



# Intel® 852GM Chipset for Embedded Computing

## Product Overview

The Intel® 852GM Chipset for Embedded Computing is an optimized integrated graphics solution with a 400 MHz system bus and integrated 32-bit 3D core at 133 MHz. It features a low-power design, supports the Mobile Intel® Celeron® processor and Intel Celeron processor, and supports up to 1 GB of DDR 200/266 system memory.

The Intel 852GM chipset is part of Intel's comprehensive validation process that enables fast deployment of next-generation platforms to maximize competitive advantage while minimizing development risks.



## Product Highlights

- The Intel 852GM chipset is designed, validated, and optimized for the Mobile Intel Celeron processor and Intel Celeron processor with Intel® NetBurst® microarchitecture
- 400 MHz system bus delivers a high-bandwidth connection between the processor and the platform
- Supports integrated graphics utilizing Intel® Extreme Graphics 2 technology
- Advanced packaging technology and industry-leading electrical design innovations deliver long-term system reliability over wide operating conditions
- Three USB host controllers provide high-performance peripherals with 480 Mbps of bandwidth, while enabling support for up to six USB 2.0 ports. This results in a significant increase over previous integrated 1-4 port hubs at 12 Mbps
- The latest AC '97 implementation delivers 20-bit audio for enhanced sound quality and full surround sound capability. Integrated audio solutions continue to enjoy success as a very cost-effective, yet high-performance solution
- LAN Connect Interface (LCI) provides flexible network solutions such as 10/100 Mbps Ethernet and 10/100 Mbps Ethernet with LAN manageability
- Dual Ultra ATA/100 controllers, coupled with the Intel® Application Accelerator – a performance software package – support faster IDE transfers to storage devices

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- Intel Application Accelerator software provides additional performance over native ATA drivers by improving I/O transfer rates and enabling faster O/S load time, resulting in accelerated boot times
- Communication and Network Riser (CNR) offers flexibility in system configuration with a baseline feature set that can be upgraded with an audio card, modem card, or network card
- Embedded lifecycle support
- Integrated graphics

**Display**

- Analog display support
- Dual independent pipe support
  - Concurrent: different images and native display timings on each display device
  - Simultaneous: same images and native display timings on each display device
- DVO (DVOB and DVOC) support
  - Digital video out ports DVOB and DVOC with 165 MHz dot clock on each 12-bit interface; two 12-bit channels can be combined to form one dual-channel 24-bit interface with an effective dot clock of 330 MHz
  - Compliant with DVI Specification 1.0
- Dedicated Local Flat Panel (LFP) LVDS interface

**Internal Graphics Features**

- Core frequency
  - Display core frequency of 133 MHz
  - Render core frequency of 133 MHz

**Intel® Embedded Graphics Driver**

- Graphics interface support
  - GDI and DirectX\* DirectDraw\* with overlay for Windows\* XP, Windows\* 2000, and Windows\* Embedded XP
  - XFree86\*, XAA, and Xv for Linux\*
- Multi-monitor support
  - Multiple programmable configurations
  - Dual independent display
  - DVO device support/TV-Out
- Dynamic display-mode support
  - User definable and extensible
- Embedded video BIOS
  - Common port interface support
  - Full VGA compatibility

**Intel® 852GM Chipset for Embedded Computing**

Product	Product Code	Package	Features
852GM Memory Controller Hub (GMCH)	RG82852GM	732 micro-FC-BGA	<ul style="list-style-type: none"> <li>■ 400 MHz system bus</li> <li>■ DDR 200/266</li> <li>■ Integrated graphics support</li> </ul>
I/O Controller Hub 4	FW82801DB	421 micro-BGA	<ul style="list-style-type: none"> <li>■ Direct connection to MCH with Intel® Accelerated Hub Architecture</li> <li>■ Supports 32-bit PCI</li> <li>■ IDE controllers with ATA/100</li> <li>■ Six USB ports with USB 2.0 support</li> <li>■ AC '97 controller with 20-bit audio support</li> <li>■ Integrated LAN connect interface</li> </ul>

**Intel Access**

Developer's Site:	<a href="http://developer.intel.com">developer.intel.com</a>
Embedded Intel Architecture Homepage:	<a href="http://www.intel.com/design/intarch">www.intel.com/design/intarch</a>
Intel Technical Documentation Center:	<a href="http://www.intel.com/go/techdoc">www.intel.com/go/techdoc</a>
General Information Hotline:	(800) 628-8686 or (916) 356-3104 5 a.m. to 5 p.m. PST

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