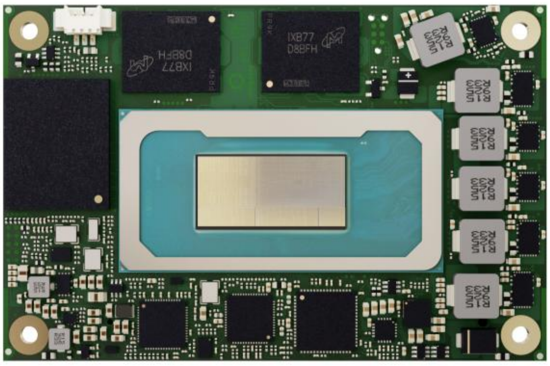
Intel® Core™ Ultra Processors Series 3

conga-MC1000



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- Intel® performance hybrid architecture with up to 16 cores
- Intel® Arc™ Graphics with up to 12 X^e cores
- Integrated NPU with up to 50 TOPS and up to 180 TOPS total platform performance
- Up to 32GB LPDDR5x soldered down memory for maximum memory bandwidth

COM Express®

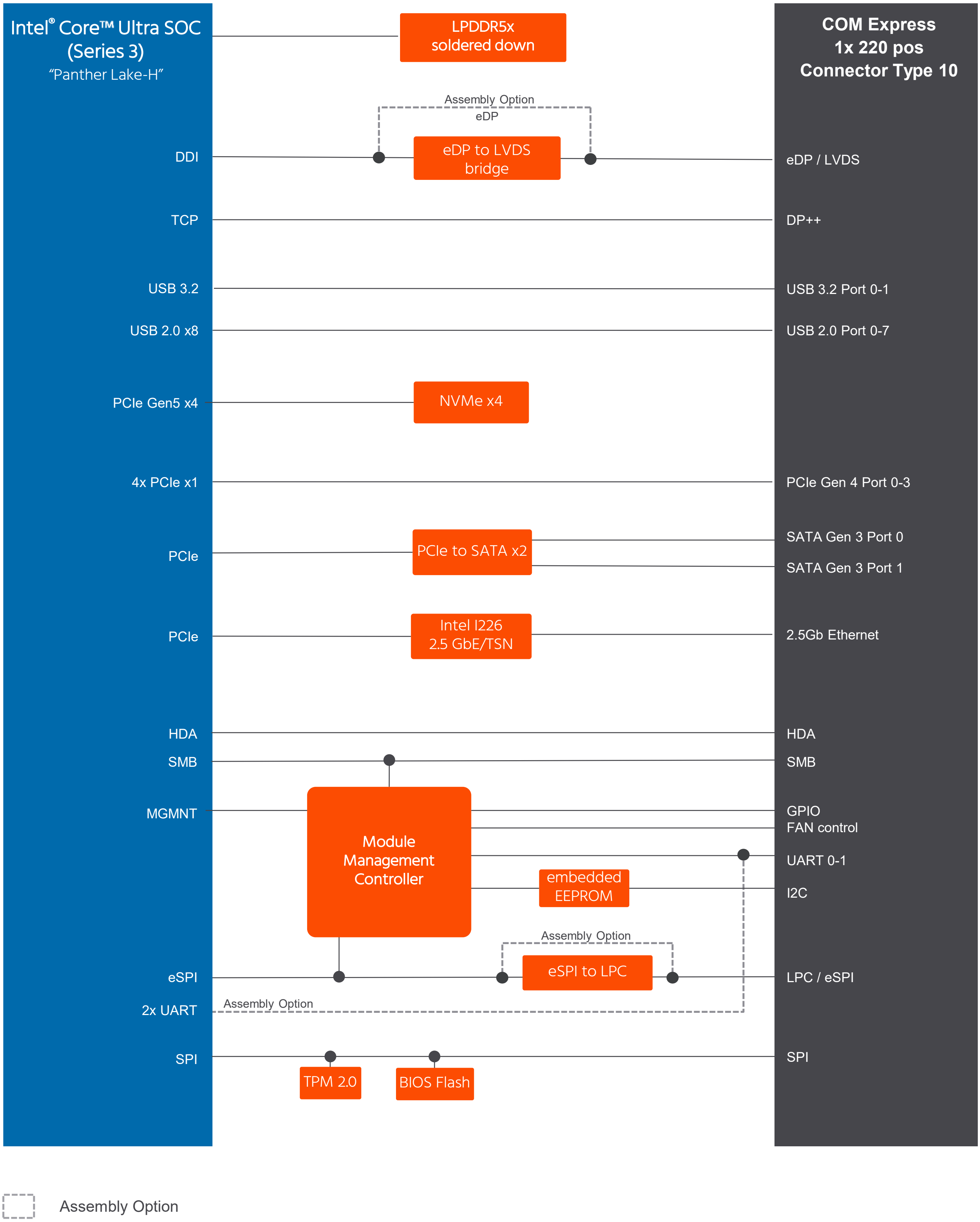
Form factor	COM Express® Mini | Type 10 connector pinout	
CPUs	Intel® Core™ Ultra Processors Series 3 (Panther Lake-H)	
DRAM	Up to 32GB LPDDR5x soldered down with up 8533 MT/s | In-band ECC (only on selected product variants)	
Mass Storage	NVMe up to 1 TB capacity SSD	
Graphics	Intel® Arc™ Graphics with up to 12 X^e cores or Intel Graphics with up to 4 X^e cores | Intel® X^e Matrix Extensions	
AI Acceleration	Integrated NPU accelerator up to 50 TOPS | Up to 180 TOPS platform total	
Display	DDI for DP++ | single-channel LVDS or optional eDP | 2x independent displays up to 4k	
Ethernet	2.5 GbE via Intel® i226 Ethernet controller series | supporting TSN (only on selected product variants)	
I/O Interfaces	Up to 4x PCIe Gen4 | 2x USB 3.2 Gen2 | 8x USB 2.0 | 2x SATA | 2x UART (RX/TX only) | GPIOs | GP SPI | LPC | SM Bus | I2C	
Audio	High Definition Audio	
Module Management Controller	Module Management Controller | Multistage Watchdog | Board Information | Board Statistics | I^{2}C bus (fast mode) | Power Loss Control | Hardware Health Monitoring | POST Code Redirection	
Embedded BIOS Feature	AMI Aptio® UEFI firmware | OEM Logo | OEM CMOS default settings | LCD Control | Display Auto Detection | Backlight Control	
Security	Trusted Platform Module (TPM 2.0)	
Power Management	ACPI 6.0 | wide range power supply 8.5V – 20V | single supply power	
Operating Systems	Microsoft® Windows 11 IoT Enterprise | Microsoft® Windows 11 | Linux	
Hypervisor	RTS real-time Hypervisor	
Temperature	Commercial Temp.: Operating 0°C to 60°C	Storage -20°C to 80°C
Humidity	Operating 10% to 85% r. H. non cond.	Storage 5% to 85% r. H. non cond.
Size	55 x 84 mm	

