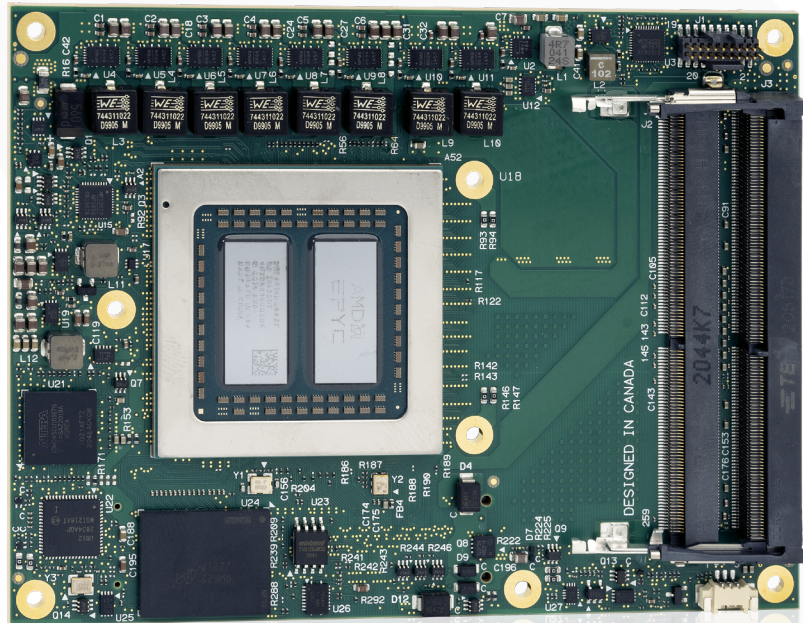


COMe-bEP7 (E2)

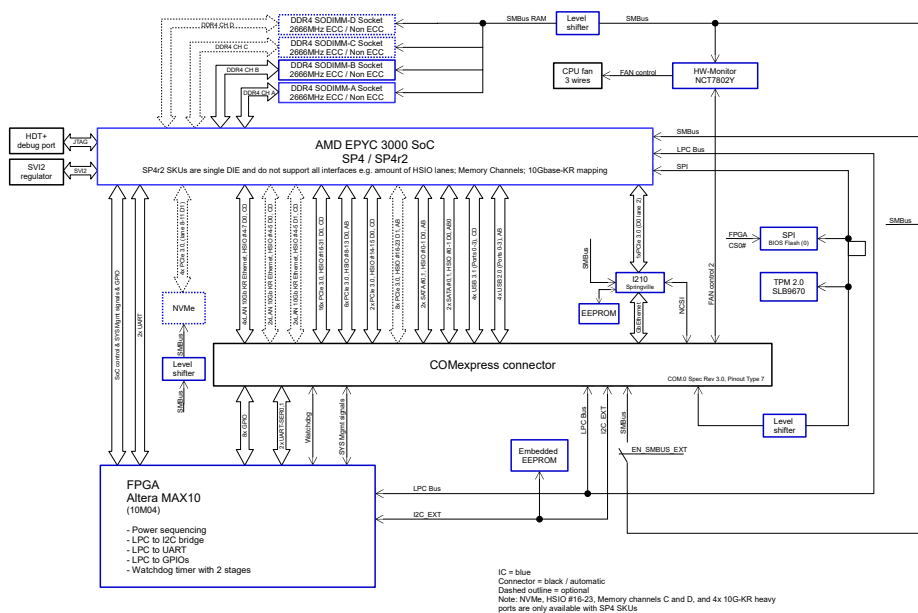


COM Express® Basic Type 7 with AMD EPYC™ Embedded 3000 SoC Processors

- ▶ Supports Single-Die SP4r2 (up to 8 cores) and Dual-Die SP4 (up to 16 core) processors
- ▶ Quad 10GbE interfaces
- ▶ 4x SODIMM sockets (up to 128 GByte DDR4 memory) on request
- ▶ Industrial grade versions

