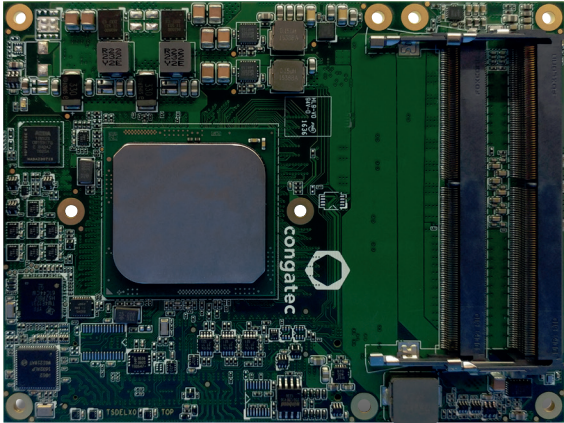


SERVER ON MODULE

conga-B7XD



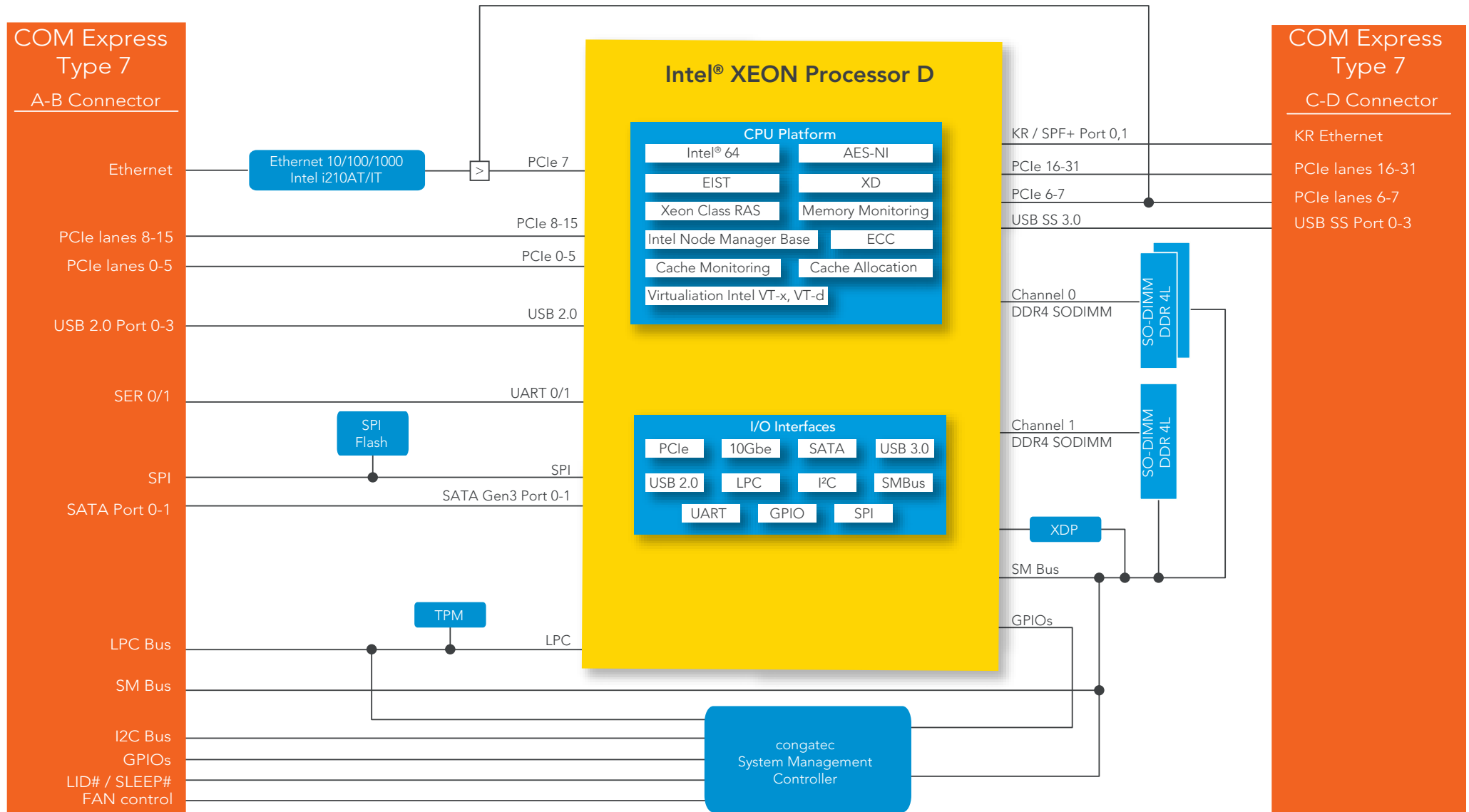
- COM Express Type 7
- Up to Intel® Xeon® D 1577 with 16 Cores and 24MB Cache
- 2x 10 Gigabit Ethernet KR Interface
- 32 PCI Express lanes
- Industrial grade variants
- Server Class Features
(RAS, QoS, Virtualization, Security, Manageability)



