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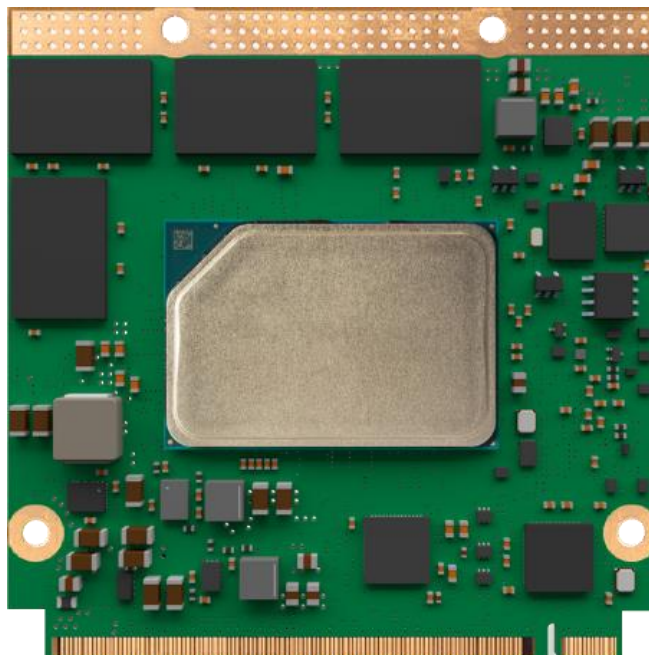


