Mobile Intel® 915GME Express Chipset for Embedded Computing

Product Overview

The Mobile Intel® 915GME Express chipset offers an optimized integrated graphics solution with a 400 MHz and 533 MHz front-side bus. The integrated 32-bit 3D graphics engine, based on Intel® Graphics Media Accelerator 900 (Intel® GMA 900) architecture, operates at core speeds of up to 333 MHz. The chipset consists of the Intel® 915GME Graphic Memory Controller Hub (GMCH) and Intel® I/O Controller Hub 6-M (ICH6-M). It features a low-power design, is validated with the Intel® Pentium® M and Intel® Celeron® M processors on 90nm process, and supports up to 2 GB of DDR2 533 MHz system memory.

Intel's platform architecture delivers the performance and high scalability required for today's cutting-edge embedded computing applications. The Intel 915GME GMCH and ICH6-M are 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

- Designed, validated, and optimized for Intel Pentium M and Intel Celeron M processors on 90nm process and associated microarchitectures

- 400 and 533 MHz front-side bus delivers a high-bandwidth connection between the processor and platform

- Supports dual-channel non-ECC DDR2 400/533 MHz and single-channel DDR 333

- New graphics core based on Intel GMA 900

- PCI Express* x16 graphics interface

- Advanced packaging technology and industry-leading electrical design innovations deliver long-term system reliability over wide operating conditions

- Direct Media Interface (DMI) chip interconnect can be implemented x4 or x2 widths, and provides up to 1 GB/s in each direction in full duplex

- Four USB host controllers provide high-performance peripherals with 480 Mb/s of bandwidth, while enabling support for up to eight USB 2.0 ports. This results in a significant increase over previous integrated one- to four-port hubs at 12 Mb/s

- Four x1 PCI Express ports, fully PCI Express 1.0a-compliant, and support for full 250 MB/s in each direction

- Intel® High Definition Audio† (Intel® HD Audio) interface for full surround sound support

- LAN Connect Interface (LCI) provides flexible network solutions such as 10/100 Mb/s Ethernet and 10/100 Mb/s Ethernet with LAN manageability

- Integrated Serial ATA host controller supports two ports and data transfers up to 1.5 MB/s
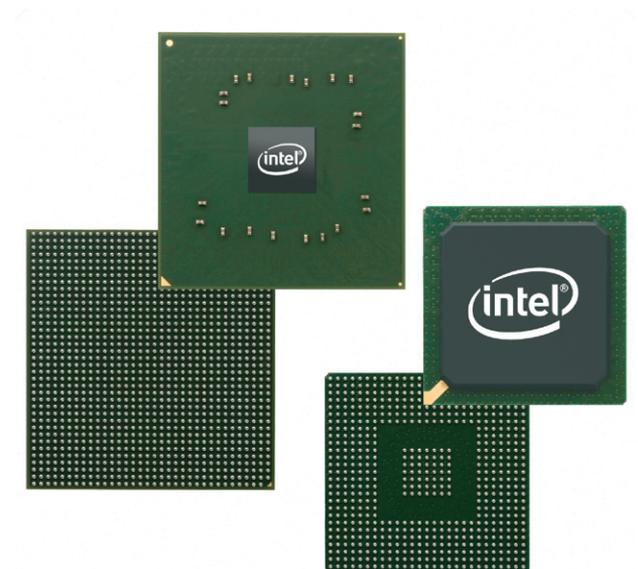
Product Highlights (continued)

Display

- Analog display support

- PCI Express-based graphics interface

  – PCI Express architecture support for external graphics devices

  – One 16-lane PCI Express port (x16 PCI Express port) intended for graphics attach

- Dual display support

  – Independent: different images and native display timings on each display device

  – Simultaneous: same images and native display timings on each display device

- SDVO support

  – Dual SDVO channels provide support for a wide array of displays

- Dedicated Local Flat Panel (LFP) LVDS interface

Internal Graphics Features

- Core frequency

  – Display core frequency up to 333 MHz

  – Render core frequency up to 333 MHz

  – Dynamic Video Memory Technology (DVMT) 3.0 to dynamically allocate up to 128 MB of system memory for graphics usage

Mobile Intel® 915GME Express Chipset for Embedded Computing

Product	Product Code	Package	Features
Intel® 915GME Graphics Memory Controller Hub (GMCH)	QG82915GME	1257 µFC-BGA	• 400 and 533 MHz front-side bus • Up to DDR2 533 MHz system memory • Intel® Graphics Media Accelerator (GMA) 900 • PCI Express* external graphics support
Intel® I/O Controller Hub 6-M (ICH6-M)	FW82801FBM NH82801FBM	609 µ-BGA	• Direct connection to GMCH via Direct Media Interface • Supports four PCI Express root ports • Two-port Serial ATA controller • Support for up to eight USB 2.0 ports • Intel® High Definition Audio† interface

† Intel® High Definition Audio requires a system with an appropriate Intel® chipset and a motherboard with an appropriate codec and the necessary drivers installed. System sound quality will vary depending on actual implementation, controller, codec, drivers and speakers. For more information about Intel® HD audio, refer to www.intel.com

Intel Access

(intel®)