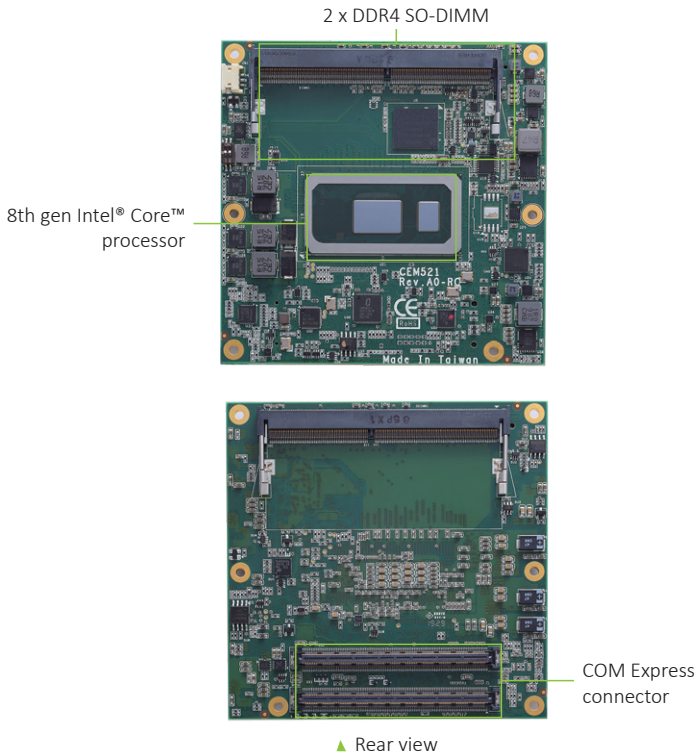


CEM521

COM Express Type 6 Compact Module with 8th Gen Intel® Core™ & Celeron® Processor



Features

- 8th gen Intel® Core™ i7/i5/i3 and Celeron® processors (Whiskey Lake-U)
- 2 dual-channel DDR4-2400 SO-DIMM for up to 64GB
- Max. up to 8 lanes of PCI Express
- 3 SATA Gen3
- 4 USB 3.0 and 8 USB 2.0
- Supports eMMC for up to 64G (optional)
- TPM 2.0 supported
- AMS.AXView intelligent remote management software



Specifications

Core System

CPU	Intel® Core™ i7-8665UE/i5-8365UE/i3-8145UE processor (Whiskey Lake-U) & Intel® Celeron® processor 4305UE
System Memory	2 x Dual-channel DDR4-2400 SO-DIMM slot, up to 64GB
Chipset	SoC integrated
BIOS	AMI uEFI (Legacy free)
SSD	eMMC for up to 64G (optional)
Watchdog Timer	65536 levels, 0 to 65535 sec.
Expansion Interface	8 x PCI Express Gen3 (max. 5 PCIe Devices with LAN)
Battery Lithium	Yes
Power Input	ATX: +12V, +5VSB AT: +12V

Display

Chipset	Intel® gen 9 Graphics Engine Supports Gfx- DX12.0, OCL2.0, OGL4.3
Display Interface	1 x LVDS; 18/24-bit single/dual channel (optional eDP 1.4 : 4096 x 2304@60Hz) 1 x VGA; 1920 x 1200 @60Hz (default) 1 x DDI (DisplayPort 1.2: 4096 x 2304@60Hz/ HDMI 1.4: 4096 x 2160@30/24Hz)

I/O

SATA	3 x SATA Gen3
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 ² C
GPIO	4-CH in & 4-CH out (SDIO optional)
Smart Battery	Yes

Mechanical and Environmental

Dimensions	95 x 95 mm
Board Thickness	2.0 mm
Operating Temperature	Industrial: -40°C to +85°C (-40°F to +185°F) with system thermal solution Standard: -20°C to +70°C (-4°F to +158°F), operation
Humidity	10%- 95% relative humidity, non-condensing
Vibration Endurance	3.5 Grms

Packing List

Quick installation guide

Ordering Information

Standard

CEM521-i7-8665UE (P/N: E38D521100)	COM Express Type 6 compact module with Intel® Core™ i7-8665UE, DDI, VGA, LVDS, GbE LAN, USB 3.0, and TPM
CEM521-i5-8365UE (P/N: E38D521102)	COM Express Type 6 compact module with Intel® Core™ i5-8365UE, DDI, VGA, LVDS, GbE LAN, USB 3.0, and TPM
CEM521-i3-8145UE (P/N: E38D521104)	COM Express Type 6 compact module with Intel® Core™ i3-8145UE, DDI, VGA, LVDS, GbE LAN, USB 3.0, and TPM
CEM521-CeL-4305UE (P/N: E38D521105)	COM Express Type 6 compact module with Intel® Celeron® 4305UE, DDI, VGA, LVDS, GbE LAN, USB 3.0, and TPM
CEM521-i7-8665UE (Ind.) (P/N: E38D521110)	COM Express Type 6 compact module with Intel® Core™ i7-8665UE, DDI, VGA, LVDS, GbE LAN, USB 3.0, and TPM (wide temperature)
CEM521-i5-8365UE (Ind.) (P/N: E38D521111)	COM Express Type 6 compact module with Intel® Core™ i5-8365UE, DDI, VGA, LVDS, GbE LAN, USB 3.0, and TPM (wide temperature)
CEM521-i3-8145UE (Ind.) (P/N: E38D521112)	COM Express Type 6 compact module with Intel® Core™ i3-8145UE, DDI, VGA, LVDS, GbE LAN, USB 3.0, and TPM (wide temperature)

Optional

CEB94011 (P/N: E394011100)	COM Express Type 6 evaluation board
E39J016100	CEM521 heat sink with fan
7128D521000E	CEM521 heat spreader

Block Diagram