congatec

intel partner Titanium

intel CORE ULTRA 7
intel CORE ULTRA 9
intel CORE ULTRA 5

conga-MC1000 | Block Diagram



conga-MC1000 | Modules Order Information

Article	PN	Description
conga-MC1000/ultraX9-388H-32G NVMe128	049900	COM Express Mini module based on Intel® Core™ Ultra X9 388H processor with 4 P-cores, 8 E-cores and 4 LPE-cores | Integrated NPU | 18MB Intel® Smart Cache LLC | Intel® Arc™ B390 Graphics with 12X^e cores | LPDDR5x memory module with up to 8533 MT/s and up to 32 GB system memory capacity | commercial grade temperature range from 0°C to 60°C.
conga-MC1000/ultra9-386H-32G NVMe128	049901	COM Express Mini module based on Intel® Core™ Ultra 9 386H processor with 4 P-cores, 8 E-cores and 4 LPE-cores | Integrated NPU | 18MB Intel® Smart Cache LLC | Intel Graphics with 4X^e cores | LPDDR5x memory module with up to 8533 MT/s and up to 32 GB system memory capacity | commercial grade temperature range from 0°C to 60°C.
conga-MC1000/ultra7-356H-32G NVMe128	049903	COM Express Mini module based on Intel® Core™ Ultra 7 356H processor with 4 P-cores, 8 E-cores and 4 LPE-cores | Integrated NPU | 18MB Intel® Smart Cache LLC | Intel Graphics with 4X^e cores | LPDDR5x memory module with up to 8533 MT/s and up to 32 GB system memory capacity | commercial grade temperature range from 0°C to 60°C.
conga-MC1000/ultra5-325-32G NVMe128	049906	COM Express Mini module based on Intel® Core™ Ultra 5 325 processor with 4 P-cores and 4 LPE-cores | Integrated NPU | 12MB Intel® Smart Cache LLC | Intel Graphics with 4X^e cores | LPDDR5x memory module with up to 8533 MT/s and up to 32 GB system memory capacity | commercial grade temperature range from 0°C to 60°C.

conga-MC1000 | Accessories Order Information

Article	PN	Description
conga-MC1000/HSP-B	049950	Standard heatspreader for high performance COM Express module conga-MC1000. All standoffs are with 2.7mm bore hole.
conga-MC1000/HSP-T	049951	Standard heatspreader for high performance COM Express module conga-MC1000. All standoffs are M2.5mm threaded.
conga-TEVAL/COMe 3.1	065820	Evaluation carrier board for COM Express Type 6 revision 3.1 modules.