

Main Features

- ◆ 3.5 ECX Form Factor
- ◆ Intel Pentium® M/ Celeron® M Processors
- ◆ Intel® 915GME or 910GML Chipset
- ◆ On-board Default 512 MB DDR2 Memory
- ◆ Max. Support up to 1GB by Manufacture Option
- ◆ Single +5V AT Mode Power Input Design
- ◆ Supports LVDS/ CRT Dual Independent Display
- ◆ Realtek 8111C-GR PCI Express GbE Controller
- ◆ Supports Both ATX or AT Power Mode
- ◆ ECX Multi I/O Expansion for Add-on Modules

Product Overview

The EBC 301 is a 3.5" ECX embedded board with Intel® Celeron® M / Pentium® M processor support. The EBC 301 features Intel® 915GME or 910GML and ICH6M chipsets, which supports DDR2 memory, along with integrated graphics with DVMT memory to support CRT and LVDS function and dual independent display capability.

The South Bridge ICH6M provides, serial port, four USB 2.0 ports, and one Gigabit Ethernet LAN port

With the ECX multi I/O connector for the extra interface, such as ,4 x USB, 1 x LPC, 2 x PCI Master, AC97 Audio Codec, 1 x PCI Express, and SDVO, which will provide dedicated application required features under such small form factor.

The EBC 301 is a great solution featuring a low power consumption processor with versatile display and numerous I/O port support.

Specifications

CPU Support

- ◆ Support Intel® Pentium® M processor or Intel® Celeron® M processor in PGA and BGA Type

Main Memory

- ◆ On-board default 512 MB DDR2 Memory
- ◆ Max. Support up to 1GB by Manufacture Option

Chipset

- ◆ Intel® 915GME chipset (compatible with 910GML chipset)
- ◆ Intel® ICH6M (82801FBM)

BIOS

- ◆ Award System BIOS
- ◆ Advanced Power Management support
- ◆ 4M bits flash ROM
- ◆ Only support Software Shutdown by 5Vsb Provided (S0 /S5 only)

On-board LAN

- ◆ Realtek 8111C-GR PCI Express GbE controller
- ◆ 1 x RJ45 with LED connector
- ◆ Support PXE LAN boot ROM for Ethernet Boot up.
- ◆ Support Wake on LAN (By 5Vsb Provided)

Display

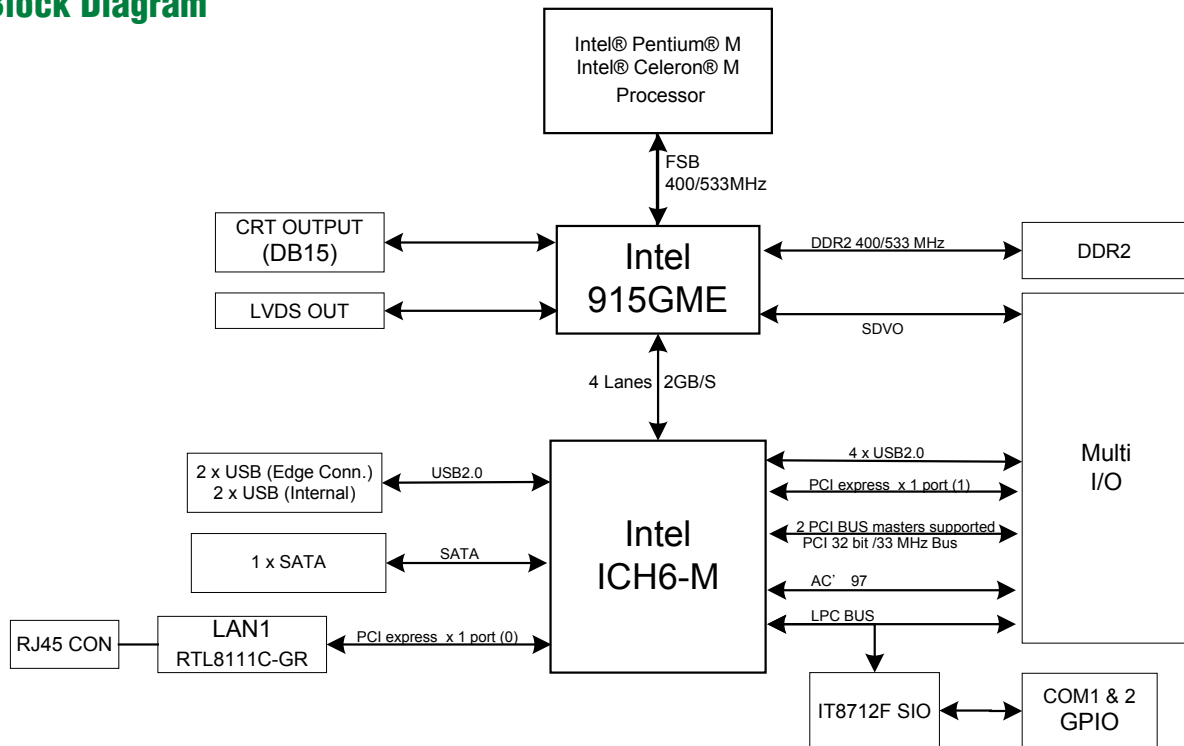
- ◆ Intel® 915GME (910GML) integrated graphics solution w/ Intel® Extreme Graphics 2 technology
- ◆ Intel DVMT video memory allocation
- ◆ 350-MHz integrated 24-bit RAMDAC that can drive a standard progressive scan analog monitor with pixel resolution up to 1600x1200 at 85 Hz, 2048x1536@75Hz
- ◆ LVDS: Single pixel LVDS panel support up to UXGA panel resolution (1600 x 1200)
- ◆ DF13-20DP, 2 x 20-pin connector for LVDS panel output
- ◆ One CCFL 7-pin 2.5mm Jst connector for LCD Backlight Inverter Power Control.

