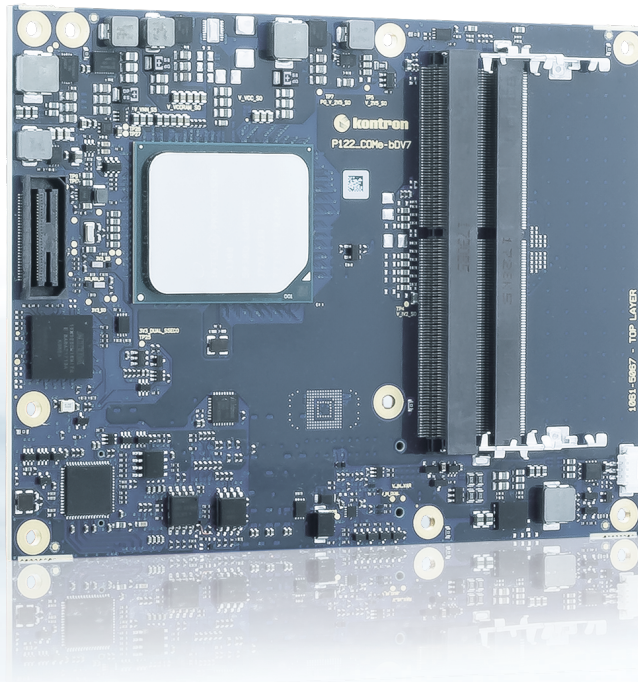


COMe-bDV7



COM Express® Basic Type 7 with Intel Atom® C3000 SoC Processors

- ▶ Entry level server-grade platform
- ▶ Quad 10 GbE interfaces
- ▶ High-speed connectivity PCIe 3.0, SATA3, USB 3.0
- ▶ Industrial grade versions

