



Main Features

- On-board Intel® Atom™ processor D2550 1.86GHz CPU
- Intel® NM10 Express chipset
- One 204-pin SO-DIMM socket supports up to 4 GB DDR3 800/1066 MHz SDRAM
- Display: DVI-H & HDMI & LVDS (1 x DF13 20-pin 18/24-bit Single channel)
- 2 x Mini-PCIe
- 2 x Intel® 82574L PCI Express Gigabit Ethernet
- 2 x SATA
- 6 x USB, 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

The EBC 354 is a 3.5" SBC embedded board with an on-board Intel® Atom™ processor D2550 1.86GHz CPU with 1MB L2 cache, which supports DDR3 800/1066 memory, along with integrated SGX545 PowerVR Core @ 400/640 MHz Enhanced Gfx & Video, support DX*10.1, OpenGL 3.0, Full HD decode (MPEG2, VC1, AVC, H.264), along with integrated graphics for large display applications to support multiple displays. Intel® NM10 Express chipset provides two SATA, four serial ports, six USB2.0 ports, two Gigabit Ethernet LAN port, two Mini-PCIe interface for application. Able to support matrix-displays with rich I/O, the EBC 354 is a great solution featuring a low power consumption and small footprint for multi-media applications.

Specifications

CPU Support

- Intel® Atom™ processor D2550 1.86GHz CPU

Main Memory

- One 204-pin SO-DIMM socket supports up to 4 GB DDR3 800/1066 MHz SDRAM

Chipset

- Intel® NM10 Express chipset

BIOS

- AMI BIOS
- Plug & Play support
- Advanced power management
- Advanced configuration & power interface
- 8M bits SPI ROM

On-board LAN

- 2 x Intel® PCI Express Gigabit Ethernet
- Support boot from LAN (PXE)
- 2 x RJ45 with LED

Display

- Intel® Atom™ processor D2550 integrated 3D graphics engine, which enhances Gfx & video, support DX*10.1, OpenGL 3.0, and Full HD decode (MPEG2, VC1, AVC, H.264), delivers sophisticated graphics for large display applications, supports dual independent displays at graphics base frequency up to 640MHz, and provides multi-options for high-resolution displays

DVI interface:

- 1 x DVI-I connector
- Resolution up to 1920 x 1200

HDMI interface:

- 1 x HDMI connector
- Resolution up to 1920 x 1200

LVDS interface:

- Single (24bit) LVDS panel, resolution up to 1440 x 900 DF13 20-pin LVDS connector for internal connection

CCFL interface:

- 1 x CCFL for LCD Panel Backlight Inverter

Audio

- Realtek ALC886 CODEC for High Definition
- 1 x Mic-in and 1 x Line-out Pin header

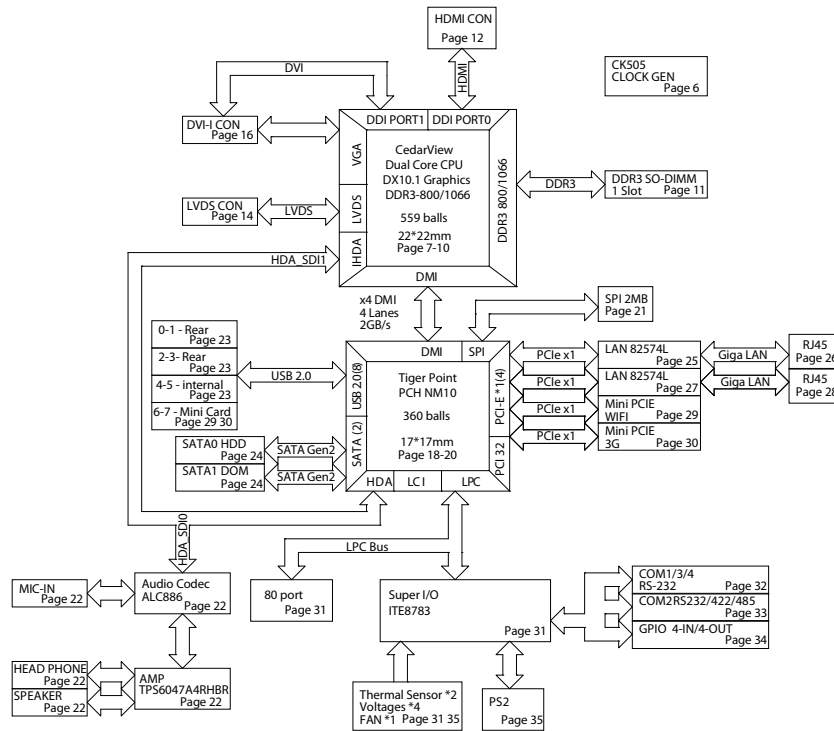
Expansion

- 2 x Mini-PCIe

I/O Interface

- Serial port: 4 port
COM1, 3, 4 support RS232 with 10-pin box header
COM2 support RS232/422/485 with 10-pin box header
- USB 2.0: 6 ports
4 ports edge connector
2 ports by 2.0mm JST 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

Block Diagram



- 1 x 3-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 DVI-I connector
- 1 x HDMI connector
- 2 x dual stack USB connector
- 2 x RJ45 with LED connector

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

- 2 x SATA port

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 Input

- Support AT and ATX mode

Power Requirements

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

Dimensions

- 3.5" SBC form factor/146mm (L) x 105mm (W) (5.7"x 4.1")

Environment

- Operating temperature: -15°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 354-2550 (P/N: 10E00035403X0) RoHS Compliant**
Low power embedded board with Intel® Atom™ processor D2550 and based on Intel® integrated graphics engine w/ DVI/24bit LVDS/ 6 x USB2.0/4 x COMs/2 x Mini-PCIe/2 x Gigabit LAN/2 x SATA
- **EBC 353/EBC 354 Cpu Cooler (P/N: 10E00035301X0)**
EBC 353/EBC 354 Cpu cooler with heat sink, Fau and Thermal Pad
- **Optional EBC 354 Cable Kit (P/N: 10E00035402X0)**
Include SATA cable, SATA power cable, PS2 KB/MS cable, DVI to DVI-D and D-SUB15 cable, COMPORT and USB cable