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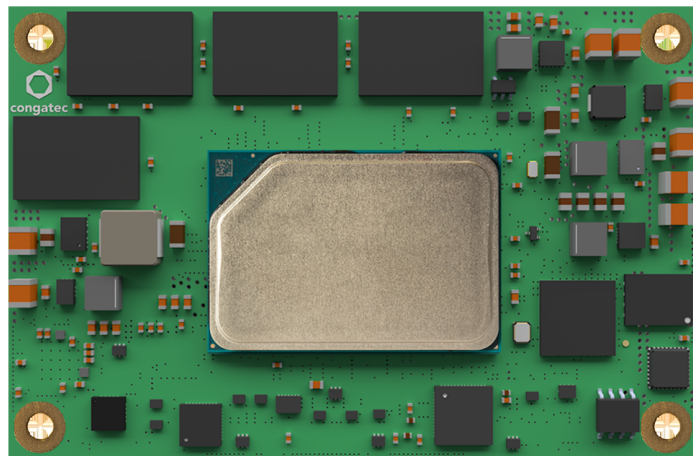


Datasheet

Congatec

conga-MA7

COM Express Mini Module with Intel® Elkhart Lake Processor



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EMBEDDED COM EXPRESS® MINI

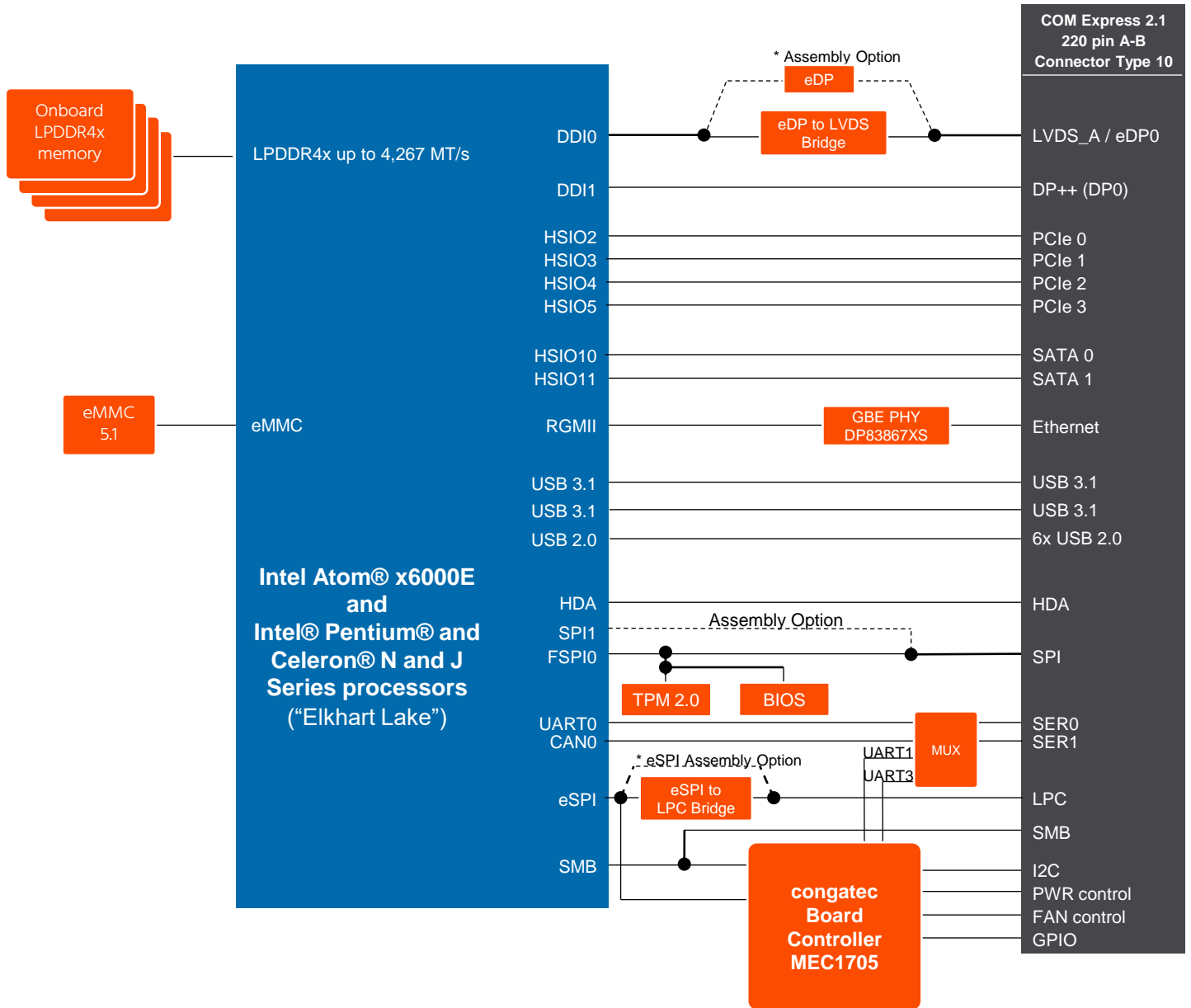
conga-MA7



- COM Express® Type 10 Mini based on Intel Atom® x6000E Series and Intel® Pentium® and Celeron® J and N Series
- High performance Intel® UHD Graphics (Gen11)
- 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	COM Express® Mini Type 10 84 x 55 mm					
CPU	Processor	TDP	Cores/Threads	Base Frequ./max. 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 real-time trigger					
I/O Interfaces	4x PCIe Gen3 2x USB 3.1 Gen2 6x USB 2.0 2x SATA III 2x UART CAN GPIO I²C Bus SMBus SPI LPC 1x SDIO (option)					
Mass Storage	eMMC 5.1 onboard flash up to 64GB (option for 256 GB)					
Audio	Intel® HD Audio					
Graphics	Intel® UHD Graphics (Gen11)					
LVDS	Single channel LVDS interface up to 1280x1024@60Hz shared with eDP up to 4096x2160@60Hz (option)					
Digital Display Interface	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 I²C 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	84 x 55 mm (approx. 3.31" x 2.17")					

conga-MA7 | Block Diagram



Note: * Assembly options on request only

conga-MA7 | Order Information

Article	PN	Description
conga-MA7/x6425E-16G eMMC64	049400	COM Express Mini Type10 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-MA7/x6413E-8G eMMC32	049401	COM Express Mini Type10 module with Intel® Atom® x6413E quad core processor with 1.5GHz core frequency up to 3.0GHz, 1.5MB cache, 8GB 3200MT/s LPDDR4x onboard memory and 32GB eMMC 5.1 onboard flash
conga-MA7/x6211E-4G eMMC32	049402	COM Express Mini Type10 module with Intel® Atom® x6211E dual core processor with 1.3GHz core frequency up to 3.0GHz, 1.5MB cache, 4GB 3200MT/s LPDDR4x onboard memory and 32GB eMMC 5.1 onboard flash
conga-MA7/i-x6425RE-8G eMMC32	049410	COM Express Mini Type10 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-MA7/i-x6414RE-4G eMMC32	049411	COM Express Mini Type10 module with Intel® Atom® x6414RE quad core processor with 1.5GHz core frequency, 1.5MB cache, 4GB 3200MT/s LPDDR4x onboard memory and 32GB eMMC 5.1 onboard flash. Industrial grade temperature range from -40°C to 85°C
