EBC 357X

Main Features

- Onboard Intel® Atom™ processor E39xx processor family
- CPU upside down design
- 2 x 204-pin SO-DIMM DDR3L
- Triplex display: HDMI/VGA/LVDS
- 1 x mini-PCIe/1 x NGFF

- 2 x Intel® i210-IT PCI express Gigabit Ethernet
- 2 x SATA 2.0
- 4 x USB 3.0, 4-in/4-out GPIO, Mic-in, Speak-out
- Serial port: 3 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. This series board provides reliable operation within wide operating temperature range of -40 to 85 degrees Celsius. 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 16GB

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 dual (24/48-bit) LVDS panel, resolution up to 1920 x 1200 DF13 20-pin LVDS connector for internal connection

Storage
- 1 x eMMC 5.0 support (optional)
- 2 x 7-pin SATA connector, one of SATA supports SATA-DOM

Audio
- Realtek ALC886 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 NGFF (M.2) support M.2 SSD (optional), WWAN ,3G, pin header for SIM
- 1 x mini-PCI express slot support mSATA (optional) and Wi-Fi module

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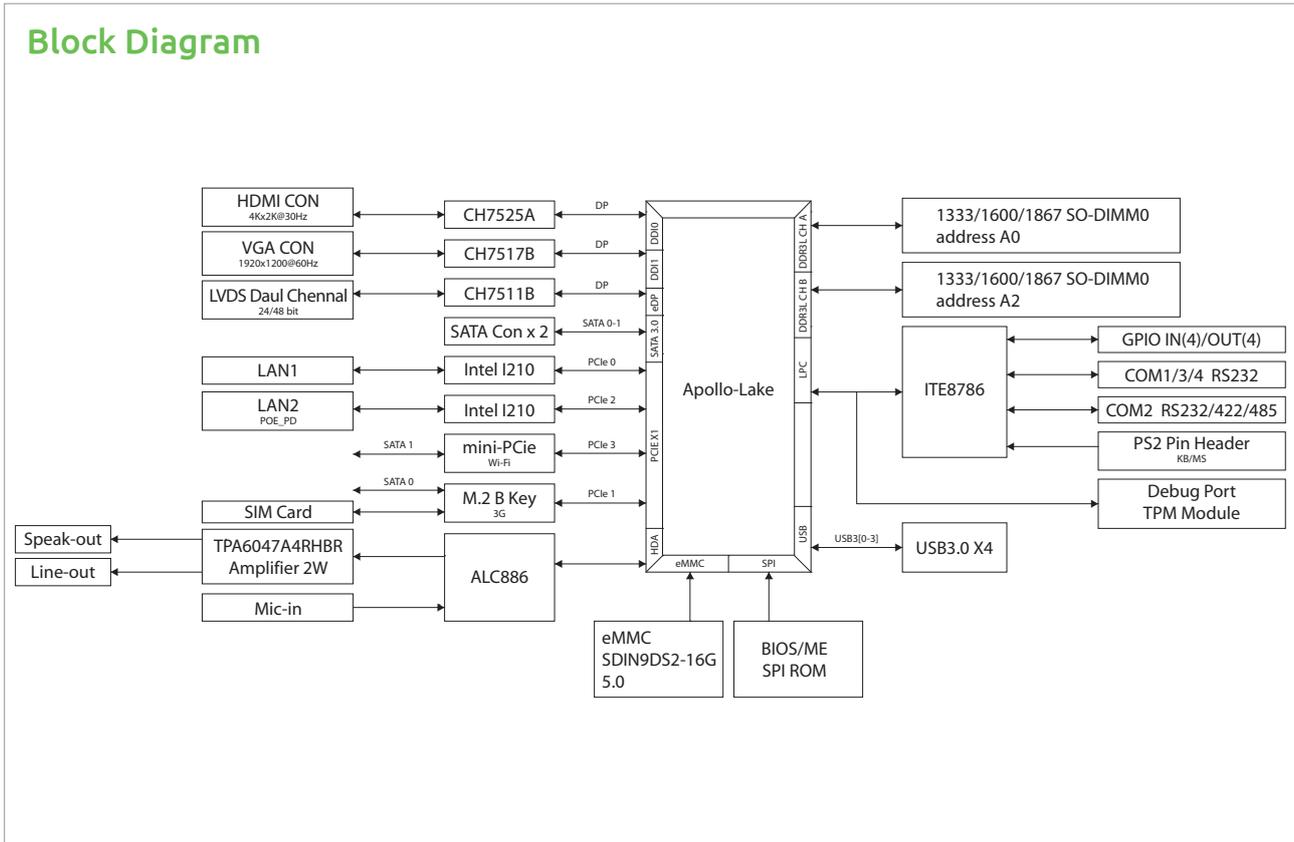- Single power 12V DC input

I/O
- Serial port x 4
  COM1/3/4: RS232 1 x 10-pin 1.0mm JST connector
  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 header with VCC 3.3V/TX/RX/GND for Zigbee module
- One 4-pin fan connector support PWM fan
- One 2 x 4/2.54mm pin header for PS2 keyboard & mouse

Optional function
- TPM module (EBK-TPM)
- PoE PD module support

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Block Diagram

Dimensions
♦ 146mm (L) x 102mm (W) (5.7" x 4.0")

Environment
♦ Board level operating temperatures: -40˚C to 85˚C

Relative humidity
♦ 10% to 90% (operating, non-condensing)
♦ 5% to 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 to + 85°C, with HDMI/VGA/LVDS, 4 x USB 3.0,
4 x COMs, 1 x mini-PCIe, 1 x NGFF(M.2), 2 x Gigabit LAN, 2 x SATA

♦ **EBC 357X-E3930 (P/N: 10E00035701X0) RoHS Compliant**
Low power embedded board with Intel® Atom™ processor E3930
and extended -40°C to + 85°C, with HDMI/VGA/LVDS, 4 x USB 3.0,
4 x COMs, 1 x mini-PCIe, 1 x NGFF(M.2), 2 x Gigabit LAN, 2 x SATA

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