I/O Interface

- ◆ Serial port: 2 ports, 1 x DB-9 Connector and one 2x5 2.0mm Box Header
- ◆ USB 2.0: 4 ports, 2 ports edge connector, 2 ports by 6-pin 2.0mm Jst connector.
- ◆ 8 GPIO:10-pin(2x5) 2.0mm header (GPI 0 ~ 3 and GPO0 ~ 3), TTL Level (0/5 V)
- ◆ One 1x2 2.54mm thermal sensor pin
- ◆ 3-pin Fan connector, adjustable by jumper for +12V or +5V(Manufacture Default)
- ◆ 2-pin header (2.54 mm) for Buzzer. Reset switch, Power LED, HDD LED and ATX mode power-on Push Button
- ◆ 2X5 10-pin Power Input connector.
- ◆ One DB15 VGA connector
- ◆ One RJ45 LAN connector
- ◆ One ECX Multi I/O connector for the expansion modules through following reserved interface:
USB x4 / LPC x1 / PCI (Master) x2 / AC97 Audio Codec Interfacex1 / PCI Express x1 / SDVO



Block Diagram



On Board RTC

- On chip RTC with battery back up
- External Li-Lon Battery

Storage

- 1 X SATA Connector
- CF socket support through optional module EBK 301-C2

System Monitor

- 3 voltage: +3.3V, +5V, Vcore
- 2 Temperatures: CPU, System
- 1 FANs speed: CPU FANs

Watchdog Timer

- Watchdog timer is programmable by Software from 1 mins to 255 mins or 1 sec. to 255 sec. , (Tolerance 15% under room temp. 25°C)

Power Input

- AT Mode: Single 5V input

CPU: P-M 2.0G Memory: On board DDR2 1GB	+5 V
Full-Loading Mode	4A
Light loading Mode	3A

- ATX Mode
Aux input connector for +5Vsb, +12V, -12V, -5V as ATX mode application.
Support Remote Power ON / Software Shutdown / RTC alarm When ATX mode

Dimensions

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

Certifications

- CE approval / FCC Class A

Environment

- Operating Temp: -20°C to 60°C for Board Level Only
- Storage Temp.: -20°C to 85°C
- Relative Humidity :
Operating 10%~90%, non-condensing
Non-operating 5%~95%, non-condensing

Ordering Information

- **EBK 301-SKT-512M (P/N: 10E00030100X0)** RoHS Compliant
3.5" ECX Embedded Board with Pentium® M/ Celeron® M CPU Socket
Based on Intel 915GME Chipset supports 400/533 MHz FSB CPU, with 512MB DDR2 Memory on Board
With VGA/ LVDS/ COMs/ USB2.0 / SATA / Gigabit LAN
- **EBK 301-C1 (PN:10E0301C100X0)**
Two USB (Via two 6 pin JST) / LPC Super I/O, for COM3 and COM4 (COM4 support RS232/422/485)
One Audio Phone Jack for Audio Speaker Out / One Internal Audio Line in and Mic in connector
One DVI connector
- **EBK 301-C2 (PN:10E0301C200X0)**
Two USB (Via one 6 pin JST)
Two LPC Super I/O for COM3,COM4 and COM5,COM6 (COM3 & 4 support RS232/422/485)
One CF socket