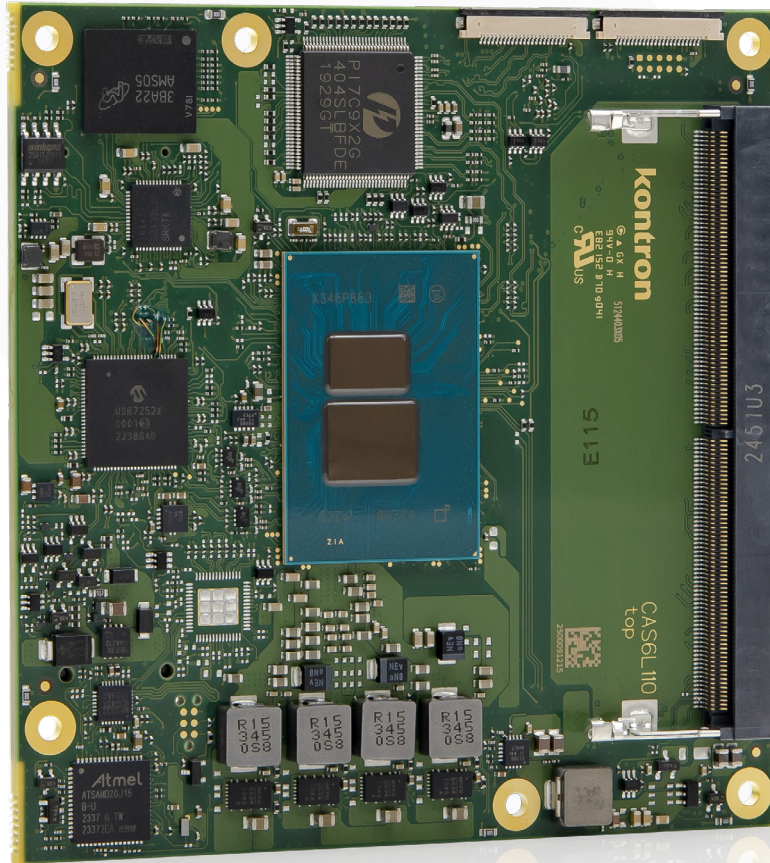


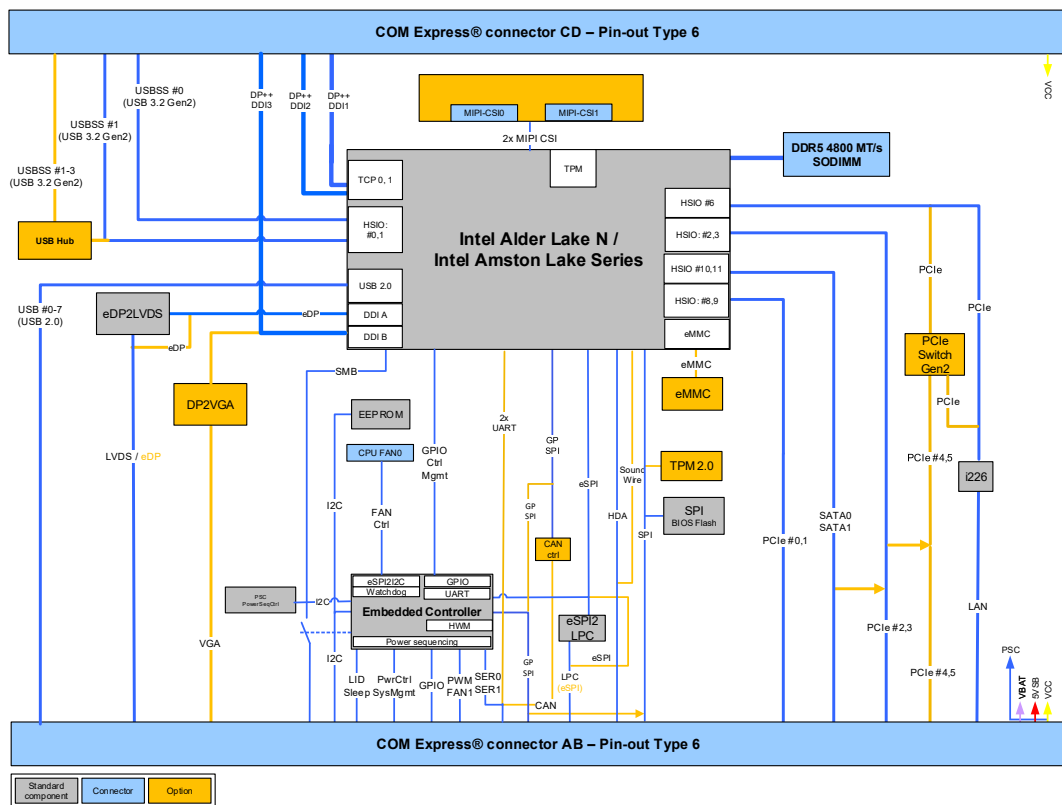
# COMe-cAS6 (E2)



