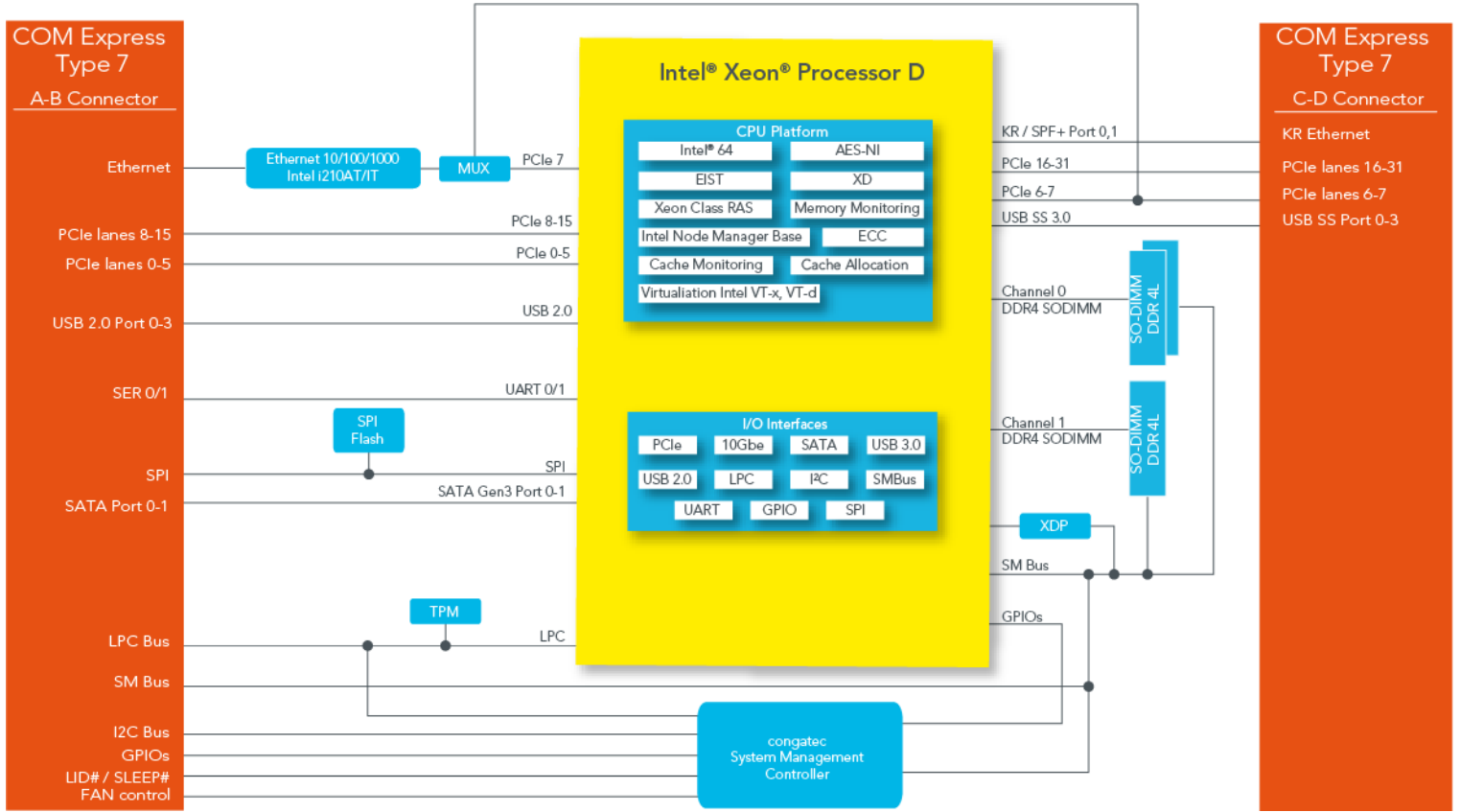


- COM Express Type 7
- Up to Intel® Xeon® D 1577 with 16 cores and 24 MB Cache
- 2x 10 Gigabit Ethernet KR Interface
- 32 PCI Express lanes
- Industrial grade variants
- Server Class Features (RAS, QoS, Virtualization, Security, Manageability)