Datasheet

congatec

conga-QA7

**Qseven™ Computer-on-Module with Intel®™ Elkhart Lake Atom™ x6000E, Pentium® and Celeron®
Processors**



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EMBEDDED QSEVEN

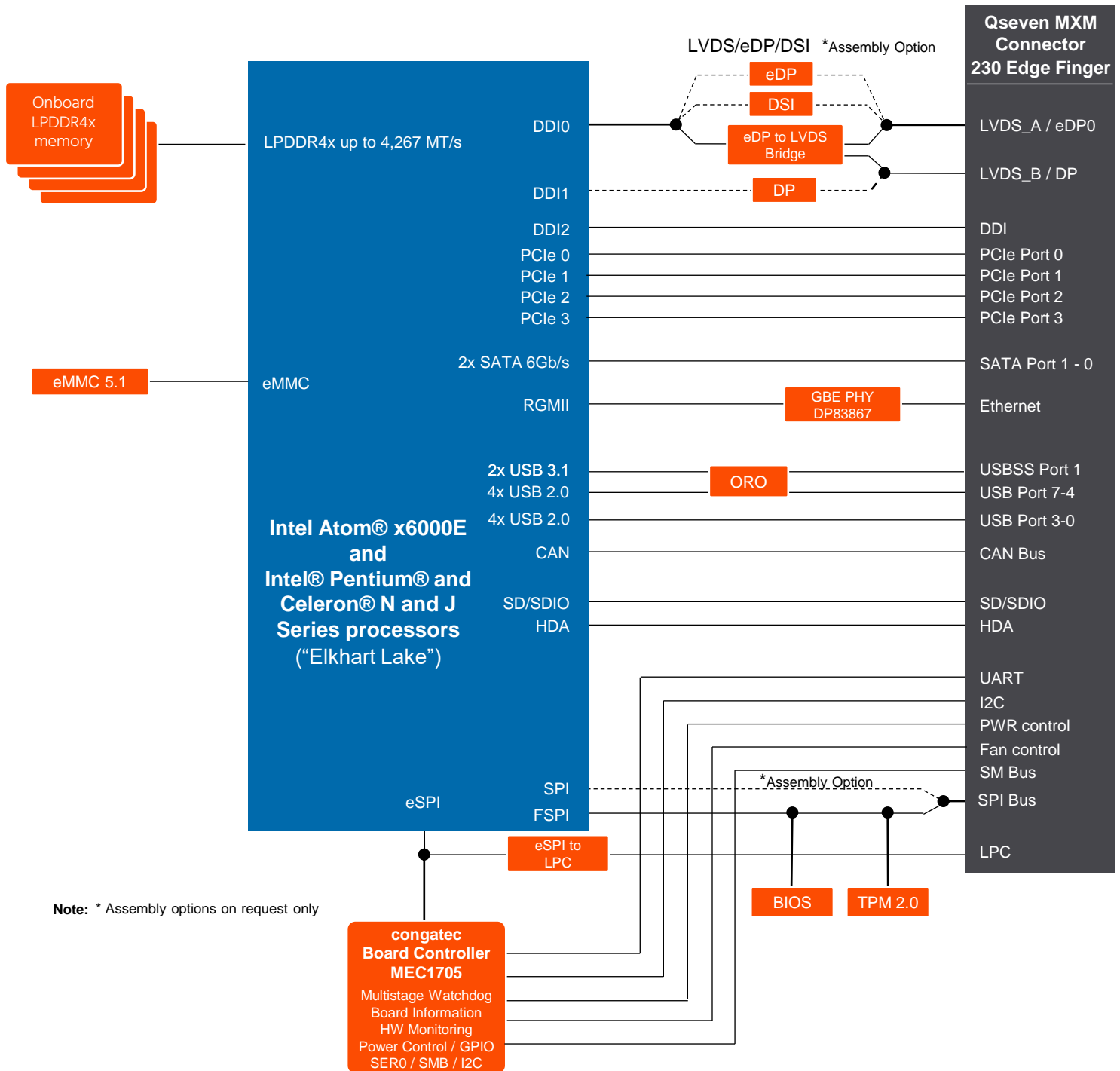
conga-QA7



- Qseven module based on Intel Atom® x6000E Series and Intel® Pentium® and Celeron® J and N Series processors
- High performance Intel® UHD Graphics (Gen11 LP)
- Options for Industrial Temperature Range -40°C to 85°C
- Options for Time Sensitive Networking and Time Coordinated Computing for improved Realtime Capability
- Up to 4.267 MT/s Memory Support

Form Factor	Qseven Form Factor Qseven Spec. Rev. 2.1 compliant 70 x 70 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	max. 16GB onboard LPDDR4x up to 4.267 MT/s					
Ethernet	Intel® GbE with TSN support and Out-Of-Band Management real-time trigger					
I/O Interfaces	up to 2x USB 3.1 Gen2 up to 1x USB3.1 Dual Role up to 8x USB 2.0 2x SATA III SDIO 4x PCIe Gen3 I ² C Bus SMBus SPI (option) UART CAN LPC					
Mass Storage	eMMC 5.1 onboard flash up to 64 Gbyte (optional up to 256 Gbyte)					
Audio	Intel® HD Audio					
Graphics	Intel® UHD Graphics (Gen11 LP)					
LVDS	18/24-bit Single/Dual Channel LVDS Interface, resolutions up to 1920X1200@60Hz, VESA standard or JEIDA data mapping, Automatic Panel Detection via EDID/EPI shared with eDP 1.3 supporting up to 4096x2160@60Hz (option) or MIPI-DSI 1.2 supporting up to 3200x2000@60Hz					
Digital Display Interface	Dual Mode 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 10 Microsoft® Windows 10 IoT Enterprise Linux (Yocto Project) Android RTS Hypervisor					
Power Consumption	Typ. Application: see manual for full details					
Temperature Range	Commercial: Operating Temperature: 0 to +60°C		Storage Temperature: -20 to +80°C			
	Industrial: Operating Temperature: -40 to +85°C		Storage Temperature: -40 to +85°C			
Humidity	Operating Humidity: 10 to 90% r. H. non cond. Storage Humidity: 5 to 95% r. H. non cond.					
Size	70 x 70 mm (approx. 2.75" x 2.75")					

