

Main Features

- Onboard Intel Atom® processor E3800 product family
- One 204-pin SO-DIMM socket supports up to 8 GB DDR3L 1066/1333 MHz SDRAM
- Display: HDMI/VGA/1 x LVDS (2 x DF13 20-pin 24/48-bit single channel)
- 2 x mini-PCIe
- 2 x Intel® I210 PCI express Gigabit Ethernet
- 2 x SATA 2.0
- 4 x USB 2.0, 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 355XP series of 3.5" boards is based on the multi-core SoC Intel Atom® processor E3800 product family (formerly codenamed "Bay Trail"). This series of 3.5" boards operates at wide temperature range with low power consumption, and features USB 2.0 ports and Intel® Gen7 graphics with multi-display support. NEXCOM's EBC 355XP series of 3.5-inch boards are aimed at embedded applications. The EBC 355XP series support a maximum memory of 8GB DDR3L SDRAM. It also offers four USB 2.0 ports along with three display outputs of VGA, HDMI and LVDS to provide the flexibility to support a range of peripherals and dual display. The 3.5" boards provide reliable operation within wide operating temperature range of -40 to 85 degrees Celsius. The EBC 355XP 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

- Support Intel Atom® processor E3800 product family

Main Memory

- Single 204-pin SO-DIMM socket supports up to 8 GB DDR3L 1066/1333 MHz SDRAM

Platform Control Hub

- Intel Atom® processor E3800 product family (formerly codenamed "Bay Trail")

BIOS

- AMI system BIOS
- Plug and play support
- Advanced power management and advanced configuration & power interface support

Display

- Integrated Intel® Gen7 graphics engine
- Supports VGA and HDMI interface
- Analog VGA interface: 1 xDB-15 connector, resolution up to 1920 x 1200@75Hz
- HDMI interface: 1 x HDMI 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

Audio

- Realtek ALC888 CODEC for high definition:
 - 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 Gigabit Ethernet
- Support PXE boot from LAN, wake on LAN function

Expansion

- 2 x mini-PCIe

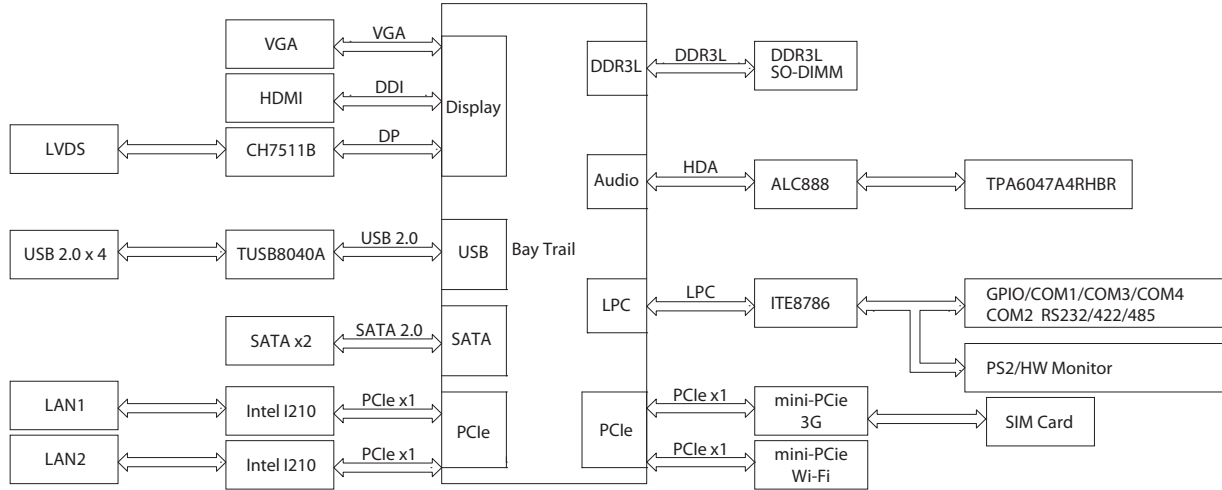
I/O Interface

- Serial port: 4 ports
 - COM1, 3, 4 support RS232 with 10-pin box header
 - COM2 support RS232/422/485 with 10-pin box header
- USB 2.0: 4 ports
 - 4 x ports edge connector
- 8 GPIO lines via header (GPI 0~3 and GPO0~3) TTL level (0/5V)
- Onboard power LED and HDD active LED pin header
- 1 x 4-pin fan connector (for CPU)
- 1 x Keyboard/mouse pin header
- Onboard buzzer/SMBus2.0/reset SW/on & off switch button

Edge I/O Interface

- 1 x VGA connector

Block Diagram



- 1 x HDMI connector
- 2 x Dual stack USB 2.0 connector
- 2 x RJ45 with LED connector

Watchdog Timer

- Watchdog time-out can be programmable by software from 1 second to 255 seconds and from 1 minute to 255 minutes (tolerance 15% under room temperature 25°C)

Storage

- 2 x SATA 2.0 ports

System Monitor

- Monitoring of 4 voltages and 2 temperatures
- 4 voltage (Vcore, +12V, +3.3V, 5V)
- 2 temperatures (CPU, system)
- 1 fan speed detection

On-board RTC

- On-chip RTC with battery backup
- 1 x External Li-ion battery

Power Requirements

- Power requirement: +12V DC Input
- One 4-pin power connector

Dimensions

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

Environment

- Board level operating temperatures: -40°C to 85°C
- Storage 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 355XP-E3845 (P/N: 10E00035525X0)**

Low power embedded board with Intel Atom® processor E3845 and extended -40°C to + 85°C w/ HDMI/24/48bit LVDS/4 x USB 2.0/ 4 x COMs/2 x mini-PCle/2 x Gigabit LAN/2 x SATA