

EMBEDDED COM EXPRESS® TYPE 6

conga-TCA7

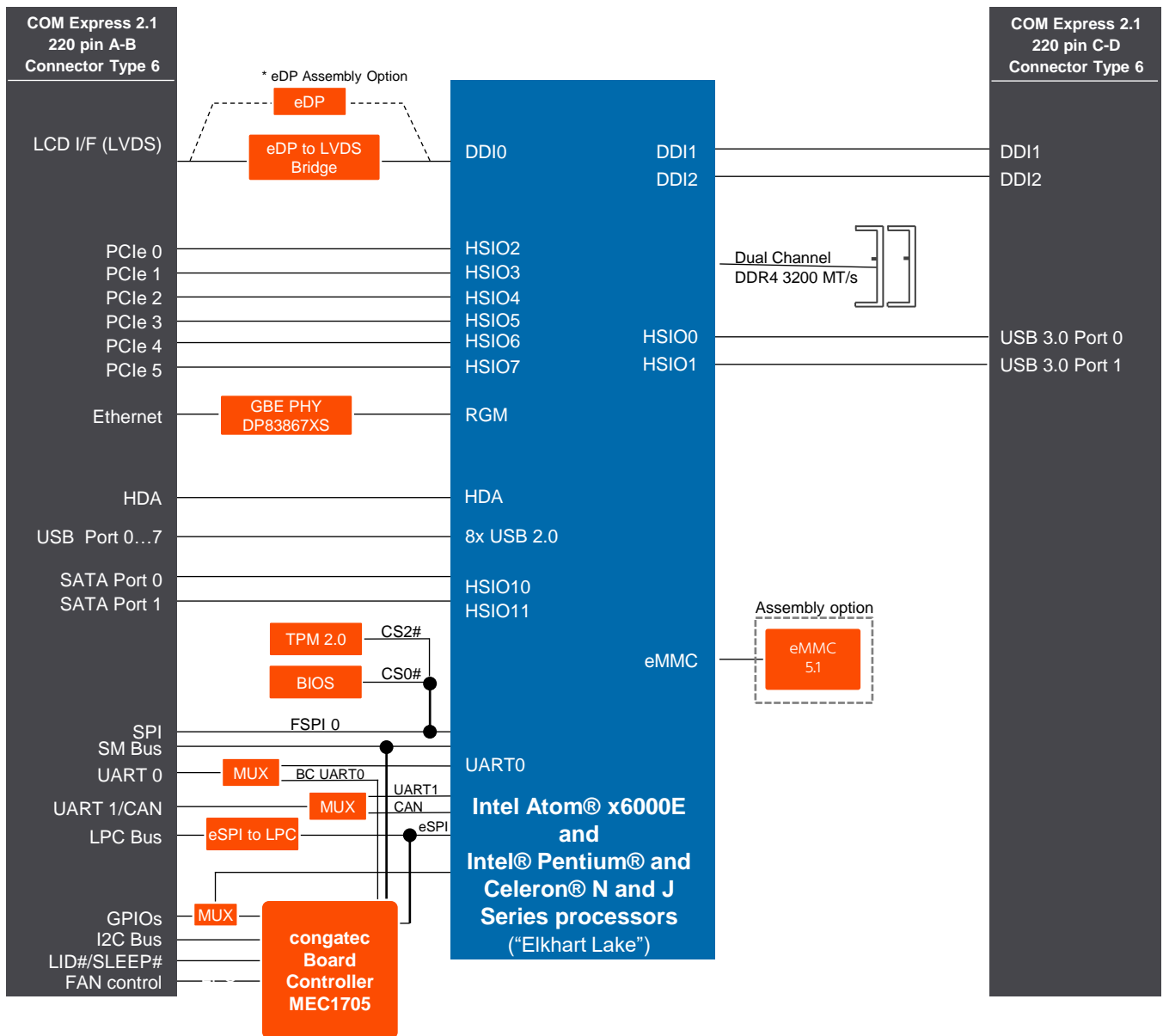


- COM Express Type 6 Compact based on Intel Atom® x6000E Series and Intel® Pentium® and Celeron® J and N Series processors
- High performance Intel® UHD Graphics for 10th Gen Intel® Processors
- Up to 3.200 MT/s DDR4 SODIMM Memory Support
- Options for Time Sensitive Networking and Time Coordinated Computing for improved Realtime Capability
- Options for Industrial Temperature Range -40°C to 85°C

