

# CEM310

COM Express Type 10 Mini Module with Intel® Atom® x5 and x7 Processor

## Features

- Intel® Atom® x5 and x7 processors (Apollo Lake)
- Onboard 4GB DDR3L memory (8GB optional)
- Max. up to 4 lanes of PCI Express
- 2 SATA-600
- 2 USB 3.0 and 8 USB 2.0

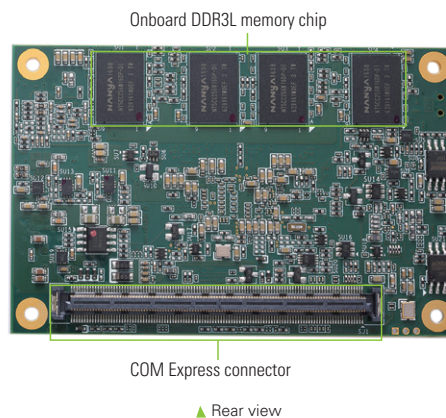
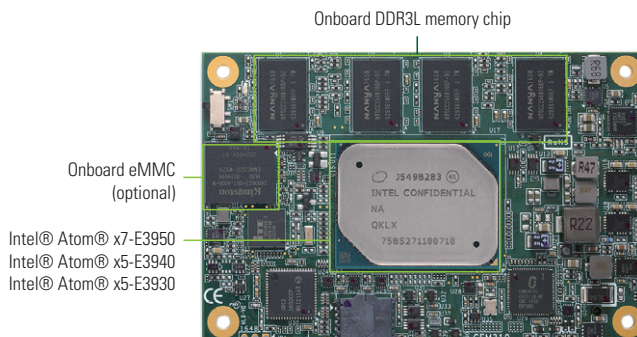


## Core System

CPU	Intel® Atom® x7-E3950 (2.0 GHz) Intel® Atom® x5-E3940 (1.8 GHz) Intel® Atom® x5-E3930 (1.8 GHz)
System Memory	4GB DDR3L memory onboard, up to 8GB (optional)
Chipset	SoC integrated
BIOS	AMI UEFI BIOS (Legacy Free)
SSD	eMMC 5.0 up to 64GB (optional)
Watchdog Timer	65536 levels, 0 to 65535 sec.
Expansion Interface	4 x PCIe x1 (3 x1 while internal LAN is connected)
Battery Lithium	N/A
Power Input	ATX: +12V, +5VSB AT: +12V Wide range input: +4.75V to +20V
Dimensions	84 x 55 mm
Board Thickness	2.0 mm
Operating Temperature	Industrial: -40°C to +85°C (-40°F to +185°F) Standard: -20°C to +70°C (-4°F to +158°F)
Humidity	10% to 95% relative humidity, non-condensing
Vibration Endurance	3.5 Grms

## I/O

SATA	2 x SATA-600
Hardware Monitoring	Yes
Ethernet	1 x 10/100/1000 Mbps Ethernet with Intel® i210-IT; supports Wake-on-LAN, PXE Boot ROM
Audio	HD link interface to baseboard for Codec
USB	2 x USB 3.0 8 x USB 2.0
Serial	1 x LPC 1 x SPI 2 x TX/RX
TPM	N/A
SMBus	Yes
Others	1 x I <sup>2</sup> C
GPIO	4-CH in & 4-CH out
Smart Battery	Yes



## Packing List

Chipset	Intel® Gen 9 Graphics Engine Supports Gfx – DX12.0, OCL2.0, OGL 4.3
Display Interface	1 x DDI (DP, HDMI, DVI) 1 x LVDS; 18/24-bit single channel (eDP optional)

## Packing List

Quick installation guide

## Ordering Information

Standard	
CEM310PG-E3930+4GB (Ind) (P/N: E38D310100)	COM Express Type 10 Mini module with Intel® Atom® x5-E3930, DDI, LVDS, USB 3.0 and GbE LAN (Ind. Temp)
CEM310PG-E3940+4GB (Ind) (P/N: E38D310102)	COM Express Type 10 Mini module with Intel® Atom® x5-E3940, DDI, LVDS, USB 3.0 and GbE LAN (Ind. Temp)
CEM310PG-E3950+4GB (Ind) (P/N: E38D310103)	COM Express Type 10 Mini module with Intel® Atom® x7-E3950, DDI, LVDS, USB 3.0 and GbE LAN (Ind. temp)
CEM310PG-E3930+4GB (P/N: E38D310104)	COM Express Type 10 Mini module with Intel® Atom® x5-E3930, DDI/LVDS, USB 3.0 and GbE LAN
CEM310PG-E3940+4GB (P/N: E38D310105)	COM Express Type 10 Mini module with Intel® Atom® x5-E3940, DDI, LVDS, USB 3.0 and GbE LAN
CEM310PG-E3950+4GB (P/N: E38D310106)	COM Express Type 10 Mini module with Intel® Atom® x7-E3950, DDI, LVDS, USB 3.0 and GbE LAN
Optional	
7128D310000E	CEM310 heatspreader
5078D840200E	Heatsink with fan (need to be with 7128D310000E)
CEB94017 (P/N: E394017101)	COM Express Type 10 development baseboard