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)

SDRAM
- Yes

Others
- 1 x I2C

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)

Packaging List

Quick installation guide; user’s manual/utility CD

Ordering Information

Standard

CEM312PG-E3950 (P/N : E38D312100)
Intel® Atom® x7-E3950, DDI, LVDS, USB 3.0 and GbE LAN

CEM312PG-E3940 (P/N : E38D312101)
Intel® Atom® x5-E3940, DDI, LVDS, USB 3.0 and GbE LAN

CEM312PG-E3930 (P/N : E38D312103)
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 heatsinker

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