

# CEM520

COM Express Type 6 Basic Module with Intel® Xeon® & 8th Gen Intel® Core™ Processors and Intel® CM246/QM370/HM370

## Features

- Intel® Xeon® & 8th gen Intel® Core™ i7/i5/i3 processors
- Intel® CM246/QM370/HM370 chipset
- 2 Dual channel DDR4-2400 SO-DIMM slots for up to 64GB of memory
- 1 PCIe x16 and 8 PCIe x1 Gen3
- 4 SATA Gen.3 with RAID 0/1/5/10
- 4 USB 3.0 and 8 USB 2.0
- TPM 2.0 function supported
- AMS.AXView intelligent remote management software for industrial IoT applications

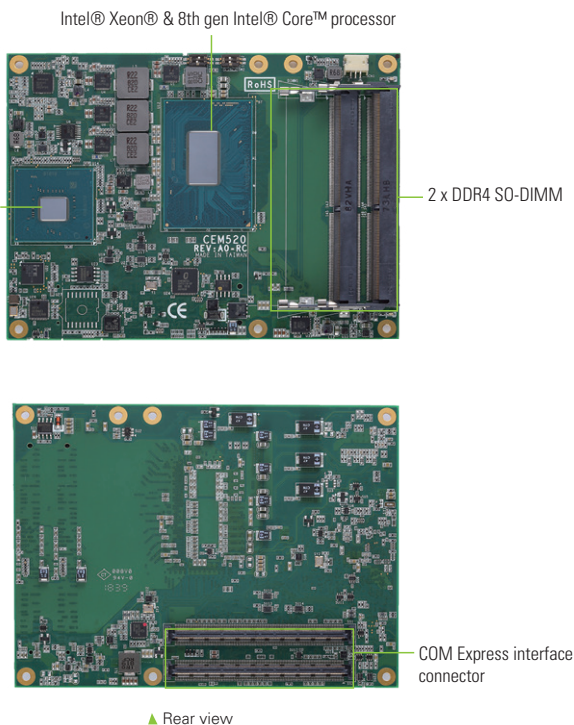


## Core System

CPU	Intel® Xeon® & 8th gen Intel® Core™ i7/i5/i3 processors (Coffee Lake)
System Memory	2 x DDR4-2666 SO-DIMM, up to 32GB non-ECC/ECC memory
Chipset	Intel® CM246/QM370/HM370
BIOS	AMI uEFI (Legacy Free)
Storage	N/A
Watchdog Timer	65536 levels, 0 to 65535 sec.
Expansion Interface	1 x PCIe x16 Gen3 8 x PCIe x1 Gen3
Battery Lithium	N/A
Power Input	ATX: +12V, +5VSB; AT: +12V
Dimensions	125 x 95 mm
Board Thickness	2.0 mm
Operating Temperature	-40°C to +85°C (-40°F to +185°F) (operation with heatsink and fan)
Humidity	10% - 95% relative humidity, non-condensing
Vibration	3.5 Grms

## I/O

SATA	4 x SATA Gen.3 with RAID 0/1/5/10
Hardware Monitoring	Yes
Ethernet	1 x 10/100/1000 Mbps Ethernet with Intel® i219-LM; supports Wake-on-LAN, PXE Boot ROM
Audio	HD link interface to baseboard for Codec
USB	4 x USB 3.0 8 x USB 2.0
Serial	1 x LPC 1 x SPI 2 x TX/RX
TPM	TPM 2.0
SMBus	Yes
Others	1 x I <sup>2</sup> C
GPIO	4-CH in & 4-CH 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 (default), optional with eDP 1.4: 4096 x 2304 @60Hz 1 x VGA; up to 1920 x 1200 @60Hz (default) 2 x DDI (DisplayPort 1.2: 4096 x 2304 @60Hz/HDMI 1.4: 4096 x 2160 @30/24Hz)

## Packing List

Quick installation guide, user's manual/utility CD

## Ordering Information

Standard	
CEM520-E-2176M+CM246 (P/N: E38D520100)	COM Express Type 6 basic module with Intel® Xeon® E-2176M, CM246, DDI/LVDS, GbE LAN, USB 3.0 and TPM
CEM520-i7-8850H+QM370 (P/N: E38D520104)	COM Express Type 6 basic module with Intel® Core™ i7-8850H, QM370, DDI/LVDS, GbE LAN, USB 3.0 and TPM
CEM520-i5-8400H+QM370 (P/N: E38D520102)	COM Express Type 6 basic module with Intel® Core™ i5-8400H, QM370, DDI/LVDS, GbE LAN, USB 3.0 and TPM
CEM520-i3-8100H+HM370 (P/N: E38D520101)	COM Express Type 6 basic module with Intel® Core™ i3-8100H, HM370, DDI/LVDS, GbE LAN, USB 3.0 and TPM
Optional	
CEB94011 (P/N: E394011100)	CEB94011 COM Express Type 6 evaluation board
E39J015100	CEM520 heat sink with fan
E39J006100	CEM520 heat spreader

# Block Diagram

