

# 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					
<b>CPU</b>	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
<b>DRAM</b>	max. 16GB onboard LPDDR4x   up to 4.267 MT/s					
<b>Ethernet</b>	Intel® GbE with TSN support   real-time trigger					
<b>I/O Interfaces</b>	4x PCIe Gen3   2x USB 3.1 Gen2   6x USB 2.0   2x SATA III   2x UART   CAN   GPIO   I <sup>2</sup> C Bus   SMBus   SPI   LPC   1x SDIO (option)					
<b>Mass Storage</b>	eMMC 5.1 onboard flash up to 64GB (option for 256 GB)					
<b>Audio</b>	Intel® HD Audio					
<b>Graphics</b>	Intel® UHD Graphics (Gen11)					
<b>LVDS</b>	Single channel LVDS interface up to 1280x1024@60Hz   shared with eDP up to 4096x2160@60Hz (option)					
<b>Digital Display Interface</b>	DisplayPort 1.4 4096x2160@60Hz					
<b>congatec Board controller</b>	Multistage watchdog   non-volatile user data storage   manufacturing and board Information   board statistics   fast mode and multi-master I <sup>2</sup> C bus   power loss control					
<b>Embedded BIOS Feature</b>	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					
<b>Power Management</b>	ACPI 5.0 compliant   Smart Battery Management					
<b>Operating Systems</b>	Microsoft® Windows 10   Microsoft® Windows 10 IoT Enterprise   Linux (Yocto Project)   Android   RTS Hypervisor					
<b>Power Consumption</b>	Typ. Application: see manual for full details					
<b>Temperature Range</b>	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			
<b>Humidity</b>	Operating Humidity: 10 to 90% r. H. non cond. Storage Humidity: 5 to 95% r. H. non cond.					
<b>Size</b>	84 x 55 mm (approx. 3.31" x 2.17")					

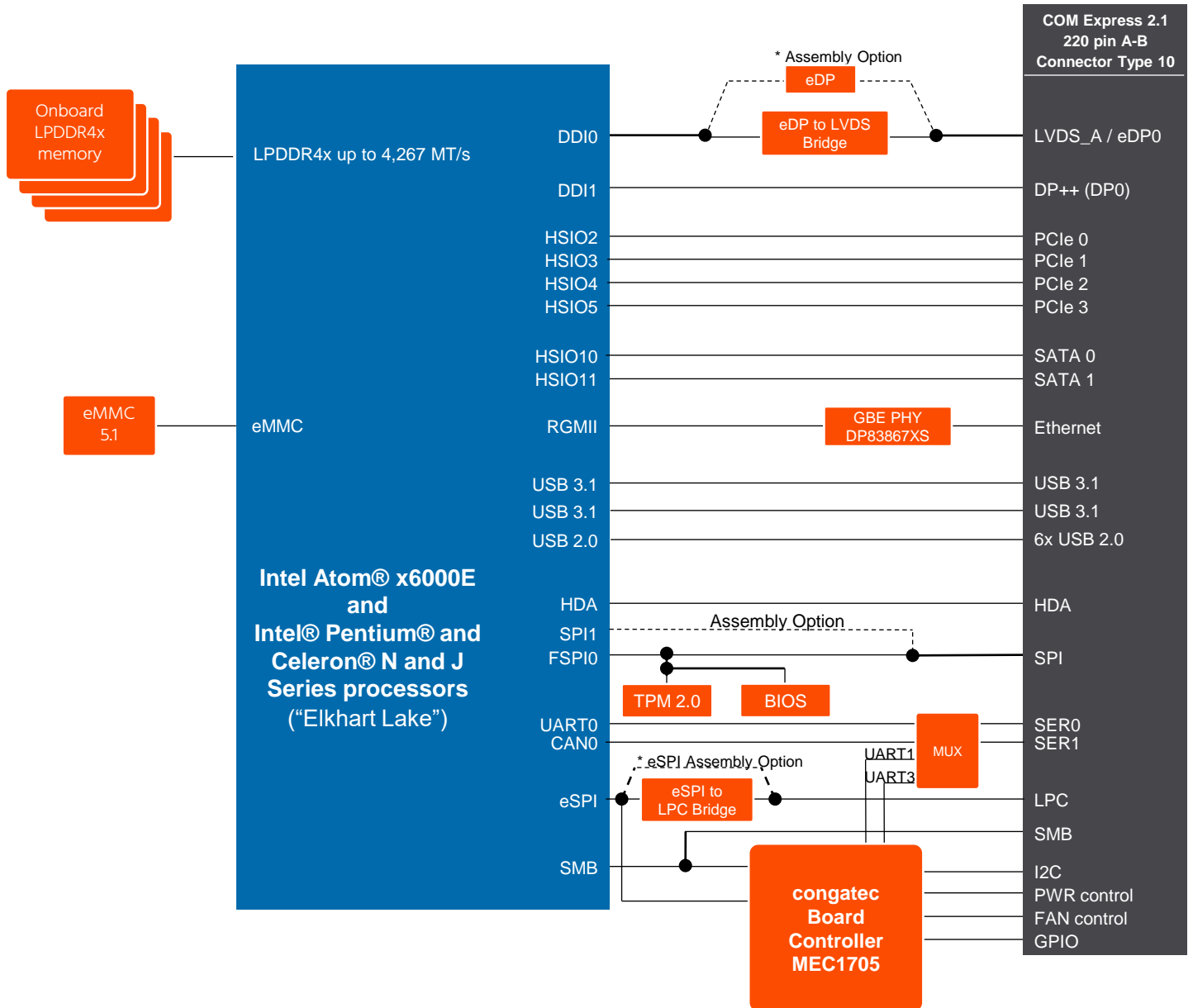


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# conga-MA7 | Block Diagram



**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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