EBC 353

Main Features

- Onboard 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-I & LVDS (1 x DF13 20-pin 18/24-bit Single channel)
- 1 x Mini-PCIe; 1 x PCI-104

- 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 353 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, one PCI-104 , one Mini-PCIe interface for application. Able to support matrix-displays with rich I/O, the EBC 353 is a great solution featuring 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
- 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
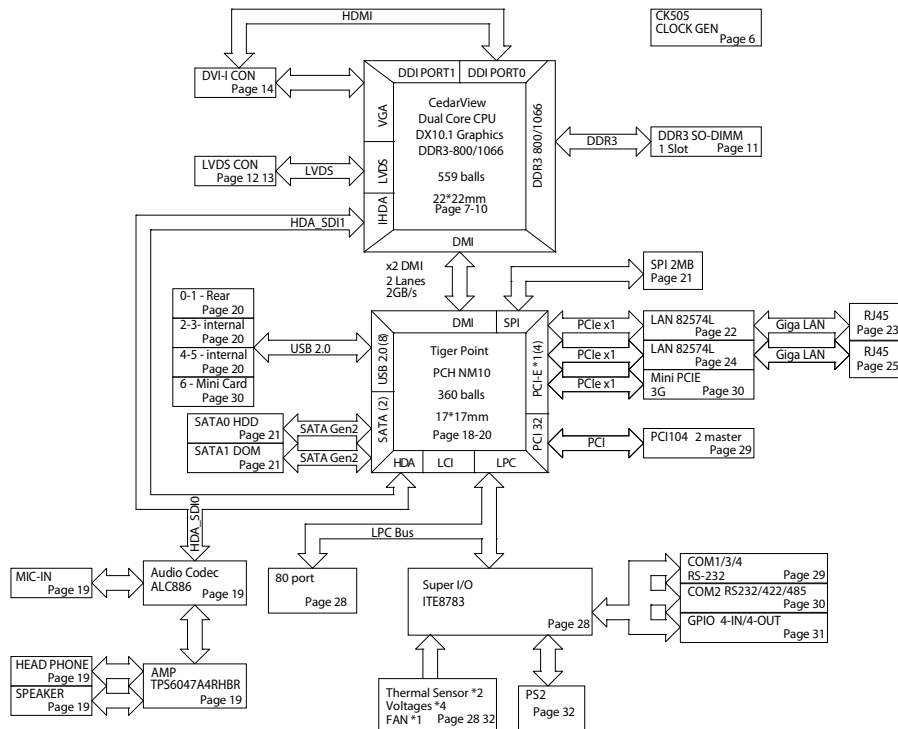- 1 x Mic-in and 1 x Line-out pin header

Expansion
- 1 x Mini-PCIe
- 1 x PCI-104

I/O Interface
- Serial port: 4 port
  COM1 support RS232 with DB9 connector
  COM2 support RS232/422/485 with 10-pin box connector
  COM3, 4 support RS232 with 10-pin box connector
- USB 2.0: 6 ports
  2 ports edge connector
  4 ports by 2.0mm JST connector
- 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 4-pin fan connector (for CPU)

NEXCOM

Block Diagram

- 1 x keyboard/mouse pin header
- On board buzzer/SMBus2.0/reset SW/o n & off switch button

Edge I/O Interface
- 1 x DVI-I connector
- 1 x COM1 support RS232 with DB9 connector
- 1 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: +12VDC 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 353-2550 (P/N: 10E00035303X0) RoHS Compliant**
  Low power embedded board with Intel® Atom™ processor D2550 and based on Intel® integrated graphics engine w/DVI/24-bit LVDS/6 x USB2.0/4 x COMs/1 x Mini-PCIe/2 x Gigabit LAN/2 x SATA/ 1 x PCI-104

- **EBC 353/EBC 354 Cpu Cooler (P/N: 10E00035301X0)**
  EBC 353/EBC 354 Cpu cooler with heat sink, Fau and Thermal Pad

- **Optional EBC 353 Cable Kit (P/N: 10E00035302X0)**
  Include SATA cable, SATA power cable, PS2 KB/MS cable, DVI to DVI-D and D-SUB15 cable, COMPORT and USB cable