Formfactor	COM Express® Basic, (95 x 125 mm) Type 7 connector pinout																																																				
CPU	<p>Commercial Versions</p> <table border="1"> <tr> <td>Intel® Xeon® D1577</td> <td>1.3 GHz 2.1 GHz (boost)</td> <td>16 Cores</td> <td>24 MB cache</td> <td>45W TDP</td> </tr> <tr> <td>Intel® Xeon® D1567</td> <td>2.1 GHz 2.7 GHz (boost)</td> <td>12 Cores</td> <td>18 MB cache</td> <td>65W TDP</td> </tr> <tr> <td>Intel® Xeon® D1548</td> <td>2.0 GHz 2.6 GHz (boost)</td> <td>8 Cores</td> <td>12 MB cache</td> <td>45W TDP</td> </tr> <tr> <td>Intel® Xeon® D1527</td> <td>2.2 GHz 2.7 GHz (boost)</td> <td>4 Cores</td> <td>6 MB cache</td> <td>35W TDP</td> </tr> <tr> <td>Intel® Pentium™ D1509</td> <td>1.5 GHz 2.7 GHz (boost)</td> <td>2 Cores</td> <td>3 MB cache</td> <td>19W TDP</td> </tr> <tr> <td>Intel® Pentium™ D1508</td> <td>2.2 GHz 2.6 GHz (boost)</td> <td>2 Cores</td> <td>3 MB cache</td> <td>25W TDP</td> </tr> </table> <p>Industrial Versions</p> <table border="1"> <tr> <td>Intel® Xeon® D1559</td> <td>1.5 GHz 2.1 GHz (boost)</td> <td>12 Cores</td> <td>18 MB cache</td> <td>45W TDP</td> </tr> <tr> <td>Intel® Xeon® D1539</td> <td>1.6 GHz 2.2 GHz (boost)</td> <td>8 Cores</td> <td>12 MB cache</td> <td>35W TDP</td> </tr> <tr> <td>Intel® Xeon® D1529</td> <td>1.3 GHz</td> <td>4 Cores</td> <td>6 MB cache</td> <td>20W TDP</td> </tr> <tr> <td>Intel® Pentium™ D1519</td> <td>1.5 GHz 2.1 GHz (boost)</td> <td>4 Cores</td> <td>6 MB cache</td> <td>25W TDP</td> </tr> </table>			Intel® Xeon® D1577	1.3 GHz 2.1 GHz (boost)	16 Cores	24 MB cache	45W TDP	Intel® Xeon® D1567	2.1 GHz 2.7 GHz (boost)	12 Cores	18 MB cache	65W TDP	Intel® Xeon® D1548	2.0 GHz 2.6 GHz (boost)	8 Cores	12 MB cache	45W TDP	Intel® Xeon® D1527	2.2 GHz 2.7 GHz (boost)	4 Cores	6 MB cache	35W TDP	Intel® Pentium™ D1509	1.5 GHz 2.7 GHz (boost)	2 Cores	3 MB cache	19W TDP	Intel® Pentium™ D1508	2.2 GHz 2.6 GHz (boost)	2 Cores	3 MB cache	25W TDP	Intel® Xeon® D1559	1.5 GHz 2.1 GHz (boost)	12 Cores	18 MB cache	45W TDP	Intel® Xeon® D1539	1.6 GHz 2.2 GHz (boost)	8 Cores	12 MB cache	35W TDP	Intel® Xeon® D1529	1.3 GHz	4 Cores	6 MB cache	20W TDP	Intel® Pentium™ D1519	1.5 GHz 2.1 GHz (boost)	4 Cores	6 MB cache	25W TDP
Intel® Xeon® D1577	1.3 GHz 2.1 GHz (boost)	16 Cores	24 MB cache	45W TDP																																																	
Intel® Xeon® D1567	2.1 GHz 2.7 GHz (boost)	12 Cores	18 MB cache	65W TDP																																																	
Intel® Xeon® D1548	2.0 GHz 2.6 GHz (boost)	8 Cores	12 MB cache	45W TDP																																																	
Intel® Xeon® D1527	2.2 GHz 2.7 GHz (boost)	4 Cores	6 MB cache	35W TDP																																																	
Intel® Pentium™ D1509	1.5 GHz 2.7 GHz (boost)	2 Cores	3 MB cache	19W TDP																																																	
Intel® Pentium™ D1508	2.2 GHz 2.6 GHz (boost)	2 Cores	3 MB cache	25W TDP																																																	
Intel® Xeon® D1559	1.5 GHz 2.1 GHz (boost)	12 Cores	18 MB cache	45W TDP																																																	
Intel® Xeon® D1539	1.6 GHz 2.2 GHz (boost)	8 Cores	12 MB cache	35W TDP																																																	
Intel® Xeon® D1529	1.3 GHz	4 Cores	6 MB cache	20W TDP																																																	
Intel® Pentium™ D1519	1.5 GHz 2.1 GHz (boost)	4 Cores	6 MB cache	25W TDP																																																	
DRAM	Dual channel DDR4 up to 2400 MT/s 3x SO-DIMM up to 3x 32 GByte (optionally with ECC support for Intel® Xeon®)																																																				
Chipset	Integrated in SoC																																																				
Ethernet	1x Intel I210AT /IT Gigabit Ethernet Controller 2x 10GbE with KR interface support																																																				
I/O Interfaces	24x PCIe Gen3 8x PCIe Gen2 4x USB 3.0 4x USB 2.0 2x SATA III (6Gb/s) LPC SPI I ² C bus (fast mode 400 kHz, multi-master) 2x UART SMBus																																																				
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)																																																				
Power Management	ACPI 5.0 with battery support																																																				
Operating Systems	<p>Windows 64 bit OS</p> <p>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 Microsoft® Windows 7 64b</p>	<p>Open Source & Frameworks</p> <p>RHEL 6.6 & 7.1 SuSE 11 SP4 & 12 SP1 Fedora 22 Ubuntu 14.10 CentOS 6.6 & 7.1 FreeBSD</p>	<p>Other</p> <p>RTS Hypervisor VMware Hyper-V Xen ESXI</p>																																																		
Power Consumption	See user's guide for full details																																																				
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-B7XD | Block diagram