## COM Express® compact Type 6 with Intel Atom® x7000E / x7000RE

- Low-Power – Performance/Watt optimized form factor solution
- Up to 16 GByte DDR5 4800 MT/s - In-Band ECC
- Up to 4x Graphics interfaces
- Up to 6x PCIe lanes, up to 4x USB 3.2/2.0, 6x USB 2.0
- 2.5 GbE with TSN support
- Industrial grade temperature

|                     |                                                                                                                                                                                                                                                                                                                         |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| COMPLIANCE          | COM Express® compact, Pin-out Type 6 according to COM.0 Rev 3.1                                                                                                                                                                                                                                                         |
| DIMENSIONS (H X W)  | 95 mm x 95 mm                                                                                                                                                                                                                                                                                                           |
| CPU                 | Intel Atom® x7000E, x7000RE Series, Intel (Core) Processor N Series<br>For details see table (CPU variants) given below                                                                                                                                                                                                 |
| CHIPSET             | Integrated in SOC                                                                                                                                                                                                                                                                                                       |
| MAIN MEMORY         | Up to 16 GByte DDR5 4800 MT/s via 1x SODIMM socket (In-Band ECC)                                                                                                                                                                                                                                                        |
| GRAPHICS CONTROLLER | SOC: Intel® HD Gfx Gen 12: LVDS/eDP, 2x DP                                                                                                                                                                                                                                                                              |
| ETHERNET CONTROLLER | Intel® i226LM/i226IT                                                                                                                                                                                                                                                                                                    |
| ETHERNET            | Up to 2.5 Gb Ethernet with TSN support                                                                                                                                                                                                                                                                                  |
| STORAGE             | 2x SATA 6Gb/s                                                                                                                                                                                                                                                                                                           |
| FLASH ONBOARD       | eMMC option – up to 256 GByte eMMC TLC                                                                                                                                                                                                                                                                                  |
| PCI EXPRESS®        | 4x PCIe lanes: 4x 1 / 2x 2 (PCIe Gen3)<br>optional 6x PCIe lanes w/o SATA-ports: 2 x2 / 1 x4 + 1 x2 / 2 x1 (PCIe Gen3, max 4 PCIe root ports)<br>optional 6x PCIe lanes with Gen2 switch: 1 x2 / 2 x1 + 1 x2 / 2 x1 (PCIe Gen3)<br>+ 2 x1 (PCIe Gen2) – onboard i226 connected via PCIe Gen2 lane                       |
| DISPLAY             | DDI1/DDI2/DDI3: DP++, LVDS: Dual Channel 18/24bit<br>optional DDI3: VGA<br>optional eDP instead of LVDS                                                                                                                                                                                                                 |
| USB                 | 2x USB 3.2 Gen2 (incl. USB 2.0) + 6x USB 2.0<br>optional 4x USB3.2 Gen2 w/ add USB-Hub                                                                                                                                                                                                                                  |
| SERIAL              | 2x serial interface (RX/TX only)                                                                                                                                                                                                                                                                                        |
| AUDIO               | Intel® High Definition Audio                                                                                                                                                                                                                                                                                            |
| OTHER FEATURES      | SPI, LPC, SMB, Fast I <sup>2</sup> C, Staged Watchdog, RTC                                                                                                                                                                                                                                                              |
| SPECIAL FEATURES    | Industrial grade temperature                                                                                                                                                                                                                                                                                            |
| FEATURES ON REQUEST | eMMC up to 256 GByte TLC,<br>eDP instead of LVDS; DDI3: VGA<br>4x PCIe lanes w/o SATA-ports: 4x 1 / 2x 2 / 1x 4<br>6x PCIe lanes with PCIe switch: 4x 1 / 2x 2 + 2x 1 / 1 x 2<br>4x USB3.2 w/ add USB-Hub instead of 2x USB 3.2<br>Discrete TPM 2.0 chip<br>General Purpose SPI instead of Boot SPI<br>De-populated LAN |
| POWER MANAGEMENT    | ACPI 5.0                                                                                                                                                                                                                                                                                                                |
| POWER SUPPLY        | 8.5 V – 20 V Wide Range, Single Supply Power                                                                                                                                                                                                                                                                            |
| BIOS                | AMI Aptio V                                                                                                                                                                                                                                                                                                             |
| OPERATING SYSTEM    | Windows® 10/11, LTSC, Linux                                                                                                                                                                                                                                                                                             |
| TEMPERATURE         | COMe-cAS6- commercial temperature:<br>0 °C to +60 °C operating, -30 °C to +85 °C non-operating<br>COMe-cAS6 E2 - industrial temperature:<br>-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

