

COM+HPC®

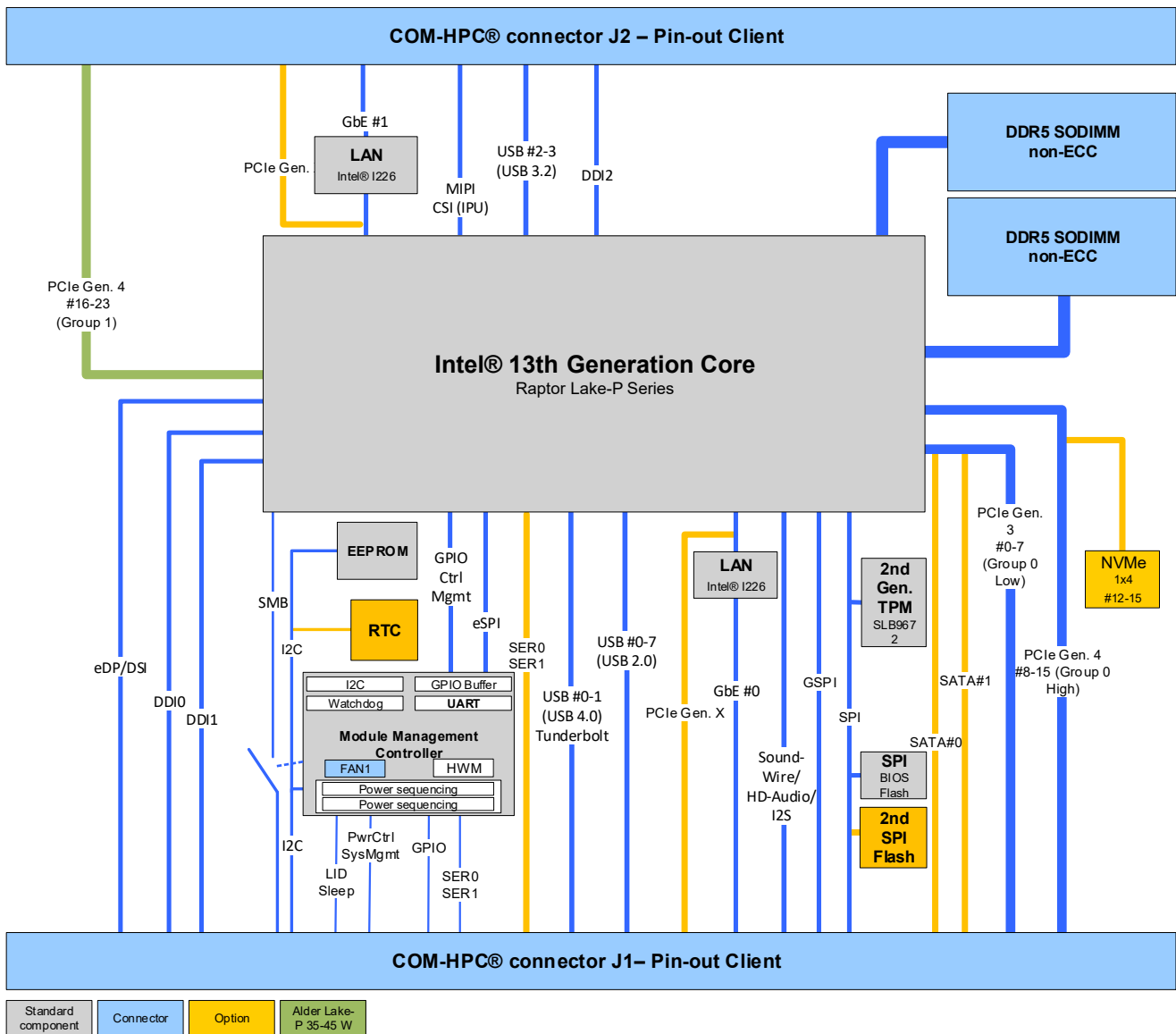
COM HPC/Client module size A with 13th Generation Intel® Core™ Processors

- ▶ Up to 64 GByte DDR5 memory
- ▶ Up to 2.5Gb Ethernet with TSN support
- ▶ Optional NVMe SSD onboard
- ▶ Industrial grade