conga-B7XD | Order Information – COMe Modules

Article	PN	Description
conga-B7XD/X-D1577	047500	COM Express Type 7 Basic module with Intel® Xeon® D1577 processor with 16 Cores, 1.3GHz up to 2.1GHz core frequency, 24MB Cache and 2133 MT/s dual channel DDR4 memory interface for up to 96GB. Features two 10GbE KR interface ports. 45W TDP, commercial temperature range.
conga-B7XD/X-D1567	047501	COM Express Type 7 Basic module with Intel® Xeon® D1567 processor with 12 Cores, 2.1GHz up to 2.7GHz core frequency, 18MB Cache and 2133 MT/s dual channel DDR4 memory interface for up to 96GB. Features two 10GbE KR interface ports. 65W TDP, commercial temperature range.
conga-B7XD/X-D1548	047502	COM Express Type 7 Basic module with Intel® Xeon® D1548 processor with 8 Cores, 2.0GHz up to 2.6GHz core frequency, 12MB Cache with and 2400 MT/s dual channel DDR4 memory interface for up to 96GB. Features two 10GbE KR interface ports. 45W TDP, commercial temperature range.
conga-B7XD/X-D1527	047503	COM Express Type 7 Basic module with Intel® Xeon® D1527 processor with 4 Cores, 2.2GHz up to 2.7GHz core frequency, 6MB Cache with and 2133 MT/s dual channel DDR4 memory interface for up to 96GB. Features two 10GbE KR interface ports. 35W TDP, commercial temperature range.
conga-B7XD/P-D1509	047504	COM Express Type 7 Basic module with Intel® Pentium™ D1509 processor with 2 Cores, 1.5GHz core frequency, 3MB Cache and 1600 MT/s dual channel DDR4 memory interface for up to 96GB. 19W TDP, commercial temperature range.
conga-B7XD/P-D1508	047505	COM Express Type 7 Basic module with Intel® Pentium™ D1508 processor with 2 Cores, 2.2GHz up to 2.6GHz core frequency, 3MB Cache and 1866 MT/s dual channel DDR4 memory interface for up to 96GB. Features two 10GbE KR interface ports. 25W TDP, commercial temperature range.
conga-B7XD/i-X-D1559	047520	COM Express Type 7 Basic module with Intel® Xeon® D1559 processor with 12 Cores, 1.5GHz up to 2.1GHz core frequency, 18MB Cache and 2133 MT/s dual channel DDR4 memory interface for up to 96GB. Features two 10GbE KR interface ports. 45W TDP, industrial temperature range.
conga-B7XD/i-X-D1539	047521	COM Express Type 7 Basic module with Intel® Xeon® D1539 processor with 8 Cores, 1.6GHz up to 2.2GHz core frequency, 12MB Cache and 2133 MT/s dual channel DDR4 memory interface for up to 96GB. Features two 10GbE KR interface ports. 35W TDP, industrial temperature range.
conga-B7XD/i-X-D1529	047522	COM Express Type 7 Basic module with Intel® Xeon® D1529 processor with 4 Cores, 1.3GHz core frequency, 6MB Cache and 1600 MT/s dual channel DDR4 memory interface for up to 96GB. 20W TDP, industrial temperature range.
conga-B7XD/i-P-D1519	047523	COM Express Type 7 Basic module with Intel® Pentium™ D1519 processor with 4 Cores, 1.5GHz up to 2.1GHz core frequency, 6MB Cache and 2133 MT/s dual channel DDR4 memory interface for up to 96GB. Features two 10GbE KR interface ports. 25W TDP, industrial temperature range.

