

# CEM312 NEW

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

## Features

- Intel® Atom® x5 and x7 processor (Apollo Lake)
- 2 DDR3L-1600 SO-DIMM, up to 8GB
- Max. up to 4 lanes of PCIe
- 2 SATA-600
- 4 USB 3.0 and 8 USB 2.0
- AXView 2.0 intelligent remote management software for industrial IoT applications

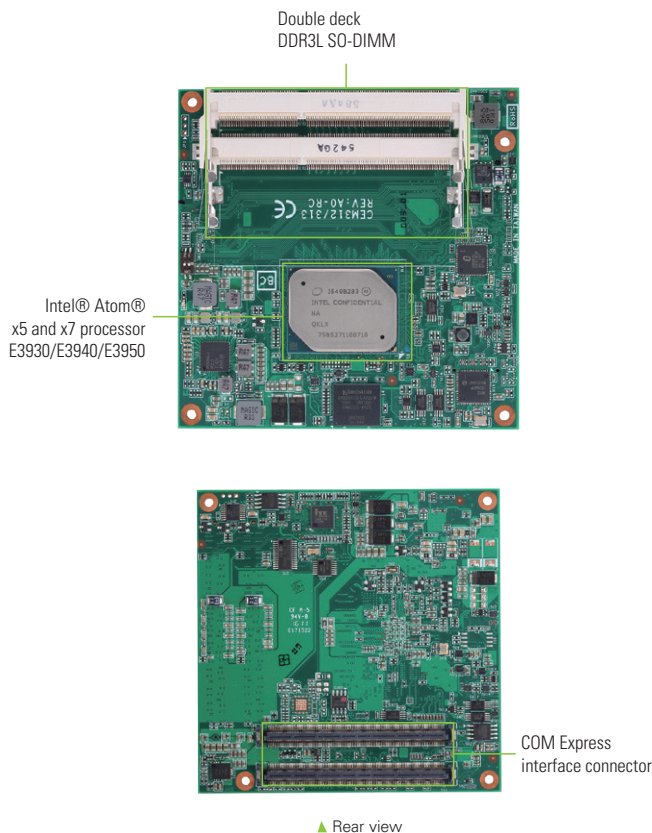


### Core System

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
SSD	eMMC 5.0 32GB
Watchdog Timer	65536 levels, 0 ~ 65535 sec.
Expansion Interface	4 x PCIe lanes (3 lanes while internal LAN is connected)
Battery Lithium	N/A
Power Input	ATX: 12V, +5VSB AT: 12V
Size	95 x 95 mm
Board Thickness	2.0 mm
Temperature	-40°C ~ +85°C (-40°F ~ +185°F), operation
Operation Humidity	10% ~ 95% relative humidity, non-condensing
Vibration	3.5 Grms

### I/O

MIO	1 x LPC interface 1 x SPI interface 2 x Serial TX/RX 1 x I <sup>2</sup> C
SATA	2 x SATA-600
Hardware Monitoring	Yes
Ethernet	1 port as 10/100/1000 Mbps supports Wake-on-LAN, PXE Boot ROM with Intel® i210IT
Audio	HD link interface to baseboard for Codec
USB	4 x USB 3.0 8 x USB 2.0
TPM	ST for trusted platform
SMBus	Yes
Digital I/O	4 channels IN & 4 channels 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	COM Express Type 6 compact module with Intel® Atom® x7-E3950, DDI/LVDS, USB 3.0 and GbE LAN
CEM312PG-E3940	COM Express Type 6 compact module with Intel® Atom® x5-E3940, DDI/LVDS, USB 3.0 and GbE LAN
CEM312PG-E3930	COM Express Type 6 compact module with Intel® Atom® x5-E3930, DDI/LVDS, USB 3.0 and GbE LAN
Optional Accessories	
CEB94006 (P/N: E394006100)	ATX form factor Type 6 evaluation board

# Block Diagram