conga-QA7 | Block Diagram



conga-QA7 | Order Information

Article	PN	Description
conga-QA7/x6425E-16G eMMC64	015800	Qseven module with Intel Atom® x6425E quad core processor with 2.0GHz core frequency up to 3.0GHz, 1.5MB cache, 16GB 3200MT/s LPDDR4x onboard memory and 64GB eMMC 5.1 onboard flash.
conga-QA7/x6413E-8G eMMC32	015801	Qseven module with Intel Atom® x6413E quad core processor with 1.5GHz core frequency up to 3.0GHz, 1.5MB cache, 8GB 3.200MT/s LPDDR4x onboard memory and 32GB eMMC 5.1 onboard flash.
conga-QA7/x6211E-4G eMMC32	015802	Qseven module with Intel Atom® x6211E dual core processor with 1.3GHz core frequency up to 3.0GHz, 1.5MB cache, 4GB 3.200MT/s LPDDR4x onboard memory and 32GB eMMC 5.1 onboard flash.
conga-QA7/i-x6425RE-8G eMMC32	015810	Qseven module with Intel Atom® x6425RE quad core processor with 1.9GHz core frequency, 1.5MB cache, 8GB 4267MT/s LPDDR4x onboard memory and 32GB eMMC 5.1 onboard flash. Industrial grade temperature range from -40°C to 85°C.
conga-QA7/i-x6414RE-4G eMMC32	015811	Qseven module with Intel Atom® x6414RE quad core processor with 1.5GHz core frequency, 1.5MB cache, 4GB 3.200MT/s LPDDR4x onboard memory and 32GB eMMC 5.1 onboard flash. Industrial grade temperature range from -40°C to 85°C.
conga-QA7/i-x6212RE-4G eMMC32	015812	Qseven module with Intel Atom® x6212RE dual core processor with 1.2GHz core frequency, 1.5MB cache, 4GB 3.200MT/s LPDDR4x onboard memory and 32GB eMMC 5.1 onboard flash. Industrial grade temperature range from -40°C to 85°C.
conga-QA7/J6426-16G eMMC64	015820	Qseven module with Intel® Pentium® J6426 quad core processor with 2.0GHz core frequency up to 3.0GHz, 1.5MB cache, 16GB 3200MT/s LPDDR4x onboard memory and 64GB eMMC 5.1 onboard flash.
conga-QA7/J6413-8G eMMC32	015821	Qseven module with Intel® Celeron® J6413 quad core processor with 1.8GHz core frequency up to 3.0GHz, 1.5MB cache, 8GB 3.733MT/s LPDDR4x onboard memory and 32GB eMMC 5.1 onboard flash.
conga-QA7/i-CSP-B	015850	Passive cooling solution for Qseven module conga-QA7 with lidded Intel Atom® x6000E processors. All standoff are with 2.7mm bore hole.
conga-QA7/i-HSP-B	015851	Standard heatspreader for Qseven module conga-QA7 with lidded Intel Atom® x6000E processors. All standoff are with 2.7mm bore hole.
conga-QA7/HSP-B	015852	Standard heatspreader for Qseven module conga-QA7 with open-die Intel® Pentium®/Celeron® J and N processors. All standoff are with 2.7mm bore hole.
conga-QA7/CSP-B	015853	Passive cooling solution for Qseven module conga-QA7 with open-die Intel® Pentium®/Celeron® J and N processors. All standoff are with 2.7mm bore hole.
conga-QA7/i-CSP-T	015854	Passive cooling solution for Qseven module conga-QA7 with lidded Intel Atom® x6000E processors. All standoff are M2.5x0.45p threaded.
conga-QA7/i-HSP-T	015855	Standard heatspreader for Qseven module conga-QA7 with lidded Intel Atom® x6000E processors. All standoff are M2.5x0.45p threaded.
conga-QA7/HSP-T	015856	Standard heatspreader for Qseven module conga-QA7 with open-die Intel Pentium/Celeron J and N processors. All standoff are M2.5x0.45p threaded.
conga-QA7/CSP-T	015857	Passive cooling solution for Qseven module conga-QA7 with open-die Intel Pentium/Celeron J and N processors. All standoff are M2.5x0.45p threaded.

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