

CEM510

COM Express Type 6 Basic Module with Intel® Xeon® E3/7th Gen Intel® Core™ i7/i5/i3 Processors and Intel® CM238/QM175/HM175

Features

- Intel® Xeon® E3 and 7th gen Intel® Core™ i7/i5/i3 processors (Kaby Lake-H)
- Intel® CM238/QM175/HM175 chipset
- 2 DDR4-2133 SO-DIMM slots, up to 32GB ECC or non-ECC
- 1 PCIe x16 and 8 PCIe x1 Gen. 3
- 4 SATA-600 with RAID 0/1/5/10
- 4 USB 3.0 and 8 USB 2.0
- Intel® AMT 11.0 and TPM 1.2 function supported
- AXView 2.0 intelligent remote management software for industrial IoT applications

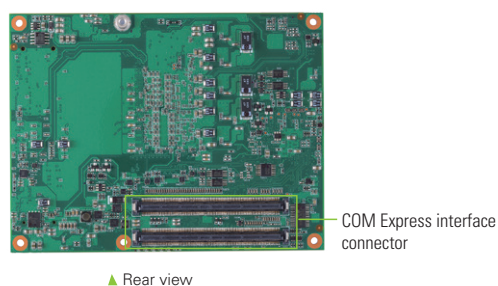
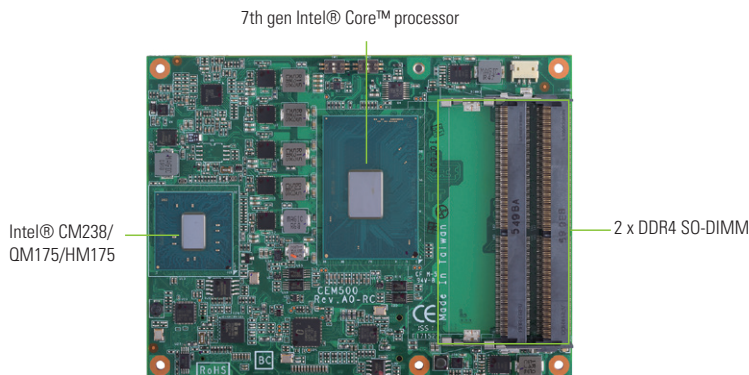


Core System

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|---------------------|--|
| CPU | Intel® Xeon® E3 and 7th gen Intel® Core™ i7/i5/i3 processors (Kaby Lake-H) |
| System Memory | 2 x DDR4-2133 SO-DIMM, up to 32GB |
| Chipset | Intel® CM238/QM175/HM175 |
| BIOS | AMI uEFI (Legacy Free) |
| SSD | N/A |
| Watchdog Timer | 65536 levels, 0 ~ 65535 sec. |
| Expansion Interface | 1 x PCIe x16 Gen 3.0 8 x PCIe x1 Gen 3.0 |
| Battery Lithium | N/A |
| Power Input | ATX: +12V, +5VSB; AT: +12V |
| Size | 125 x 95 mm |
| Board Thickness | 2.0 mm |
| Temperature | -40°C ~ +85°C (-40°F ~ +185°F), operation |
| Operation Humidity | 10% ~ 95% relative humidity, non-condensing |
| Vibration | 3.5 Grms |

I/O

| | |
|---------------------|--|
| MIO | 1 x LPC interface 1 x SPI interface 1 x I ² C interface 2 x TX/RX serial interface |
| SATA | 4 x SATA-600 with RAID 0/1/5/10 |
| Hardware Monitoring | Yes |
| Ethernet | 1 port as 10/100/1000 Mbps supports Wake-on-LAN, PXE Boot ROM with Intel® i219LM |
| Audio | HD link interface to baseboard for Codec |
| USB | 4 x USB 3.0 8 x USB 2.0 |
| TPM | TPM 1.2 |
| SMBus | Yes |
| Digital I/O | 4 channels IN & 4 channels OUT |
| Smart Battery | Yes |



Display

| | |
|-------------------|--|
| Chipset | Intel® Gen 9 HD Graphic Gfx APIs - DX11/12, OCL2.x, OGL 4.3/4.4 3 independent displays |
| Display Interface | 1 x LVDS; 18/24-bit single/dual channel (optional with eDP) 3 x DDI (DP/HDMI/DVI), 1 x DDI optional w/VGA |

Packing List

Quick installation guide, user's manual/utility CD

Ordering Information

| Standard | |
|--|---|
| CEM510-E3-1505M v6+CM238 (P/N: E38D510100) | COM Express Type 6 basic module with Intel® Xeon® E3-1505MV6, CM238, DDI/LVDS, GbE LAN, USB 3.0 and TPM |
| CEM510-i3-7100E+CM238 (P/N: E38D510101) | COM Express Type 6 basic module with Intel® Core™ i3-7100E, CM238, DDI/LVDS, GbE LAN, USB 3.0 and TPM |
| CEM510-i7-7820EQ+QM175 (P/N: E38D510102) | COM Express Type 6 basic module with Intel® Core™ i7-7820EQ, QM175, DDI/LVDS, GbE LAN, USB 3.0 and TPM |
| CEM510-i5-7440EQ+QM175 (P/N: E38D510103) | COM Express Type 6 basic module with Intel® Core™ i5-7440EQ, QM175, DDI/LVDS, GbE LAN, USB 3.0 and TPM |
| CEM510-i3-7100E+QM175 (P/N: E38D510104) | COM Express Type 6 basic module with Intel® Core™ i3-7100E, QM175, DDI/LVDS, GbE LAN, USB 3.0 and TPM |
| CEM510-i3-7102E+HM175 (P/N: E38D510105) | COM Express Type 6 basic module with Intel® Core™ i3-7102E, HM175, DDI/LVDS, GbE LAN, USB 3.0 and TPM |
| Optional | |
| CEB94011 (P/N: E394011100) | CEB94011 COM Express Type 6 evaluation board |
| TS008-CEM500 (P/N: E39J008100) | CEM500 heat sink with fan |
| TS006-CEM500 (P/N: E39J006100) | CEM500 heat spreader |

Block Diagram