conga-MA7/i-x6212RE-4G eMMC32	049412	COM Express Mini Type10 module with Intel® Atom® x6212RE dual core processor with 1.2GHz core frequency, 1.5MB cache, 4GB 3200MT/s LPDDR4x onboard memory and 32GB eMMC 5.1 onboard flash. Industrial grade temperature range from -40°C to 85°C
conga-MA7/J6426-16G eMMC64	049420	COM Express Mini Type10 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-MA7/J6413-8G eMMC32	049421	COM Express Mini Type10 module with Intel® Celeron® J6413 quad core processor with 1.8GHz core frequency up to 3.0GHz, 1.5MB cache, 8GB 3733MT/s LPDDR4x onboard memory and 32GB eMMC 5.1 onboard flash
conga-MA7/i-CSP-B	049450	Passive cooling solution for COM Express Mini Type10 module conga-MA7 with lidded Intel Atom x6000E processors. All standoffs are with 2.7mm bore hole.
conga-MA7/i-CSP-T	049451	Passive cooling solution for COM Express Mini Type10 module conga-MA7 with lidded Intel Atom x6000E processors. All standoffs are M2.5mm threaded.
conga-MA7/CSP-B	049452	Passive cooling solution for COM Express Mini Type10 module conga-MA7 with open-die Intel Pentium/Celeron N and J processors. All standoffs are with 2.7mm bore hole.
conga-MA7/CSP-T	049453	Passive cooling solution for COM Express Mini Type10 module conga-MA7 with open-die Intel Pentium/Celeron N and J processors. All standoffs are M2.5mm threaded.
conga-MA7/i-HSP-B	049454	Standard heatspreader for COM Express Mini Type10 module conga-MA7 with lidded Intel Atom x6000E processors. All standoffs are with 2.7mm bore hole.
conga-MA7/i-HSP-T	049455	Standard heatspreader for COM Express Mini Type10 module conga-MA7 with lidded Intel Atom x6000E processors. All standoffs are M2.5mm threaded.
conga-MA7/HSP-B	049456	Standard heatspreader for COM Express Mini Type10 module conga-MA7 with open-die Intel Pentium/Celeron N and J processors. All standoffs are with 2.7mm bore hole.
conga-MA7/HSP-T	049457	Standard heatspreader for COM Express Mini Type10 module conga-MA7 with open-die Intel Pentium/Celeron N and J processors. All standoffs are M2.5mm threaded.

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