



## Main Features

- On-board 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 355X 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® Gen 7 Graphics with multi-display support. NEXCOM's EBC 355X series of 3.5-inch boards are aimed at embedded applications. The EBC 355X 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 355X 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

- Atom™ processor E3800 product family (formerly codenamed "Bay Trail-I")

### BIOS

- AMI System BIOS
- Plug and play support
- Advanced Power Management and Advanced Configuration & Power Interface support

### Display

- Integrated Intel® Gen.7 Graphics Engine
- Supports VGA and HDMI interface
- Analog VGA interface: 1 x DB-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 ALC886 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 speaker out

### On-board LAN

- 2 x Intel® i210 Gigabit Ethernet
- Support PXE boot from LAN, wake on LAN function

### Expansion

- 2 x Mini-PCIe

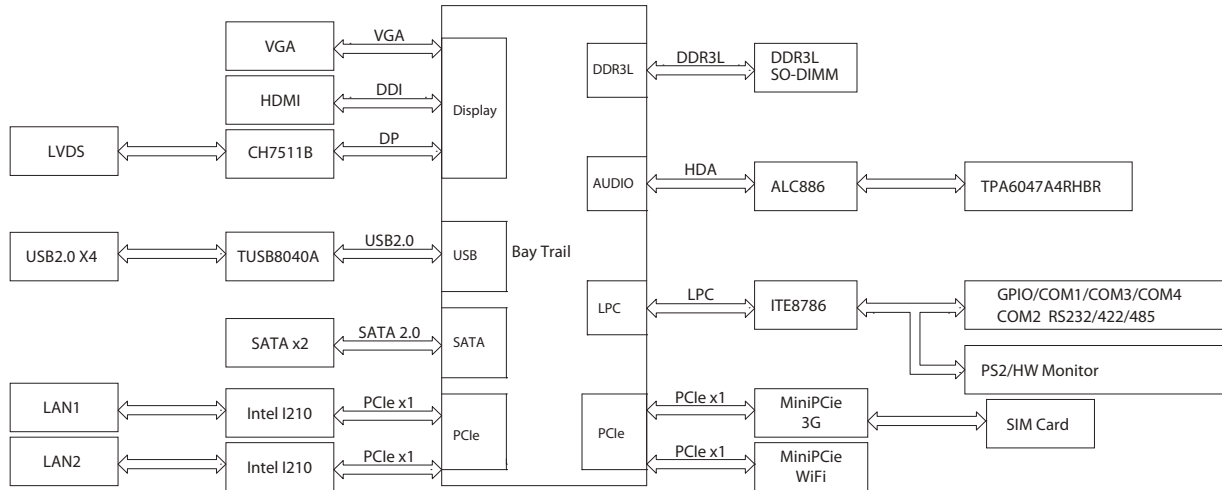
### I/O Interface

- 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 GPO 0~3) TTL level (0/5V)
- On-board 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
- 1 x HDMI connector

## Block Diagram



- 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 355X-E3826 (P/N: TBD) RoHS Compliant

Low power embedded board with Intel® Atom™ processor E3826 and extended -40°C to + 85°C w/ HDMI/24/48bit LVDS/4 x USB2.0/4 x COMs/2 x Mini-PCle/2 x Gigabit LAN/2 x SATA

### ♦ EBC 355X-E3845 (P/N: TBD) RoHS Compliant

Low power embedded board with Intel® Atom™ processor E3845 and extended -40°C to + 85°C w/ HDMI/24/48bit LVDS/4 x USB2.0/4 x COMs/2 x Mini-PCle/2 x Gigabit LAN/2 x SATA