

## 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 SATA2.0
- 4 x USB3.0, 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 355 is a 3.5" SBC embedded board with an on-board Intel® Atom™ processor E3800 product family (formerly codenamed "Bay Trail-I") with 1MB L2 cache, which supports DDR3L 1066/1333 memory, along with integrated Intel® Gen. 7 Graphics Engine Enhanced Gfx & Video, support DX 11\*, OGL3.2, Full HD decode (MPEG2, VC1, AVC, H.264), along with integrated graphics for large display applications to support multiple displays. Intel® Atom™ processor E3800 product family provides two SATA, four serial ports, four USB3.0 ports, two Gigabit Ethernet LAN port, and two Mini-PCIe interfaces for application. Able to support matrix-displays with rich I/O, the EBC 355 is a great solution featuring a low power consumption and small footprint for multimedia applications.

## 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

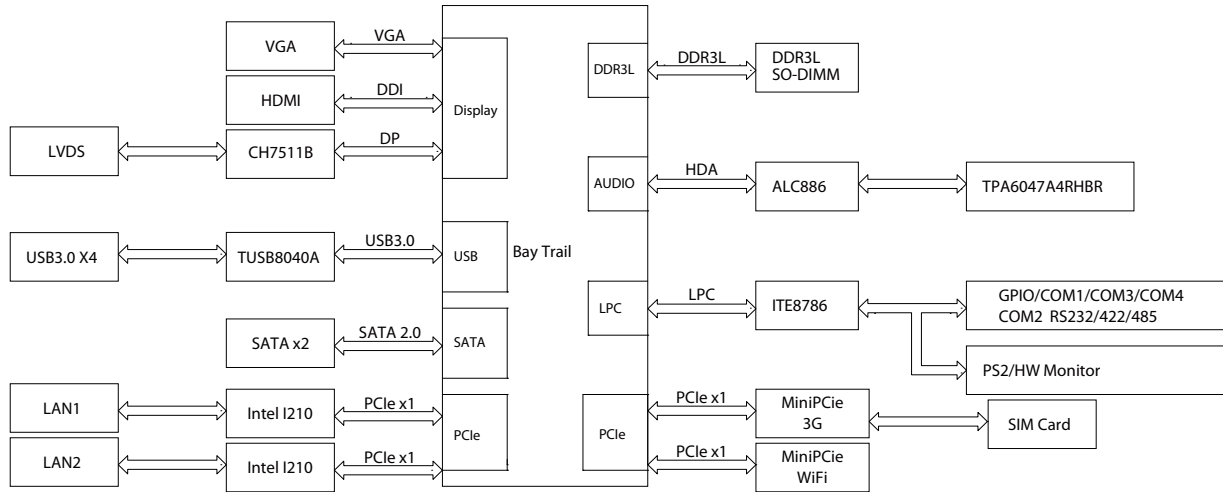
### Expansion

- 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
- USB3.0: 4 ports  
4 x ports edge connector
- 8 GPIO lines via header (GPI 0~3 and GPO0~3) 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

## Block Diagram



### Edge I/O Interface

- 1 x VGA connector
- 1 x HDMI connector
- 2 x dual stack USB3.0 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 SATA2.0 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: -20°C to 60°C
- Storage temperatures: -25°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 355-E3826 (P/N: 10E00035500X0) RoHS Compliant**  
Low power embedded board with Intel® Atom™ processor E3826 and based on Intel® integrated graphics engine w/ HDMI/24/48bit LVDS/4 x USB3.0/4 x COMs/2 x Mini-PCIe/2 x Gigabit LAN/2 x SATA
- **EBC 355-E3845 (P/N: 10E00035502X0) RoHS Compliant**  
Low power embedded board with Intel® Atom™ processor E3845 and based on Intel® integrated graphics engine w/ HDMI/24/48bit LVDS/4 x USB3.0/4 x COMs/2 x Mini-PCIe/2 x Gigabit LAN/2 x SATA
- **EBC 355 Cable Kit (P/N: 10E00035501X0)**