

# CEM310

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

## Features

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

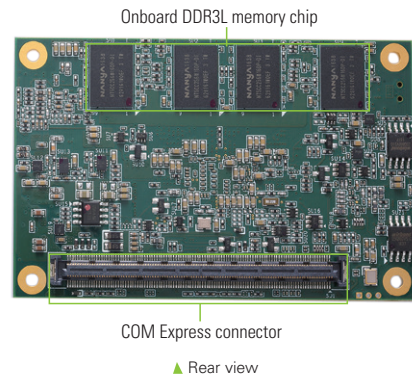
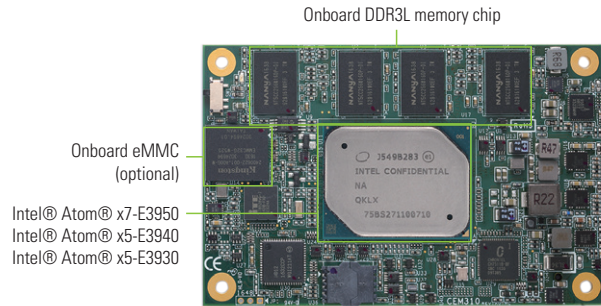


### Core System

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
Chipset	SoC integrated
BIOS	AMI UEFI BIOS (Legacy Free)
Storage	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) with system thermal solution Standard: -20°C to +70°C (-4°F to +158°F)
Humidity	10% - 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 (DisplayPort, 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