| | SP4R2 (SINGLE-DIE) | SP4 (DUAL-DIE) |
|----------------------------|---|--|
| COMPLIANCE | COM Express® Basic, Pin-out Type 7 | |
| DIMENSIONS (H x W x D) | 95 x 125 mm | |
| CPU | Commercial Temperature: AMD E3101 4C/4T, 35 W TDP, 2.1 GHz (2.9 GHz) AMD E3151 4C/8T, 45 W TDP, 2.7 GHz (2.9 GHz) AMD E3201 8C/8T, 30 W TDP, 1.5 GHz (3.1 GHz) AMD E3251 8C/16T, 55 W TDP, 2.5 GHz (3.1 GHz) Industrial Temperature: AMD E3255 8C/16T, 30-55 W TDP, 2.0/2.5 GHz (3.1 GHz) | AMD E3351 12C/24T, 65-80 W TDP, 1.9 GHz (3.0 GHz) AMD E3451 16C/32T, 85-100 W TDP, 2.45 GHz (3.0 GHz) |
| MAIN MEMORY | 2x DDR4 SODIMM for up to 64 GByte non-ECC/ECC memory | 2x DDR4 SODIMM for up to 64 GByte non-ECC/ECC memory 4x DDR4 SODIMM for up to 128 GByte on request |
| ETHERNET CONTROLLER | Internet i210 | |
| HARD DISK | 2x SATA | |
| PCI EXPRESS® / PCI SUPPORT | 24x PCIe Gen 3.0 | 32x PCIe Gen 3.0 |
| USB | 4x USB 3.1, 4x USB 2.0 | |
| SERIAL | 2x serial interface | |
| COMMON FEATURES | SPI Flash, LPC, SMB, Dual Staged Watchdog, RTC | |
| ON REQUEST | | NVMe Support |
| POWER MANAGEMENT | OS ACPI PM support for Critical Shutdown | |
| POWER SUPPLY | ATX, 8.5V- 20 V Wide Range Single Supply | |
| SPECIAL FEATURES | TPM | |
| HUMIDITY | 93 % relative Humidity at 40 °C, non-condensing | |
| TEMPERATURE | Commercial Grade Version: 0 °C to 60 °C Industrial Grade Version: -40 °C to 85 °C | |
| BIOS | AMI UEFI | |
| OPERATING SYSTEM | Linux x64 – Ubuntu Windows Server x64 2016 | |
| SUPPORTED MODULES | COMe-bEP7 xxxxx commercial grade COMe-bEP7 E2 xxxxx industrial grade | |

Block Diagram



| | SP4R2 | | | | SP4 | | |
|------------------|---------|----------|----------|----------|-------------|----------|----------|
| PROCESSOR NUMBER | E3101 | E3151 | E3201 | E3251 | E3255 | E3351 | E3451 |
| TDP | 35 W | 45 W | 30 W | 55 W | 25-55 W | 65-80 W | 85-100 W |
| CORES | 4 | 4 | 8 | 8 | 8 | 12 | 16 |
| THREADS | 4 | 8 | 8 | 16 | 16 | 32 | 32 |
| CACHE | 8 MByte | 16 MByte | 16 MByte | 16 MByte | 16 MByte | 32 MByte | 32 MByte |
| BASE FREQ | 2.1 GHz | 2.7 GHz | 1.5 GHz | 2.5 GHz | 2.0/2.5 GHz | 1.9 GHz | 2.45 GHz |
| MAX TURBO FREQ | 2.9 GHz | 2.9 GHz | 3.1 GHz | 3.1 GHz | 3.1 GHz | 3.0 GHz | 3.0 GHz |
| MEMORY CHANNEL | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| SATA | 8 | 8 | 8 | 8 | 8 | 16 | 16 |
| EXTEND TEMP | no | no | no | no | yes | no | no |

