

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 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 355 is a 3.5" SBC embedded board with an onboard Intel Atom® processor E3800 product family (formerly codenamed "Bay Trail") with 1MB L2 cache, which supports DDR3L 1066/1333 memory, along with integrated Intel® Gen7 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 USB 3.0 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

- 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 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 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

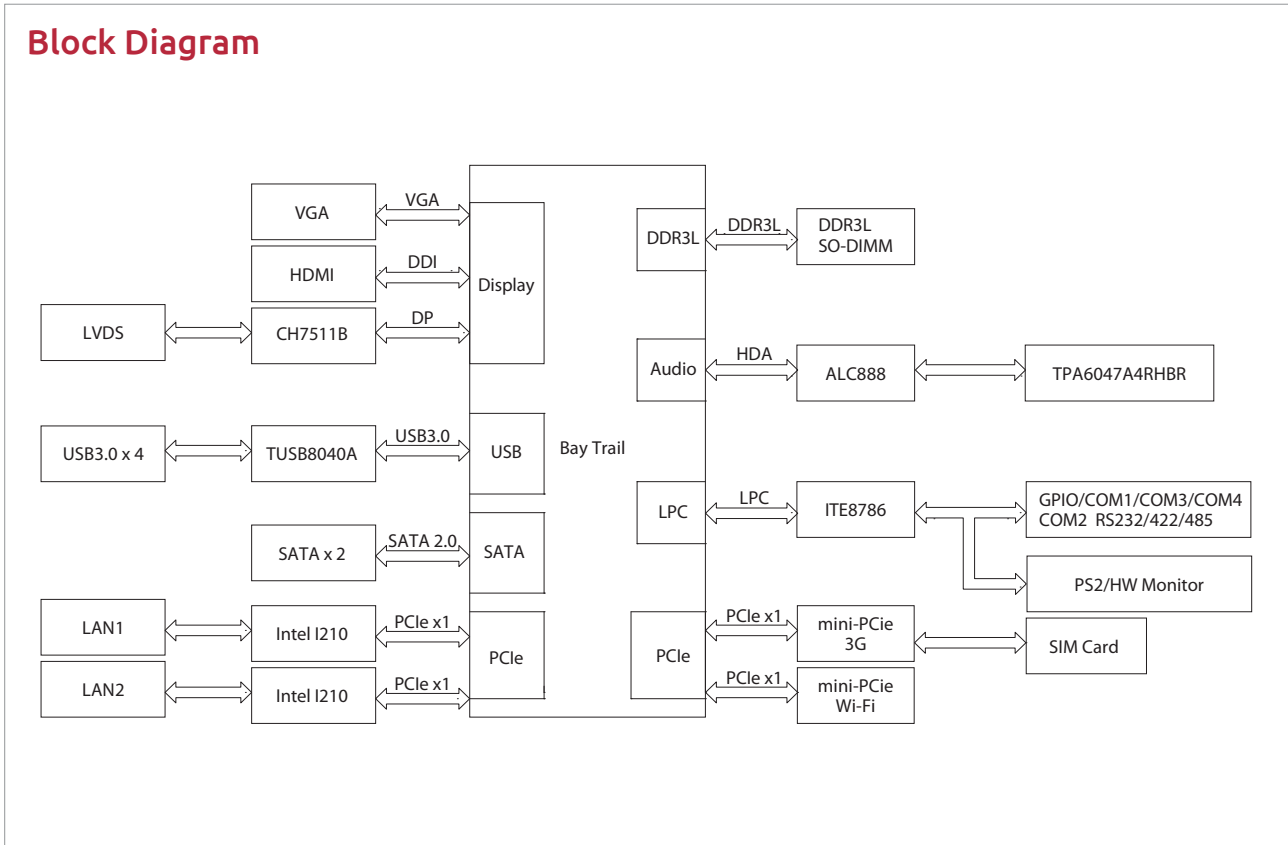
I/O Interface

- 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 3.0: 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/SMBus 2.0/reset SW/on & off switch button

Edge I/O Interface

- 1 x VGA connector
- 1 x HDMI connector
- 2 x Dual stack USB 3.0 connector

Block Diagram



- 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: -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, 24/48-bit LVDS, 4 x USB 3.0, 4 x COMs, 2 x mini-PCle, 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, 24/48-bit LVDS, 4 x USB 3.0, 4 x COMs, 2 x mini-PCle, 2 x Gigabit LAN, 2 x SATA
- **EBC 355 cable kit (P/N: 10E00035501X0)**