Form Factor	COM Express® Compact Type 6 (95 x 95 mm)					
CPU	Processor	TDP	Cores/Threads	Base Frequ./Turbo	Gen 11 Gfx	Intel Use Condition
	J6413	10W	4 / 4	1.8 GHz / 3.0 GHz	16 EU	PC Client
	J6426	10W	4 / 4	2.0 GHz / 3.0 GHz	32 EU	PC Client
	x6211E	6W	2 / 2	1.3 GHz / 3.0 GHz	16 EU	Embedded
	x6413E	9W	4 / 4	1.5 GHz / 3.0 GHz	16 EU	Embedded
	x6425E	12W	4 / 4	2.0 GHz / 3.0 GHz	32 EU	Embedded
	x6212RE	6W	2 / 2	1.2 GHz / ---	16 EU	Industrial
	x6414RE	9W	4 / 4	1.5 GHz / ---	16 EU	Industrial
	x6425RE	12W	4 / 4	1.9 GHz / ---	32 EU	Industrial
DRAM	Support for 2x SO DIMM on socket (dual channel DDR4 3.200 MT/s) max. 32 GB RAM system capacity					
Ethernet	Intel® GbE with TSN support real-time trigger					
I/O Interfaces	Up to 6x PCIe Gen3 2x USB 3.1 Gen2 up to 8x USB 2.0 2x SATA III 2x UART (UART1 muxed with CAN) GPIO I ² C Bus SMBus SPI LPC					
Mass Storage	Option for onboard eMMC 5.1 flash up to 128 Gbyte					
Audio	Intel® HD Audio					
Graphics	Intel® UHD Graphics					
LVDS	Dual channel 18/24-bit LVDS interface up to 1920x1200@60Hz shared with eDP up to 3840x2160@60Hz (option)					
Digital Display Interface	2x DisplayPort 1.4 4096x2160@60Hz					
congatec Board controller	Multistage watchdog non-volatile user data storage manufacturing and board Information board statistics fast mode and multi-master I ² C bus power loss control					
Embedded BIOS Feature	AMI Aptio® UEFI firmware 32 MByte serial SPI with congatec Embedded BIOS features OEM Logo OEM CMOS Defaults LCD Control Display Auto Detection Backlight Control Flash Update					
Power Management	ACPI 5.0 compliant Smart Battery Management					
Operating Systems	Microsoft® Windows 11 upon request Microsoft® Windows 11 IoT Enterprise upon request Microsoft® Windows 10 Microsoft® Windows 10 IoT Enterprise Linux Yocto					
Hypervisor	RTS Real-Time Hypervisor					
Power Consumption	Typ. Application: see manual for full details					
Temperature Range	Commercial variants	Operation: 0° to +60°C		Storage: -20° to +80°C		
	Industrial variants	Operation: -40° to +85°C		Storage: -40° to +85°C		
Humidity	Operation: 10% to 85% r. H. non cond. Storage: 5% to 85% r. H. non cond.					
Size	95 x 95 mm (approx. 3.74" x 3.74")					



