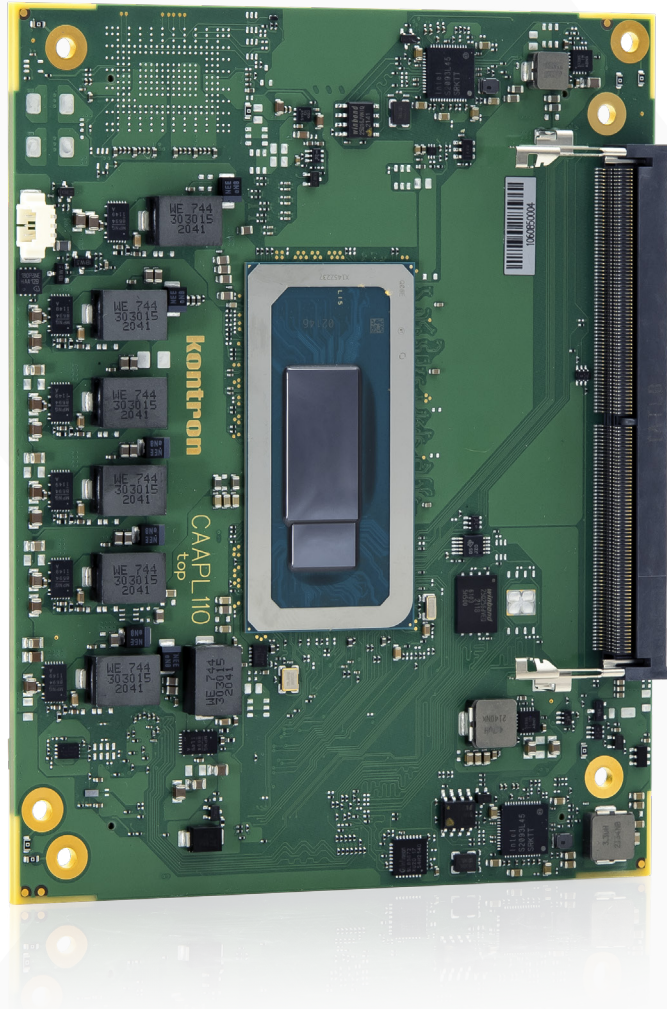




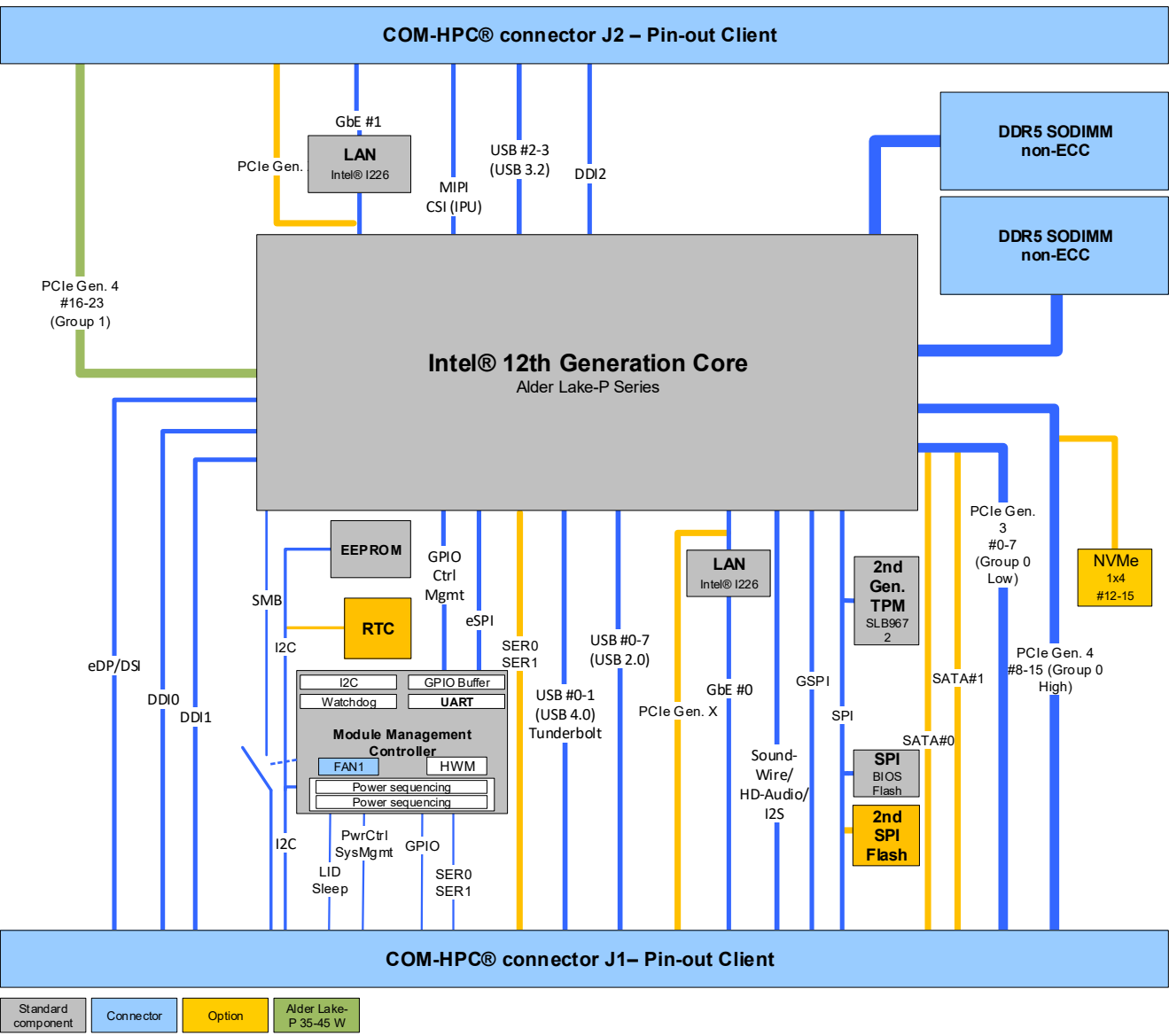
## COM HPC/Client module size A with 12th Generation Intel® Core™ Processors

