

## Main Features

- On-board Intel Atom® processor E39xx processor family
- CPU upside down design
- 2 x 204-pin SO-DIMM DDR3L
- Triplex display: HDMI/VGA/LVDS
- 1 x M.2 (2242) B key
- 2 x Intel® i210-IT PCI express Gigabit Ethernet
- 1 x SATA 2.0
- 2 x USB 3.0, 4 x USB 2.0, 4-in/4-out GPIO, Mic-in, Speak-out
- Serial port: 1 x RS232, 1 x RS232/422/485 port
- Support AT/ATX mode and single +12VDC input

## Product Overview

EBC 357X is under the 3.5" SBC series which is based on multi-core SoC Intel Atom® processor (formerly codenamed "Apollo Lake"). EBC 357X series operates at wide temperature range with low power consumption. This series of 3.5-inch board is aimed at embedded applications. It supports a maximum memory of 16GB DDR3L SDRAM. Also, it offers three display outputs of VGA, HDMI and LVDS in order to provide the flexibility of supporting a range of peripherals and triplex display. The EBC 357X series is ideal for battery-powered portable devices, multimedia HMI panels, outdoor systems installed in harsh environments, home automation and thin clients.

## Specifications

### CPU Support

- Intel Atom® processor E39xx processor family, 14nm core, Quad/Dual Core, 1.8/2.0GHz, 2 x L2-Cache 1MB 16-way shared per 2 cores, TDP: 6.5W/12W

### Main Memory

- Dual DDR3L/SO-DIMMs, up to 8GB

### BIOS

- AMI system BIOS
- Plug and play support

### Display

- 1 x HDMI connector (resolution up to 3840 x 2160@30Hz)
- 1 x VGA connector (resolution up to 1920 x 1200)
- LVDS interface: 1 x single (18/24 bit) LVDS panel, resolution up to 1366 x 768. (Dual channel optional)

### Storage

- 1 x M.2 (2242) B key
- 1 x SATA port

### Audio

- Realtek ALC888s HD codec
- 1 x 4 2.0 pitch pin header for Mic-in
- 1 x 4 2.0 pitch pin header for Line-out
- 1 x 5 2.0 pitch pin-header for Speak-out

### On-board LAN

- 2 x Intel® I210-IT GbE controller
- Support PXE boot from LAN, wake on LAN function

### Expansion Slot

- 1 x M.2 slot M key support PCIe (default) & SATA interface

### Power Requirements

- AT/ATX mode (by jumper setting default-AT)
- 4-Pin power connector (right angle) for DC power input
- Single power 12V DC input

### I/O

- Serial port x 4
  - COM1/3/4: RS232 1 x 10-pin 1.0mm JST connector. (COM3/4 optional)
  - COM2: RS232/422/485, 1 x 10-pin 1.0mm JST connector
- 4-in/4-out GPIO
- One 2 x 7 2.0mm pin header with SMBus/power on-off/system reset/power/storage LED
- One 4-pin fan connector support PWM fan