Variants

| PART NO. | DESCRIPTION | CPU |
|------------------|---------------------------------------|-------|
| SP4R2 | | |
| 68010-0000-01-1* | COMe-bEP7 E3101 | E3101 |
| 68010-0000-51-1* | COMe-bEP7 E3151 | E3151 |
| 68010-0000-01-2* | COMe-bEP7 E3201 | E3201 |
| 68010-0000-51-2 | COMe-bEP7 E3251 | E3251 |
| 68011-0000-55-2 | COMe-bEP7 E2 E3255 | E3255 |
| SP4 | | |
| 68010-0000-51-3 | COMe-bEP7 E3351 | E3351 |
| 68010-0000-51-4 | COMe-bEP7 E3451 | E3451 |
| 68010-0000-61-3 | COMe-bEP7 3351 with 4 SODIMM sockets | E3351 |
| 68010-0000-61-4 | COMe-bEP7 E3451 with 4 SODIMM sockets | E3451 |

*only available on request

Carrier

| ARTICLE | PART NO. | DESCRIPTION |
|----------------------------------|-----------------|--|
| COM Express® Eval Carrier Type 7 | 68300-0000-00-0 | |
| COM Express® Eval Carrier2 T7 | 68301-0000-00-8 | COMe Eval Carrier T7 G2-8, 8 mm stack height, support of PCIe Gen3 |
| COM Express® Eval Carrier2 T7 | 68301-0001-00-8 | COMe Eval Carrier T7 G2-8, 8 mm stack height, support of PCIe Gen4 |

Cooling

| ARTICLE | PART NO. |
|------------------------|-----------------|
| HSP COMe-bEP7 THREADED | 68010-0000-99-0 |
| HSP COMe-bEP7 THROUGH | 68010-0000-99-1 |

| PART NO. | MIN. SPEC. | SIZE | ECC/NON-ECC | OP. TEMPERATURE |
|------------------|------------|----------|-------------|-----------------|
| 97020-0827-BEP7* | DDR4-2666 | 8 GByte | non-ECC | 0 °C - 60 °C |
| 97020-1627-BEP7* | DDR4-2666 | 16 GByte | non-ECC | 0 °C - 60 °C |
| 97020-3227-BEP7* | DDR4-2666 | 32 GByte | non-ECC | 0 °C - 60 °C |
| 97021-0827-BEP7* | DDR4-2666 | 8 GByte | non-ECC | -40 °C - 85 °C |
| 97021-1627-BEP7* | DDR4-2666 | 16 GByte | non-ECC | -40 °C - 85 °C |
| 97021-3227-BEP7* | DDR4-2666 | 32 GByte | non-ECC | -40 °C - 85 °C |
| 97030-0827-BEP7 | DDR4-2666 | 8 GByte | ECC | 0 °C - 60 °C |
| 97030-1627-BEP7 | DDR4-2666 | 16 GByte | ECC | 0 °C - 60 °C |
| 97030-3227-BEP7 | DDR4-2666 | 32 GByte | ECC | 0 °C - 60 °C |
| 97031-0827-BEP7 | DDR4-2666 | 8 GByte | ECC | -40 °C - 85 °C |
| 97031-1627-BEP7 | DDR4-2666 | 16 GByte | ECC | -40 °C - 85 °C |
| 97031-3227-BEP7 | DDR4-2666 | 32 GByte | ECC | -40 °C - 85 °C |

* On Request

Accessories

| PART NUMBER | DESCRIPTION |
|-----------------------|------------------------------|
| MOUNTING | |
| 38017-0000-00-5 | COMe Mount KIT 5 mm 1 set |
| 38017-0100-00-5 | COMe Mount KIT 5 mm 100 sets |
| 38017-0000-00-0 | COMe Mount KIT 8 mm 1 set |
| 38017-0100-00-0 | COMe Mount KIT 8 mm 100 sets |
| ADAPTER/CABLES | |
| 38019-0000-00-0 | ADA-COMe-Height-dua |
| 96079-0000-00-0 | KAB-HSP 200 mm |

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