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

|                     |                                                                                                                                                                                                                                                                                |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| COMPLIANCE          | COM HPC® Client 2x 400 pin connector                                                                                                                                                                                                                                           |
| DIMENSIONS (H x W)  | 95 x 120 mm                                                                                                                                                                                                                                                                    |
| CPU                 | Intel® 12th Generation Core™ family<br>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 32 GByte                                                                                                                                                                                                                                     |
| GRAPHICS CONTROLLER | Intel® Iris Xe Graphics 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 4.0 (Alder Lake H-Series, 35-45 W)<br>2x 4 PCIe Gen 4.0 -> 1x4 shared with onboard NVMe<br>8x PCIe Gen3.0<br>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 I²C, 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,<br>Fail Save via 2nd SPI Flash                                                                                                                                                          |
| POWER MANAGEMENT    | ACPI 6.0                                                                                                                                                                                                                                                                       |
| POWER SUPPLY        | 8.5 V – 20 V Wide Range, Single Supply Power                                                                                                                                                                                                                                   |
| BIOS                | AMI UEFI                                                                                                                                                                                                                                                                       |
| OPERATING SYSTEM    | Windows®10, Linux, VxWorks                                                                                                                                                                                                                                                     |
| TEMPERATURE         | Commercial temperature: 0 °C to +60 °C operating, -30 °C to +85 °C non-operating<br>Extended temperature (planned): -25 °C to +75 °C operating, -30 °C to +85 °C non-operating<br>Industrial temperature (planned): -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

|                                 | 12th GENERATION |             |             |             |             |             |
|---------------------------------|-----------------|-------------|-------------|-------------|-------------|-------------|
| ALDER LAKE SERIES               | H-SERIES        |             |             | P-SERIES    |             |             |
| CPU                             | i7-12800HE      | i5-12600HE  | i3-12300HE  | i7-1270PE   | i5-1250PE   | i3-1220PE   |
| CORES                           | 14              | 12          | 8           | 14          | 12          | 8           |
| NUMBER OF P-CORES               | 6               | 4           | 4           | 6           | 4           | 4           |
| FREQUENCY BASE /TURBO (P-CORES) | 2.4/4.6 GHz     | 2.5/4.5 GHz | 1.9/4.3 GHz | 1.8/4.5 GHz | 1.7/4.4 GHz | 1.5/4.2 GHz |
| NUMBER OF E-CORES               | 8               | 8           | 4           | 8           | 8           | 4           |
| FREQUENCY BASE /TURBO (E-CORES) | 1.8/3.5 GHz     | 1.8/3.3 GHz | 1.5/3.3 GHz | 1.2/3.3 GHz | 1.2/3.2 GHz | 1.2/3.1 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    |
| IBEC                            | no              | no          | no          | no          | no          | no          |
| TCC/TSN                         | no              | no          | no          | no          | no          | no          |



## Variants

| PART NO.        | CPU        | PCH | MEM. DOWN | SO-DIMM | FLASH | OP. TEMPERATURE |
|-----------------|------------|-----|-----------|---------|-------|-----------------|
| HCA01-0000-80-7 | i7-12800HE | -   |           |         | -     | 0 °C - 60 °C    |
| HCA01-0000-60-5 | i5-12600HE | -   |           |         | -     | 0 °C - 60 °C    |
| HCA01-0000-30-3 | i3-12300HE | -   |           |         | -     | 0 °C - 60 °C    |
| HCA01-0000-70-7 | i7-1270PE  | -   |           |         | -     | 0 °C - 60 °C    |
| HCA01-0000-50-5 | i5-1250PE  | -   |           |         | -     | 0 °C - 60 °C    |
| HCA01-0000-20-3 | i3-1220PE  | -   |           |         | -     | 0 °C - 60 °C    |
| HCA01-0000-45-5 | i5-1245UE  | -   |           |         | -     | 0 °C - 60 °C    |

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

## Cooling

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

## Memory

| PART NO.        | MIN. SPEC. | SIZE     | ECC | OP. TEMPERATURE |
|-----------------|------------|----------|-----|-----------------|
| 79040-3248-CAAP | DDR5-4800  | 32 GByte | no  | 0 °C - 60 °C    |
| 97040-1648-CAAP | DDR5-4800  | 16 GByte | no  | 0 °C - 60 °C    |
| 97040-0848-CAAP | DDR5-4800  | 8 GByte  | no  | 0 °C - 60 °C    |

## Your Contact

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