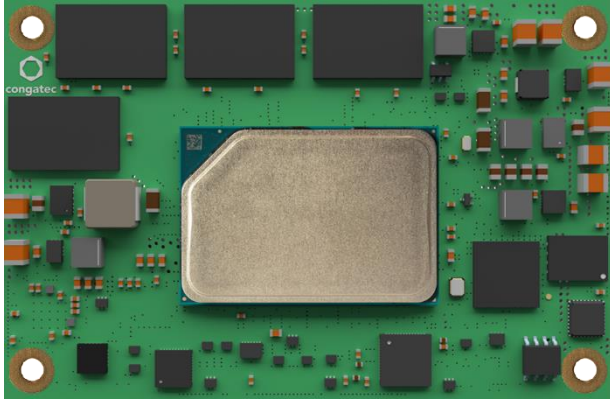


EMBEDDED COM EXPRESS® MINI

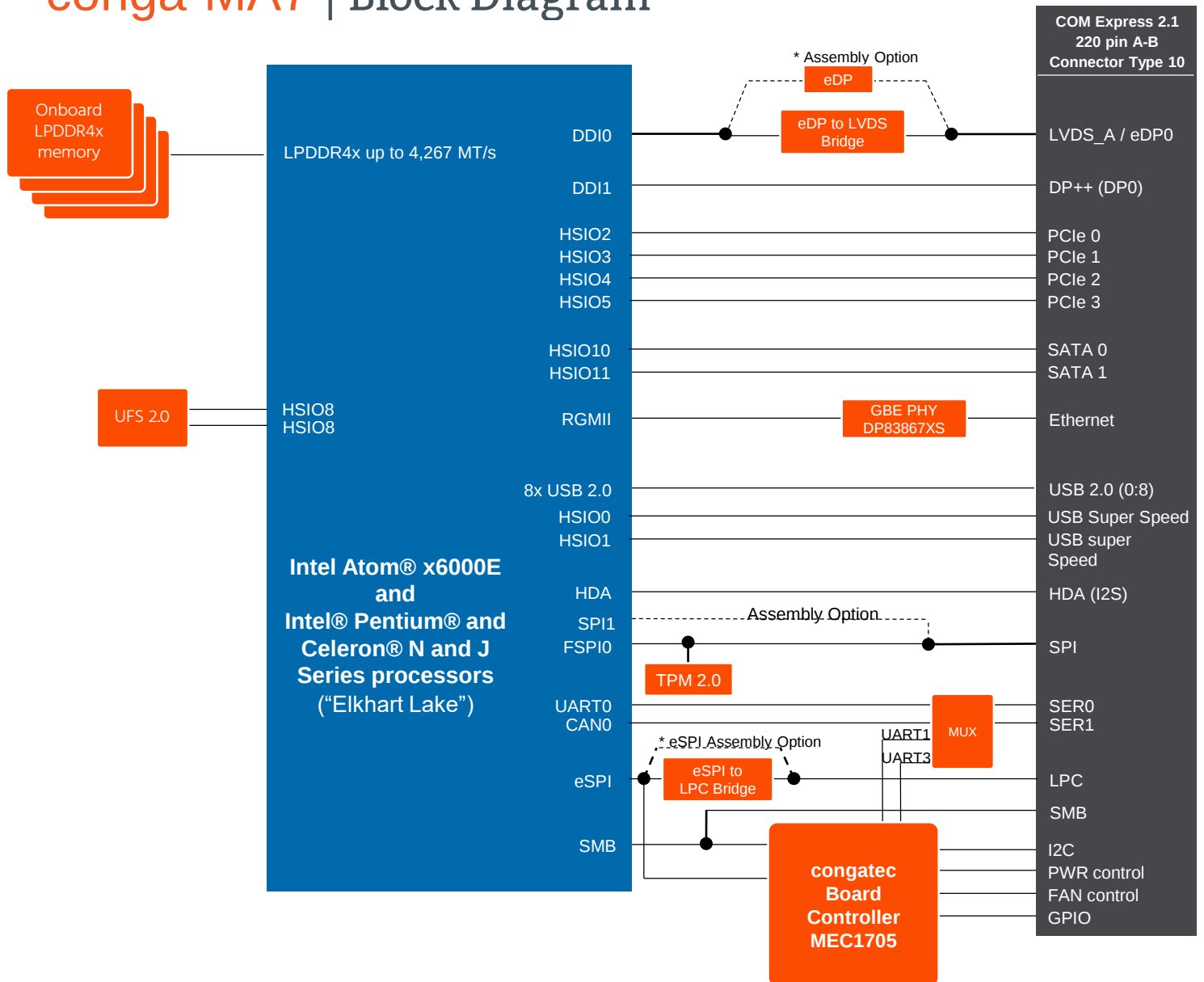
conga-MA7



- COM Express® Type 10 Mini based on Intel® Atom® x6000E Series and Intel® Pentium® and Celeron® J Series processors (code-named Elkhart Lake)
- High performance Intel® UHD Graphics (Gen11)
- Options for Industrial Temperature Range -40°C to 85°C
- Time Sensitive Networking and Time Coordinated Computing for improved Realtime Capability
- Up to 4.267 MT/s onboard Memory Support with Inband ECC
- UFS 2.0 for higher bandwidth and data processing

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
	J6425	10W	4 / 4	1.8 GHz / 3.0 GHz	32 EU	PC Client
	x6211E	6W	2 / 2	1.2 GHz / 3.0 GHz	16 EU	Embedded
	x6413E	9W	4 / 4	1.5 GHz / 3.0 GHz	16 EU	Embedded
	x6425E	12W	4 / 4	1.8 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	4x PCIe Gen3 2x USB 3.1 Gen2 up to 8x USB 2.0 2x SATA III 1x SDIO (option) 2x UART CAN GPIO I²C Bus SMBus SPI LPC					
Mass Storage	UFS 2.0 onboard flash up to 64 Gbyte					
Sound	HD Audio Intel® LPE Audio via I2S					
Graphics	Intel® UHD Graphics (Gen11)					
LVDS	Single channel LVDS interface up to 1920x1200@60Hz shared with eDP up to 3840x2160@60Hz (option)					
Digital Display Interface	DisplayPort 1.4 4096x2160@60Hz or HDMI 2.0 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 Microsoft® Windows IoT 10 Core 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



conga-MA7 | Order Information

Article	PN	Description