COMPLIANCE	COM HPC® Client 2x 400 pin connector
DIMENSIONS (H x W)	95 x 120 mm
CPU	Intel® 13th Generation Core™ family For details see table (CPU variants) given below
CHIPSET	Intel® 600/700 Series Chipset Family - On-Package Platform Controller Hub
MAIN MEMORY	2x DDR5 SODIMM dual channel up to 64 GByte non ECC
GRAPHICS CONTROLLER	Intel® Iris XeGraphics architecture with up to 96 EUs, 4 Independent Displays (up to 8K)
ETHERNET CONTROLLER	Intel® i226
ETHERNET	Up to 2x 2.5 Gb Ethernet with TSN & WOL support (depending on SKU)
STORAGE	2x SATA 6Gb/s (optional)
FLASH ONBOARD	Up to 1 TByte NVMe SSD (on request)
PCI EXPRESS®	1x 8 PCIe Gen 5.0 (Raptor Lake H-Series, 35-45 W) 2x 4 PCIe Gen 4.0 -> 1x4 shared with onboard NVMe 8x PCIe Gen3.0 Optional 1x PCIe for BMC
DISPLAY	DDI1: DP++, DDI2: DP++, DDI3: DP++, eDP (DSI, BIOS option), MIPI DSI
USB	2x USB 4.0/ Thunderbolt™; 2x USB 3.2; 8x USB 2.0
SERIAL	2x serial interface (RX/TX only)
AUDIO	HD Audio
OTHER FEATURES	(G) SPI, SMB, Fast I ² C, Staged Watchdog, RTC
SPECIAL FEATURES	Trusted Platform Module TPM 2.0
FEATURES ON REQUEST	vPRO (AMT/TXT/AES Support), up to 3x PCIe x1 additional w/o Ethernet & SATA, NVMe SSD, Fail Save via 2nd SPI Flash
POWER MANAGEMENT	ACPI 6.0
POWER SUPPLY	Commercial Temperature: 8.0 V – 20 V Wide Range, Single Supply Power Industrial Temperature: 12 V ± 5%
BIOS	AMI UEFI
OPERATING SYSTEM	Windows®10, Linux, VxWorks
TEMPERATURE	Industrial temperature: -40 °C to +85 °C operating, -40 °C to +85 °C non-operating
HUMIDITY	93 % relative Humidity at 40 °C, non-condensing (according to IEC 60068-2-78)

CPU Variants

	13 TH GEN RAPTOR LAKE					
	H-SERIES INDUSTRIAL (45 W)			P-SERIES INDUSTRIAL (28 W)		
	i7-13800HRE	i5-13600HRE	i3-13300HRE	i7-1370PRE	i5-1350PRE	i3-1320PRE
CPU	i7-13800HRE	i5-13600HRE	i3-13300HRE	i7-1370PRE	i5-1350PRE	i3-1320PRE
CORES	14	12	8	14	12	8
NUMBER OF P-CORES	6	4	4	6	4	4
FREQUENCY BASE /TURBO (P-CORES)	2.5/5.0 GHz	2.7/4.8 GHz	2.1/4.6 GHz	1.9/4.8 GHz	1.8/4.6 GHz	1.7/4.5 GHz
NUMBER OF E-CORES	8	8	4	8	8	4
FREQUENCY BASE /TURBO (E-CORES)	1.8/4.0 GHz	1.9/3.6 GHz	1.5/3.4 GHz	1.4/3.7 GHz	1.3/3.4 GHz	1.2/3.3 GHz
TDP	45/ 35 W	45/ 35 W	45/ 35 W	28/ 20 W	28/ 20 W	28/ 20 W
CACHE	24 MByte	18 Mbyte	12 Mbyte	24 MByte	12 MByte	12 Mbyte
IBECC	yes	yes	yes	yes	yes	yes
TCC/TSN	yes	yes	yes	yes	yes	yes



Variants

PART NO.	NAME	CPU	OP. TEMPERATURE
HCA02-0000-80-7	COMh-caRP E2 i7-13800HRE	i7-13800HRE	- 40 °C - 85 °C
HCA02-0000-60-5	COMh-caRP E2 i5-13600HRE	i5-13600HRE	- 40 °C - 85 °C
HCA02-0000-30-3	COMh-caRP E2 i3-13300HRE	i3-13300HRE	- 40 °C - 85 °C
HCA02-0000-70-7	COMh-caRP E2 i7-1370PRE	i7-1370PRE	- 40 °C - 85 °C
HCA02-0000-50-5	COMh-caRP E2 i5-1350PRE	i5-1350PRE	- 40 °C - 85 °C
HCA02-0000-20-3	COMh-caRP E2 i3-1320PRE	i3-1320PRE	- 40 °C - 85 °C

PART NO.	ARTICLE	DESCRIPTION
HCT01-0000-10-0	COM-HPC CLIENT CARRIER 10MM	COM-HPC Client Carrier with 10mm Connector Height

Cooling

PART NO.	ARTICLE	DESCRIPTION
HCA01-0000-99-0	HSP COMe-caAP CU-CORE THREADED	Heatspreader for COMh-caAP, Cu-core, threaded mounting holes
HCA01-0000-99-1	HSP COMe-caAP CU-CORE THROUGH	Heatspreader for COMh-caAP, Cu-core, through mounting holes
HCA99-0000-99-0	COMh Size A Active Uni Cooler (w/o HSP)	COM-HPC Size A Universal Active Cooler for Heatspreader Mounting (120 x 95 x 17 mm)
HCA99-0000-99-1	COMh Size A Passive Uni Cooler (w/o HSP)	COM-HPC Size A Universal Passive Cooler for Heatspreader Mounting (120 x 95 x 17 mm)

Memory

PART NO.	MIN. SPEC.	SIZE	ECC	OP. TEMPERATURE
97041-0848-CARP	DDR5-4800 SODIMM 8GB_E2_CARP	8 GB	-	-40°C - 85°C
97041-1648-CARP	DDR5-4800 SODIMM 16GB_E2_CARP	16 GB	-	-40°C - 85°C
97041-3248-CARP	DDR5-4800 SODIMM 32GB_E2_CARP	32 GB	-	-40°C - 85°C

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