Formfactor	Formfactor COM Express® Basic (95 x 125 mm) Type 7 Connector Pinout																																																
CPU	Commercial versions <table border="1"> <tr> <td>Intel® Xeon® D1577</td> <td>1.3 GHz 2.1 GHz</td> <td>16 Cores</td> <td>24MB cache</td> <td>45W TDP</td> </tr> <tr> <td>Intel® Xeon® D1548</td> <td>2.0 GHz 2.6 GHz</td> <td>8 Cores</td> <td>12MB cache</td> <td>45W TDP</td> </tr> <tr> <td>Intel® Xeon® D1527</td> <td>2.2 GHz 2.7 GHz</td> <td>4 Cores</td> <td>6MB cache</td> <td>35W TDP</td> </tr> <tr> <td>Intel® Pentium™ D1509</td> <td>1.5 GHz</td> <td>2 Cores</td> <td>3MB cache</td> <td>19W TDP</td> </tr> <tr> <td>Intel® Pentium™ D1508</td> <td>2.2 GHz 2.6 GHz</td> <td>2 Cores</td> <td>3MB cache</td> <td>25W TDP</td> </tr> </table> Industrial versions <table border="1"> <tr> <td>Intel® Xeon® D1559</td> <td>2.1 GHz (Burst) 1.5 GHz Clock</td> <td>12 Cores</td> <td>cache 18MB</td> <td>45W TDP</td> </tr> <tr> <td>Intel® Xeon® D1539</td> <td>2.2 GHz (Burst) 1.6 GHz Clock</td> <td>8 Cores</td> <td>cache 12MB</td> <td>35W TDP</td> </tr> <tr> <td>Intel® Xeon® D1529</td> <td>1.3 GHz Clock</td> <td>4 Cores</td> <td>cache 6MB</td> <td>20W TDP</td> </tr> <tr> <td>Intel® Pentium™ D1519</td> <td>2.1 GHz (Burst) 1.5 GHz Clock</td> <td>4 Cores</td> <td>cache 6MB</td> <td>25W TDP</td> </tr> </table>				Intel® Xeon® D1577	1.3 GHz 2.1 GHz	16 Cores	24MB cache	45W TDP	Intel® Xeon® D1548	2.0 GHz 2.6 GHz	8 Cores	12MB cache	45W TDP	Intel® Xeon® D1527	2.2 GHz 2.7 GHz	4 Cores	6MB cache	35W TDP	Intel® Pentium™ D1509	1.5 GHz	2 Cores	3MB cache	19W TDP	Intel® Pentium™ D1508	2.2 GHz 2.6 GHz	2 Cores	3MB cache	25W TDP	Intel® Xeon® D1559	2.1 GHz (Burst) 1.5 GHz Clock	12 Cores	cache 18MB	45W TDP	Intel® Xeon® D1539	2.2 GHz (Burst) 1.6 GHz Clock	8 Cores	cache 12MB	35W TDP	Intel® Xeon® D1529	1.3 GHz Clock	4 Cores	cache 6MB	20W TDP	Intel® Pentium™ D1519	2.1 GHz (Burst) 1.5 GHz Clock	4 Cores	cache 6MB	25W TDP
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DRAM	up to 3 SO-DIMM sockets for DDR4 memory modules up to 16 GByte each (48 GByte total) with 2400 MT/s ECC and non-ECC supported																																																
Chipset	Integrated in SoC																																																
Ethernet	1x Intel I210AT /IT Gigabit Ethernet Controller 2x 10GbE with KR interface support - the 10GbE PHY must be implemented on the carrier board																																																
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																																																
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) 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 Microsoft® Windows 7 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 Yocto v.2.0 Kernel 4.1	Real-Time OS Wind River VxWorks 7	Other VMware 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-B7XD | Block diagram



conga-B7XD | Order Information

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 2400 MT/s dual channel DDR4 memory interface for up to 48GB. Features two 10GbE KR interface ports. 45W 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 2133 MT/s dual channel DDR4 memory interface for up to 48GB. 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 48GB. 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 2133 MT/s dual channel DDR4 memory interface for up to 48GB. 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 2133 MT/s dual channel DDR4 memory interface for up to 48GB. 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 48GB. 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 48GB. 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 2133 MT/s dual channel DDR4 memory interface for up to 48GB. 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 48GB. Features two 10GbE KR interface ports. 25W TDP, industrial temperature range.
conga-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 standoff are M2.5mm thread.
conga-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 standoff are with 2.7mm bore hole.
conga-B7XD/HSP-VP-T	047532	Standard heatspreader for high performance COM Express Type 7 module conga-B7XD with integrated vapor chamber. All standoff are M2.5mm thread.
conga-B7XD/HSP-VP-B	047533	Standard heatspreader for high performance COM Express Type 7 module conga-B7XD with integrated vapor chamber. All standoff are with 2.7mm bore hole.
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

Accessories

conga-X7/EVAL	065420	Evaluation Carrier Board for COM Express Type 7 modules with up to four 10GbE SFP+ fiber/copper ports implemented via Intel Cortina 10GbE Ph'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