conga-MA7/x6425E-16G UFS64	049400	COM Express Mini Type10 module with Intel® Atom® x6425E quad core processor with 1.8GHz core frequency up to 3.0GHz, 1.5MB cache, 16GB 3200MT/s LPDDR4x onboard memory and 64GB UFS 2.0 onboard flash
conga-MA7/x6413E-8G UFS32	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 4267MT/s LPDDR4x onboard memory and 32GB UFS 2.0 onboard flash
conga-MA7/x6211E-4G UFS32	049402	COM Express Mini Type10 module with Intel® Atom® x6211E dual core processor with 1.2GHz core frequency up to 3.0GHz, 1.5MB cache, 4GB 4267MT/s LPDDR4x onboard memory and 32GB UFS 2.0 onboard flash
conga-MA7/i-x6425RE-8G UFS32	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 UFS 2.0 onboard flash. Industrial grade temperature range from -40°C to 85°C
conga-MA7/i-x6414RE-4G UFS32	049411	COM Express Mini Type10 module with Intel® Atom® x6414RE quad core processor with 1.5GHz core frequency, 1.5MB cache, 4GB 4267MT/s LPDDR4x onboard memory and 32GB UFS 2.0 onboard flash. Industrial grade temperature range from -40°C to 85°C
conga-MA7/i-x6212RE-4G UFS32	049412	COM Express Mini Type10 module with Intel® Atom® x6212RE dual core processor with 1.2GHz core frequency, 1.5MB cache, 4GB 4267MT/s LPDDR4x onboard memory and 32GB UFS 2.0 onboard flash. Industrial grade temperature range from -40°C to 85°C
conga-MA7/J6425-16G UFS64	049420	COM Express Mini Type10 module with Intel® Pentium® J6425 quad core processor with 1.8GHz core frequency up to 3.0GHz, 1.5MB cache, 16GB 3200MT/s LPDDR4x onboard memory and 64GB UFS 2.0 onboard flash
conga-MA7/J6413-8G UFS32	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 4267 MT/s LPDDR4x onboard memory and 32GB UFS 2.0 onboard flash