POSSIBILITIES START HERE

▶ TECHNICAL INFORMATION

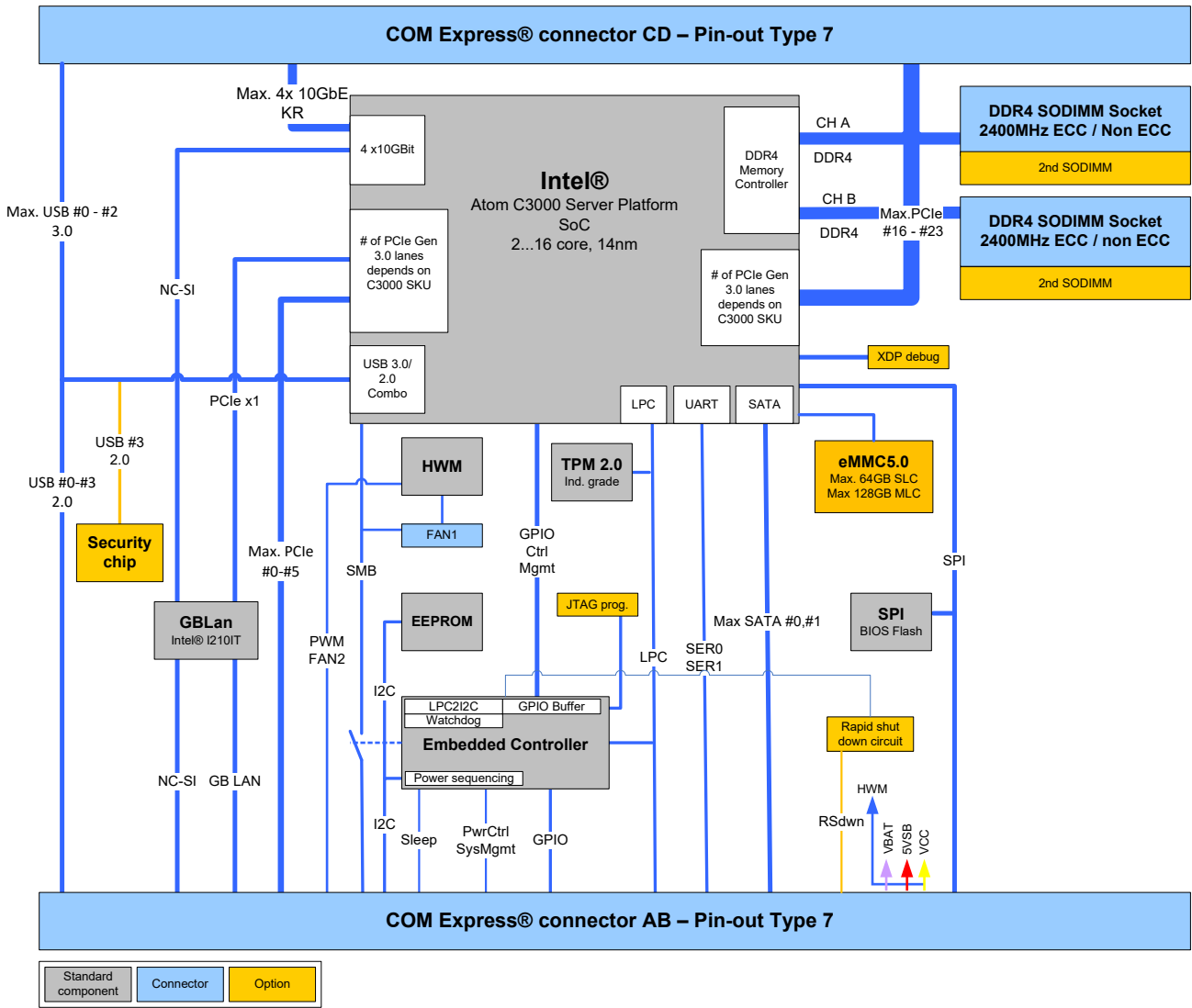
| | |
|---------------------------|--|
| COMPLIANCE | COM Express® Basic, Pin-out Type 7 |
| DIMENSIONS (H x W x D) | 95 x 125 mm |
| CPU (SoC) | Commercial temperature: Intel® Atom® Processor C3958, 16C, 2.0GHz, 31W TDP Intel® Atom® Processor C3858, 12C, 2.0GHz, 25W TDP Intel® Atom® Processor C3758, 8C, 2.2GHz, 25W TDP Intel® Atom® Processor C3558, 4C, 2.2GHz, 16W TDP Industrial temperature: Intel® Atom® Processor C3808, 12C, 2.0 GHz, 25 W TDP Intel® Atom® Processor C3708, 8C, 1.7 GHz, 17 W TDP Intel® Atom® Processor C3508, 4C, 1.5 GHz, 11 W TDP Intel® Atom® Processor C3308, 2C, 1.6 GHz, 9 W TDP |
| MAIN MEMORY | 2x DDR4 SODIMM for up to 64 GByte ECC / non ECC on request: 4x DDR4 SODIMM for up to 128 GByte ECC / non ECC |
| ETHERNET CONTROLLER | Intel® I210IT Intel® Quad 10GbE LAN integrated in SoC |
| ETHERNET | 1x 10/100/1000 MBit Ethernet Up to 4x 10GbE Interfaces (KR) – depending on C3000 SKU NC-SI support |
| HARD DISK | Up to 2x SATA3, 6Gb/s |
| FLASH ONBOARD | eMMC 5.0 up to 64 GByte SLC or 128 GByte MLC (build option) |
| PCI Express®/ PCI SUPPORT | Up to 14x PCIe 3.0 lanes – depending on C3000 SKU |
| USB | Up to 3x USB 3.0, 4x USB 2.0 (3x USB 2.0 with Security chip populated) |
| SERIAL | 2x serial interface (RX/TX only) |
| COMMON FEATURES | SPI, LPC, SMB, Fast I ² C, Staged Watchdog, RTC |
| ON REQUEST | eMMC size, additional 2 SODIMM sockets for overall 4 SODIMM sockets Security chip for Kontron security stack APPROTECT based on WIBU Systems |
| POWER MANAGEMENT | ACPI 4.0 |
| POWER SUPPLY | ATX, 8.5 V – 20 V Wide Range, Single Supply Power |
| SPECIAL FEATURES | TPM 2.0 |
| HUMIDITY | 93 % relative at 40 °C, non-condensing (according to IEC 60068-2-78) |
| TEMPERATURE | Commercial grade Version Temperature 0 °C - 60 °C, Industrial grade Versions -40 °C to +85 °C |
| BIOS | AMI UEFI |
| OPERATING SYSTEMS | Linux, Windows® Server 2012/2016 |
| SUPPORTED MODULES | COMe-bDV7 xxxxx commercial grade COMe-bDV7 E2 xxxxx industrial grade |

