

# CEM312

COM Express Type 6 Compact Module with Intel® Atom® x5 and x7 Processor

## Features

- Intel® Atom® x5 and x7 processors (Apollo Lake)
- 2 DDR3L-1600 SO-DIMM for up to 8GB of memory
- Max. up to 4 lanes of PCI Express
- 2 SATA-600
- 4 USB 3.0 and 8 USB 2.0
- AXView 2.0 intelligent remote management software
- TPM 1.2 supported (optional)

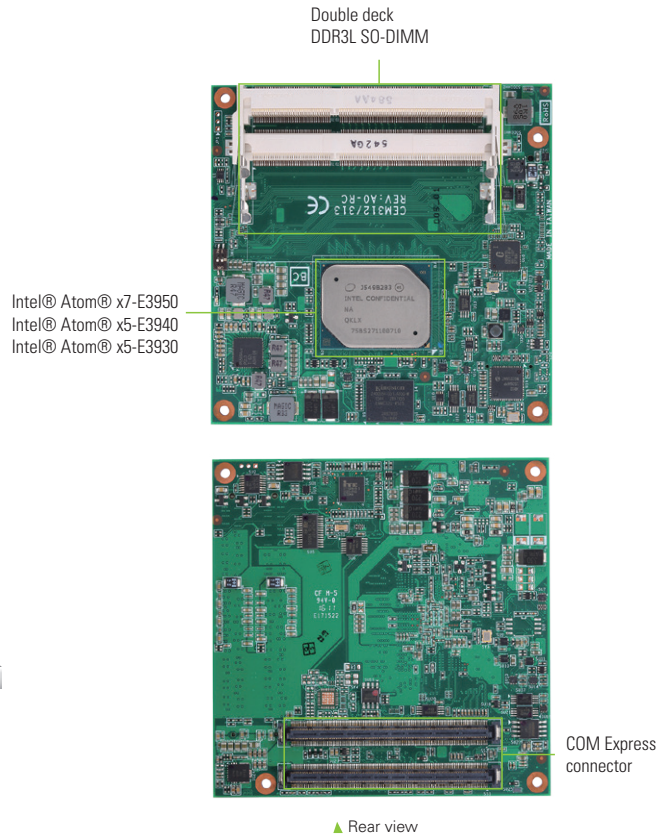


### Core System

CPU	Intel® Atom® x7-E3950 (2.0 GHz) Intel® Atom® x5-E3940 (1.8 GHz) Intel® Atom® x5-E3930 (1.8 GHz)
System Memory	2 x 204-pin SO-DIMM DDR3L-1600, up to 8GB
Chipset	SoC integrated
BIOS	AMI UEFI BIOS (Legacy Free)
SSD	eMMC 5.0 64GB (optional)
Watchdog Timer	65536 levels, 0 to 65535 sec.
Expansion Interface	4 x PCIe (3 lanes while internal LAN is connected)
Battery Lithium	N/A
Power Input	ATX: 12V, +5VSB AT: 12V
Dimensions	95 x 95 mm
Board Thickness	2.0 mm
Operating Temperature	-40°C to +85°C (-40°F to +185°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	4 x USB 3.0 8 x USB 2.0
Serial	1 x LPC 1 x SPI 2 x TX/RX
TPM	TPM 1.2 (optional)
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 Graphics Engine Supports Gfx - DX12.0, OCL 2.0, OGL 4.3
Display Interface	2 x DDI (DP, HDMI, DVI); VGA optional 1 x LVDS; 18/24-bit dual channel (eDP option)

### Packing List

Quick installation guide; user's manual/utility CD

### Ordering Information

Standard	
CEM312PG-E3950 (P/N : E38D312100)	COM Express Type 6 Compact module with Intel® Atom® x7-E3950, DDI, LVDS, USB 3.0 and GbE LAN
CEM312PG-E3940 (P/N : E38D312101)	COM Express Type 6 Compact module with Intel® Atom® x5-E3940, DDI, LVDS, USB 3.0 and GbE LAN
CEM312PG-E3930 (P/N : E38D312103)	COM Express Type 6 Compact module with Intel® Atom® x5-E3930, DDI, LVDS, USB 3.0 and GbE LAN
Optional	
CEB94011 (P/N : E394011100)	COM Express Type 6 evaluation board
7128D312000E	CEM312 heatspreader
7118D312000E	CEM312 heatsink

