

Main Features

- ◆ Onboard Intel® Atom™ N270 1.6 GHz CPU
- ◆ Intel® 945GSE/ICH7-M Chipset
- ◆ One 200-pin SODIMM socket supports up to 2 GB DDR2 400/533 MHz SDRAM
- ◆ 24-bit LVDS Dual View, 2-CH LVDS
- ◆ 5.1-CH Audio
- ◆ 1 CF, 1 Mini-PCle Card
- ◆ 1 SATA, 3 COM, 6 USB, 16-bit GPIO

Product Overview

The EBC 342 is a 3.5" embedded board with an on-board Intel® Atom™ N270 1.6GHz processor with 512 KB L2 cache by 533/667 MHz FSB. The EBC 342 features Intel® 945GSE and ICH7-M chipsets, which supports DDR2 400/533 memory, along with integrated GMA950 graphics for large display application to support Multiple Display.

The South Bridge ICH7-M provides a Compact Flash socket, four serial ports, six USB 2.0 ports, two Gigabit Ethernet LAN port, one Mini-PCle interface for application.

The EBC 342 is a great solution featuring a low power consumption processor and small footprint with versatile displays and numerous I/O port support at industrial applications.

Specifications

CPU Support

- ◆ Support Intel® Atom™ N270 1.6GHz processor with 533MHz FSB

Main Memory

- ◆ 1 x 200-pin SO-DIMM socket, up to 2GB non-ECC 400/533 DDR2 memory

Chipset

- ◆ Intel® 82945GSE Graphic Controller Hub (GMCH)
- ◆ Intel® 82801 GBM ICH7 Mobile (ICH7-M)

BIOS

- ◆ Award system BIOS
- ◆ Plug & Play support
- ◆ Advanced Power Management
- ◆ Advanced Configuration & Power Interface
- ◆ 8M bits SPI ROM

On-board LAN

- ◆ 2x Realtek RTL8111C-GR PCI Express Gigabit Ethernet
- ◆ Support Boot From LAN (PXE)
- ◆ 2 x RJ45 with LED

Display

- ◆ Intel® 945GSE integrated 3D graphics engine, based on IntelGMA950 architecture, delivers sophisticated graphics for large display application, dual independent display support, at graphics core speeds up to 166MHz, provides a wealth of options for high-resolution displays

- ◆ Analog VGA interface:

1 x DB15 VGA port
Resolution up to 1600 x 1200 at 85 Hz, 2048x1536 at 75Hz

- ◆ LVDS interface:

SDVO w/ CH7308B single/dual LVDS transmitter to single (24bit) or dual pixel (48bit) LVDS panel, resolution up to 1600 x 1200
2 x DF13 20-pin LVDS connector for internal connection

- ◆ CCFL interface:

1 x CCFL for LCD Panel Backlight Inverter

Audio

- ◆ Realtek ALC888 CODEC for High Definition
- ◆ 1 x Mic-in and 1 x Line-out Pin header

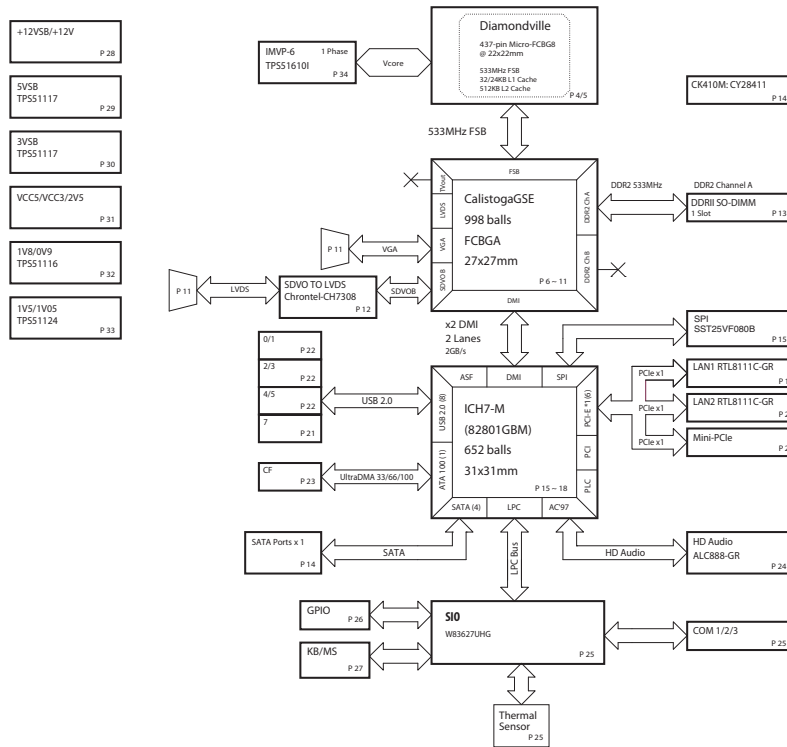
Expansion

- ◆ 1 x Mini-PCle

I/O Interface

- ◆ Serial port: 3 port, One DB9 Connector and Two 2 x 5 2.0mm box header serial
- ◆ Parallel port: 1 x 26-pin box header
- ◆ USB 2.0: 6 ports, 2 ports edge connector, 2 ports by 2.0mm JST connector, 2 ports by 2.0mm pin header
- ◆ 8 GPIO lines via header (GPI 0-3 and GPO0-3) TTL Level (0/5 V)
- ◆ On-board Power LED and HDD Active LED Pin Header
- ◆ 1 x 3-pin fan connector (for CPU)
- ◆ 1 x DB15 VGA connector
- ◆ 1 x Keyboard/Mouse pin header
- ◆ On board Buzzer/SMBus2.0/Reset SW

Block Diagram



Watchdog Timer

- Watchdog timeout 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

- 1 x SATA port
- 1 x CF socket

System Monitor

- Monitoring of 4 voltages and 2 temperatures
- 4 Voltage (Vcore, +12V, +3.3V, +1.5V)
- 2 Temperatures (CPU, System)

On-board RTC

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

Power Input

- Support AT and ATX mode

Power Requirements

| Power requirement | +5 V | +12 V |
|-------------------|------|-------|
| Full-Loading Mode | 1.26 | 0.66 |
| Idle Mode | 1.15 | 0.5 |
| Standby Mode | 0.86 | 0.41 |

Dimensions

- 3.5" form factor/146mm (L) x 105mm (W) (5.7"x4.1")

Environment

- Operating temperatures: 0°C to 60°C
- Storage temperature: -20°C to 85°C
- Relative humidity: Operating 10% to 90%, non-condensing

Certifications

- CE approval
- FCC Class A

Ordering Information

- **EBC 342 (P/N: 10E00034200X0)** RoHS Compliant
Low power Embedded Board with Intel® Atom™ N270 processor and based on Intel® 945GSE 3D graphics engine GMA950 w/ VGA/24bit LVDS/6 x USB2.0/3 x COMs/1 x Mini-PCle/2 x Gigabit LAN/1 x parallel port

Packing List

| Part No. | Description |
|---------------|----------------|
| 60233USB59X00 | USB CABLE |
| 60233PW145X00 | POWER CABLE |
| 60233PRT15X00 | PRINT CABLE |
| 60233ATA17X00 | SATA CABLE |
| 6023309101X00 | COM PORT CABLE |
| 60233PS203X00 | PS/2 CABLE |