▶ CPU VARIANTS

| PROCESSOR NUMBER | TDP | CORES | THREADS | CACHE | BASE FREQ | MAX TURBO FREQ | MEM-CHANNEL | MEM-FREQ | HSIO LANES | QAT* | EXTEND TEMP |
|------------------|--------|-------|---------|----------|-----------|----------------|-------------|----------|------------|------|-------------|
| C3558 | 16 W | 4 | 4 | 8 MByte | 2.2 GHz | - | 2 | 2133 | 12 | yes | no |
| C3758 | 25 W | 8 | 8 | 16 MByte | 2.2 GHz | - | 2 | 2400 | 20 | yes | no |
| C3858 | 25 W | 12 | 12 | 12 MByte | 2.0 GHz | - | 2 | 2400 | 20 | yes | no |
| C3958 | 31 W | 16 | 16 | 16 MByte | 2.0 GHz | - | 2 | 2400 | 20 | yes | no |
| C3308 | 9.5 W | 2 | 2 | 4 MByte | 1.6 GHz | 2.1 GHz | 1 | 1866 | 6 | yes | yes |
| C3508 | 11.5 W | 4 | 4 | 8 MByte | 1.6 GHz | - | 2 | 1866 | 8 | yes | yes |
| C3708 | 17 W | 8 | 8 | 16 MByte | 1.7 GHz | - | 2 | 2133 | 20 | yes | yes |
| C3808 | 25 W | 12 | 12 | 12 MByte | 2.0 GHz | - | 2 | 2133 | 20 | yes | yes |

* On the COMe-bDV7 QAT is disabled by default, please contact tech support for a custom UEFI firmware

► BLOCK DIAGRAM



► VARIANTS

| PART NO. | CPU | 1GbE | SoC LAN | | HSIO | HSIO-USAGE Default # of PCIe lanes | | | | HSIO-USAGE Max # of PCIe lanes* | | | | FLASH eMMC | OP. TEMP. |
|-----------------|-------|--------|------------------|------------------|------|---------------------------------------|---------|------|------|------------------------------------|---------|------|------|------------|----------------|
| | | | PORT 0 PORT 1 | PORT 2 PORT 3 | | PCIe | USB 3.0 | SATA | 1GbE | PCIe | USB 3.0 | SATA | 1GbE | | |
| 68006-0000-58-5 | C3558 | I210IT | 10GBASE-KR | 2.5GBASE-X | 12 | 7 | 2 | 2 | 1 | 12 | 0 | 0 | 0 | no | 0 °C - 60 °C |
| 68006-0000-58-7 | C3758 | I210IT | 10GBASE-KR | 10GBASE-KR | 20 | 14 | 3 | 2 | 1 | same as default | | | | no | 0 °C - 60 °C |
| 68006-0000-58-8 | C3858 | I210IT | 10GBASE-KR | 10GBASE-KR | 20 | 14 | 3 | 2 | 1 | same as default | | | | no | 0 °C - 60 °C |
| 68006-0000-58-9 | C3958 | I210IT | 10GBASE-KR | 10GBASE-KR | 20 | 14 | 3 | 2 | 1 | same as default | | | | no | 0 °C - 60 °C |
| 68007-0000-08-3 | C3308 | I210IT | 2.5GBASE-X | 2.5GBASE-X | 6 | 3 | 0 | 2 | 1 | 6 | 0 | 0 | 0 | no | -40 °C - 85 °C |
| 68007-0000-08-5 | C3508 | I210IT | 2.5GBASE-X | 2.5GBASE-X | 8 | 4 | 1 | 2 | 1 | 8 | 0 | 0 | 0 | no | -40 °C - 85 °C |
| 68007-0000-08-7 | C3708 | I210IT | 10GBASE-KR | 10GBASE-KR | 20 | 14 | 3 | 2 | 1 | same as default | | | | no | -40 °C - 85 °C |
| 68007-0000-08-8 | C3808 | I210IT | 10GBASE-KR | 10GBASE-KR | 20 | 14 | 3 | 2 | 1 | same as default | | | | no | -40 °C - 85 °C |