conga-B7XD | Order Information – Cooling Solutions

Article	PN	Description
B7XD/CSA-HP-T	047530	Standard active cooling solution for high performance COM Express Type 7 module conga-B7XD with integrated heat pipes, 70mm radial 12V PWM fan and 30mm overall heat sink height. All standoffs are M2.5mm threaded.
B7XD/CSA-HP-B	047531	Standard active cooling solution for high performance COM Express Type 7 module conga-B7XD with integrated heat pipes, 70mm radial 12V PWM fan and 30mm overall heat sink height. All standoffs are with 2.7mm bore hole.
B7XD/HSP-VC-T	047532	Standard heatspreader for high performance COM Express Type 7 module conga-B7XD with integrated vapor chamber. All standoffs are M2.5mm threaded.
B7XD/HSP-VC-B	047533	Standard heatspreader for high performance COM Express Type 7 module conga-B7XD with integrated vapor chamber. All standoffs are with 2.7mm bore hole.
B7XD/CSA-Cu-B	047535	Standard active cooling solution for low and mid range performance COM Express Type 7 module conga-B7XD with integrated copper plate, 70mm 12V radial FAN and 27mm overall heat sink height. Intended for modules with TDP up to 35W * Cu = Copper plate * B = 2.7mm Bore hole standoffs
B7XD/CSA-Cu-T	047536	Standard active cooling solution for low and mid range performance COM Express Type 7 module conga-B7XD with integrated copper plate, 70mm 12V radial FAN and 27mm overall heat sink height. Intended for modules with TDP up to 35W * Cu = Copper plate * T = M2.5 Threaded standoffs
B7XD/CSP-Cu-B	047537	Standard passive cooling solution for low and mid range performance COM Express Type 7 module conga-B7XD with integrated copper plate and 26mm overall heat sink height. Intended for modules with TDP up to 20W * Cu = Copper plate * B = 2.7mm Bore hole standoffs
B7XD/CSP-Cu-T	047538	Standard passive cooling solution for low and mid range performance COM Express Type 7 module conga-B7XD with integrated copper plate and 26mm overall heat sink height. Intended for modules with TDP up to 20W * Cu = Copper plate * T = M2.5 Threaded standoffs
B7XD/HSP-Cu-B	047539	Standard heatspreader for COM Express Type 7 module conga-B7XD with integrated copper plate and 11mm overall height. * Cu = Copper plate * B = 2.7mm Bore hole standoffs
B7XD/HSP-Cu-T	047540	Standard heatspreader for COM Express Type 7 module conga-B7XD with integrated copper plate and 11mm overall height. * Cu = Copper plate * T = M2.5 Threaded standoffs

conga-B7XD | Order Information - Accessories

Article	PN	Description
DDR4-SODIMM-2400 (4GB) TSDE	068728	DDR4 SODIMM memory module with 2400 MT/s and 4GB RAM for conga-B7XD
DDR4-SODIMM-2400 (8GB) TSDE	068724	DDR4 SODIMM memory module with 2400 MT/s and 8GB RAM for conga-B7XD
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) TSDE	068729	DDR4 ECC SODIMM memory module with 2400 MT/s and 4GB RAM for conga-B7XD
DDR4-SODIMM-2400 ECC (8GB) TSDE	068725	DDR4 ECC SODIMM memory module with 2400 MT/s and 8GB RAM for conga-B7XD
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 TSDE	068726	Industrial DDR4 SODIMM memory module with 2400 MT/s and 4GB RAM for conga-B7XD
DDR4-SODIMM-2400 (8GB) / i-temp TSDE	068722	Industrial DDR4 SODIMM memory module with 2400 MT/s and 8GB RAM for conga-B7XD
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 TSDE	068727	Industrial DDR4 ECC SODIMM memory module with 2400 MT/s and 4GB RAM for conga-B7XD
DDR4-SODIMM-2400 ECC (8GB) / i-temp TSDE	068723	Industrial DDR4 ECC SODIMM memory module with 2400 MT/s and 8GB RAM for conga-B7XD
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).