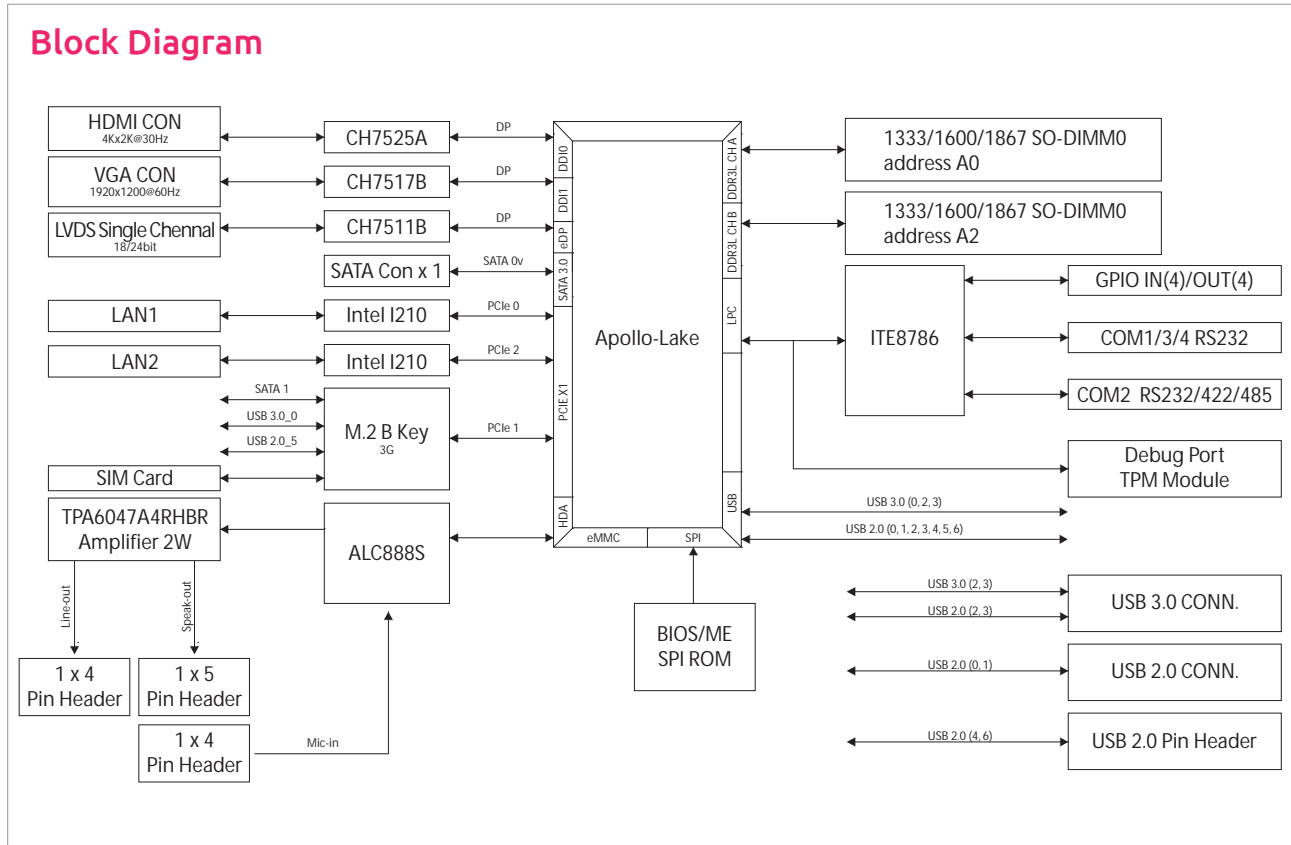
### Optional Function

- TPM module (EBK-TPM)

### Dimensions

- 146mm (L) x 102mm (W) (5.7" x 4.0")

## Block Diagram



### Environment

- Board level operating temperatures: -40°C~85°C

### Relative Humidity

- 10%~90% (operating, non-condensing)
- 5%~95% (non-operating, non-condensing)

### Certifications

- Meet CE
- FCC Class A

## Ordering Information

- **EBC 357X-E3950 (P/N: 10E00035700X0) RoHS Compliant**  
Low power embedded board with Intel Atom® processor E3950 and extended -40°C~85°C, with HDMI/VGA/LVDS, 2 x USB 3.0, 4 x USB 2.0, 2 x COMs, 1 x M.2 B key, 2 x Gigabit LAN, 1 x SATA
- **EBC 357X-E3930 (P/N: 10E00035701X0) RoHS Compliant**  
Low power embedded board with Intel Atom® processor E3930 and extended -40°C~85°C, with HDMI/VGA/LVDS, 2 x USB 3.0, 4 x USB 2.0, 2 x COMs, 1 x M.2 B key, 2 x Gigabit LAN, 1 x SATA

### Optional Accessories

- **7P+15P SATA cable (P/N: 60233AT136X00)**
- **COM port cable (P/N: 60233SIO62X00)**