| PROCESSOR NUMBER | STD FOR COME-CAS6 | TDP W | CORES | EUS | BASE FREQ GHZ | 1C TURBO FREQ GHZ | TJUNCTION MIN °C | TJUNCTION MAX °C | ECC IN-BAND | USE CONDITION        |
|------------------|-------------------|-------|-------|-----|---------------|-------------------|------------------|------------------|-------------|----------------------|
| X7211E           | on request        | 6     | 2     | 16  | 1,0           | 3,2               | 0                | 105              | Yes         | Embedded             |
| X7213E           | on request        | 10    | 2     | 16  | 1,7           | 3,2               | 0                | 105              | Yes         | Embedded             |
| X7425E           | on request        | 12    | 4     | 24  | 1,5           | 3,4               | 0                | 105              | Yes         | Embedded             |
| X7211RE          | standard          | 6     | 2     | 16  | 1,0           | 3,2               | -40              | 105              | Yes         | Embedded/Industrial* |
| X7213RE          | standard          | 9     | 2     | 16  | 2,0           | 3,4               | -40              | 105              | Yes         | Embedded/Industrial* |
| X7433RE          | standard          | 9     | 4     | 32  | 1,5           | 3,4               | -40              | 105              | Yes         | Embedded/Industrial* |
| X7835RE          | standard          | 12    | 8     | 32  | 1,3           | 3,6               | -40              | 105              | Yes         | Embedded/Industrial* |
| N50              | on request        | 6     | 2     | 16  | 1,0           | 3,4               | 0                | 105              | Yes         | PC Client            |
| N97              | on request        | 12    | 4     | 24  | 2,0           | 3,6               | 0                | 105              | Yes         | PC Client            |
| N150             | on request        | 6     | 4     | 24  | 0,8           | 3,6               | 0                | 105              | Yes         | PC Client            |
| N200             | on request        | 6     | 4     | 32  | 1,0           | 3,7               | 0                | 105              | Yes         | PC Client            |
| N250             | on request        | 6     | 4     | 32  | 1,3           | 3,8               | 0                | 105              | Yes         | PC Client            |
| I3-N305          | on request        | 9/15  | 8     | 32  | 1,0/1,8       | 3,8               | 0                | 105              | Yes         | PC Client            |
| N355             | on request        | 9/15  | 8     | 32  | 1,0/1,9       | 3,9               | 0                | 105              | Yes         | PC Client            |

\*For Industrial use condition turbo needs to be disabled  
 DTR applies to these processors. See user guide for further information

# Standard Variants

COMe-cAS6 (E2)

| PART NO.        | CPU     | SODIMM               | ETH     | USB 3.2 | FLASH - EMMC | VARIOUS   | OP. TEMPERATURE     |
|-----------------|---------|----------------------|---------|---------|--------------|-----------|---------------------|
| 36039-0000-R1-2 | x7211RE | Inband-ECC, 4800MT/s | 2.5 GbE | 2       | No           | LPC, LVDS | -40 °C up to +85 °C |
| 36039-0000-R2-2 | x7213RE | Inband-ECC, 4800MT/s | 2.5 GbE | 2       | No           | LPC, LVDS | -40 °C up to +85 °C |
| 36039-0000-R2-4 | x7433RE | Inband-ECC, 4800MT/s | 2.5 GbE | 2       | No           | LPC, LVDS | -40 °C up to +85 °C |
| 36039-0000-R2-8 | x7835RE | Inband-ECC, 4800MT/s | 2.5 GbE | 2       | No           | LPC, LVDS | -40 °C up to +85 °C |

Please contact your sales representative for other versions

## Carrier

| ARTICLE                   | PART NO.        | DESCRIPTION                            |
|---------------------------|-----------------|----------------------------------------|
| COMe Eval Carrier2 Type 6 | 38116-0000-00-5 | COM Express® Evaluation Carrier Type 6 |

## Cooling

| ARTICLE                            | PART NO.        | DESCRIPTION                                                                                     |
|------------------------------------|-----------------|-------------------------------------------------------------------------------------------------|
| HSP COMe-cAS6 (E2) THREAD          | 36039-0000-99-0 | Heatspreader for COMe-cAS6 commercial and E2, threaded mounting holes                           |
| HSP COMe-cAS6 (E2) THROUGH         | 36039-0000-99-1 | Heatspreader for COMe-cAS6 commercial and E2, through holes                                     |
| COME ACTIVE UNI COOLER2 (W/O HSP)  | 36099-0000-99-4 | COM Express® Universal Active Cooler for Heatspreader Mounting (95 x 95 x 14.3) - 90° turnable  |
| COME PASSIVE UNI COOLER2 (W/O HSP) | 36099-0000-99-5 | COM Express® Universal Passive Cooler for Heatspreader Mounting (95 x 95 x 14.3) - 90° turnable |

## Memory

| PART NO.        | MIN. SPEC. | SIZE     | EXX/NON-ECC | OP. TEMPERATURE  |
|-----------------|------------|----------|-------------|------------------|
| 97040-1648-CAS6 | DDR5-4800  | 16 GByte | no          | 0 °C to +60 °C   |
| 97040-0848-CAS6 | DDR5-4800  | 8 GByte  | no          | 0 °C to +60 °C   |
| 97041-1648-CAS6 | DDR5-4800  | 16 GByte | no          | -40 °C to +85 °C |
| 97041-0848-CAS6 | DDR5-4800  | 8 GByte  | no          | -40 °C to +85 °C |

## Your Contact

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