conga-TCA7 | Block Diagram



Note: Assembly options on request only

conga-TCA7 | Order Information

Article	PN	Description
conga-TCA7/x6425E	049300	COM Express Compact module with Intel Atom® x6425E quad core processor with 2.0GHz core frequency up to 3.0GHz, 1.5MB cache and up to 32GB 3200MT/s DDR4 SODIMM memory support
conga-TCA7/x6413E	049301	COM Express Compact module with Intel Atom® x6413E quad core processor with 1.5GHz core frequency up to 3.0GHz, 1.5MB cache and up to 32GB 3200MT/s DDR4 SODIMM memory support
conga-TCA7/x6211E	049302	COM Express Compact module with Intel Atom® x6211E dual core processor with 1.3GHz core frequency up to 3.0GHz, 1.5MB cache and up to 32GB 3200MT/s DDR4 SODIMM memory support
conga-TCA7/i-x6425RE	049310	COM Express Compact module with Intel Atom® x6425RE quad core processor with 1.9GHz core frequency, 1.5MB cache and up to 32GB 3200MT/s DDR4 SODIMM memory support. Industrial grade temperature range from -40°C to 85°C.
conga-TCA7/i-x6414RE	049311	COM Express Compact module with Intel Atom® x6414RE quad core processor with 1.5GHz core frequency, 1.5MB cache and up to 32GB 3200MT/s DDR4 SODIMM memory support. Industrial grade temperature range from -40°C to 85°C.
conga-TCA7/i-x6212RE	049312	COM Express Compact module with Intel Atom® x6212RE dual core processor with 1.2GHz core frequency, 1.5MB cache and up to 32GB 3200MT/s DDR4 SODIMM memory support. Industrial grade temperature range from -40°C to 85°C.
conga-TCA7/J6426	049320	COM Express Compact module with Intel® Pentium® J6426 quad core processor with 2.0GHz core frequency up to 3.0GHz, 1.5MB cache and up to 32GB 3200MT/s DDR4 SODIMM memory support.
conga-TCA7/J6413	049321	COM Express Compact module with Intel® Celeron® J6413 quad core processor with 1.8GHz core frequency up to 3.0GHz, 1.5MB cache and up to 32GB 3200MT/s DDR4 SODIMM memory support
conga-TCA7/i-HSP-B	049350	Standard heatspreader for COM Express Compact module conga-TCA7 with lidded Intel Atom x6000E processors. All standoffs are with 2.7mm bore hole.
conga-TCA7/i-HSP-T	049351	Standard heatspreader for COM Express Compact module conga-TCA7 with lidded Intel Atom x6000E processors. All standoffs are M2.5mm thread.
conga-TCA7/i-CSP-B	049352	Passive cooling solution for COM Express Compact module conga-TCA7 with lidded Intel Atom x6000E processors. All standoffs are with 2.7mm bore hole.
conga-TCA7/i-CSP-T	049353	Passive cooling solution for COM Express Compact module conga-TCA7 with lidded Intel Atom x6000E processors. All standoffs are M2.5mm thread.
conga-TCA7/HSP-B	049354	Standard heatspreader for COM Express Compact module conga-TCA7 with open silicon Intel Pentium/Celeron J and N processors. All standoffs are with 2.7mm bore hole.
conga-TCA7/HSP-T	049355	Standard heatspreader for COM Express Compact module conga-TCA7 with open silicon Intel Pentium/Celeron J and N processors. All standoffs are M2.5mm thread.
conga-TCA7/CSP-B	049356	Passive cooling solution for COM Express Compact module conga-TCA7 with open silicon Intel Pentium/Celeron J and N processors. All standoffs are with 2.7mm bore hole.
conga-TCA7/CSP-T	049357	Passive cooling solution for COM Express Compact module conga-TCA7 with open silicon Intel Pentium/Celeron J and N processors. All standoffs are M2.5mm thread.

conga-TCA7 | Order Information

Article	PN	Description
DDR4-SODIMM-3200 (4GB)	068793	DDR4 SODIMM memory module with up to 3200 MT/s and 4GB RAM, commercial temp 0°C to +60°C
DDR4-SODIMM-3200 (8GB)	068794	DDR4 SODIMM memory module with up to 3200 MT/s and 8GB RAM, commercial temp 0°C to +60°C
DDR4-SODIMM-3200 (16GB)	068798	DDR4 SODIMM memory module with up to 3200 MT/s and 16GB RAM, commercial temp 0°C to +60°C
DDR4-SODIMM-3200 (4GB) / i-temp	068825	DDR4 SODIMM memory module with up to 3200 MT/s and 4GB RAM, industrial temp -40°C to +85°C
DDR4-SODIMM-3200 (8GB) / i-temp	068826	DDR4 SODIMM memory module with up to 3200 MT/s and 8GB RAM, industrial temp -40°C to +85°C
DDR4-SODIMM-3200 (16GB) / i-temp	068827	DDR4 SODIMM memory module with up to 3200 MT/s and 16GB RAM, industrial temp -40°C to +85°C
DDR4-SODIMM-3200 (32GB) / i-temp	068837	DDR4 SODIMM memory module with up to 3200 MT/s and 32GB RAM, industrial temp -40°C to +85°C