The table above shows the default LAN configuration. A LAN configuration different from the shown default requires a different part no.
 Please contact your sales representative for other versions

* Please contact tech support for custom UEFI firmware

► CARRIER

| ARTICLE | PART NO. | DESCRIPTION |
|---|-----------------|--|
| COMe EVAL CARRIER T7 | 68300-0000-00-0 | COM Express® Eval Carrier Type 7 |
| ADA-COMe-T7 4X10G KR-RJ45 - DEV-TOOL | 68300-0000-01-0 | Adapter Card with 4x RJ45 ports for use with COM Express® Eval Carrier Type 7 |

► COOLING

| ARTICLE | PART NO. | DESCRIPTION |
|-------------------------------------|--------------------|---|
| HSP COMe-bDV7 (E2) THREAD | 68007-0000-99-0 | Heatspreader for COMe-bDV7 commercial and E2, threaded mounting holes |
| HSP COMe-bDV7 (E2) THROUGH | 68007-0000-99-1 | Heatspreader for COMe-bDV7 commercial and E2, through holes |
| HSK COMe-BASIC ACTIVE (W/O HSP) | 38025-0000-99-0C05 | Active Cooler for COMe-bxL6/bDV7 to be mounted on HSP |
| HSK COMe-BASIC PASSIVE (W/O HSP) | 38025-0000-99-0C06 | Passive Cooler for COMe-bxL6/bDV7 to be mounted on HSP |

► MEMORY

| PART NO. | MIN. SPEC. | SIZE | ECC/NON-ECC | OP. TEMPERATURE |
|-----------------|------------|----------|-------------|------------------|
| 97020-0424-COM7 | DDR4-2400 | 4 GByte | No ECC | 0 °C to +60 °C |
| 97020-0824-COM7 | DDR4-2400 | 8 GByte | No ECC | 0 °C to +60 °C |
| 97020-1624-COM7 | DDR4-2400 | 16 GByte | No ECC | 0 °C to +60 °C |
| 97020-3224-COM7 | DDR4-2400 | 32 GByte | No ECC | 0 °C to +60 °C |
| 97021-0424-COM7 | DDR4-2400 | 4 GByte | No ECC | -40 °C to +85 °C |
| 97021-0824-COM7 | DDR4-2400 | 8 GByte | No ECC | -40 °C to +85 °C |
| 97021-1624-COM7 | DDR4-2400 | 16 GByte | No ECC | -40 °C to +85 °C |
| 97021-3224-COM7 | DDR4-2400 | 32 GByte | No ECC | -40 °C to +85 °C |
| 97030-0424-COM7 | DDR4-2400 | 4 GByte | ECC | 0 °C to +60 °C |
| 97030-0824-COM7 | DDR4-2400 | 8 GByte | ECC | 0 °C to +60 °C |
| 97030-1624-COM7 | DDR4-2400 | 16 GByte | ECC | 0 °C to +60 °C |
| 97030-3224-COM7 | DDR4-2400 | 32 GByte | ECC | 0 °C to +60 °C |
| 97031-0424-COM7 | DDR4-2400 | 4 GByte | ECC | -40 °C to +85 °C |
| 97031-0824-COM7 | DDR4-2400 | 8 GByte | ECC | -40 °C to +85 °C |
| 97031-1624-COM7 | DDR4-2400 | 16 GByte | ECC | -40 °C to +85 °C |
| 97031-3224-COM7 | DDR4-2400 | 32 GByte | ECC | -40 °C to +85 °C |

► GLOBAL HEADQUARTERS

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