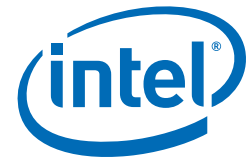


Product Brief

Development Kit

Embedded Computing



Intel® Atom™ Processor N270 and Mobile Intel® 945GSE Express Chipset Development Kit

Product Overview

The Intel® Atom™ processor N270^A and Mobile Intel® 945GSE Express chipset development kit provides robust performance-per-watt, power-efficient graphics and rich I/O capabilities for cost-effective embedded solutions.

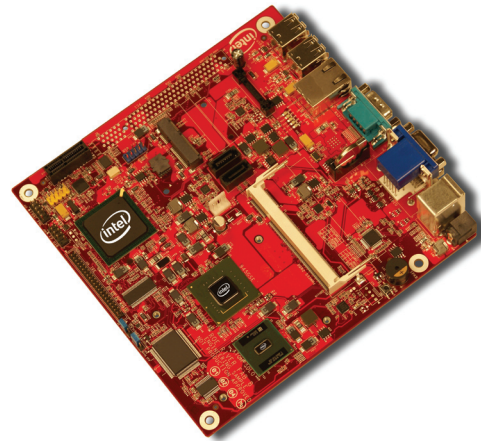
The chipset features an integrated 32-bit 3D graphics engine based on Intel® Graphics Media Accelerator 950 (Intel® GMA 950) architecture, a 533 MHz front-side bus (FSB), single-channel 400/533 MHz DDR2 system memory (SODIMM and/or memory down), Intel® Matrix Storage Technology and Intel® High Definition Audio¹ interface. The chipset delivers outstanding system performance and flexibility through high-bandwidth interfaces such as PCI Express*, PCI, Serial ATA, and Hi-Speed USB 2.0 connectivity.

This platform offers an excellent solution for embedded market segments such as digital signage, interactive clients (kiosks, point-of-sale terminals), thin clients, digital security, residential gateways, print imaging, and commercial and industrial control. It is part of Intel's comprehensive validation process, enabling fast deployment of next-generation platforms to help developers maximize competitive advantage while minimizing development risks.

This and other development kits from Intel provide a working system with a range of performance options that can be modified or used immediately for product development, and allow software vendors to test BIOS and operating system software.

Product Highlights

- Power-optimized Intel Atom processor N270 at 1.6 GHz core speed with 533 MHz AGTL+ FSB, implemented in 45nm technology
- Intel® 82945GSE Graphics Memory Controller Hub (GMCH) in a 998 µFC-BGA package and Intel® I/O Controller Hub 7-M (ICH7-M) in a 652 µ-BGA package
- Integrated 3D graphics engine, based on Intel GMA 950 architecture delivers sophisticated graphics for large display applications
- Single-channel non-ECC 400/533 MHz DDR2 (SODIMM and/or memory down)



Board Peripheral Features

- VGA port and DVI-D
- Two (2) SATA ports
- One (1) parallel ATA port (44-pin mobile header)
- Eight (8) USB 2.0 ports (four back-panel, two front-panel, one internal, one PCIe mini-card)
- One (1) PCIe x1 port
- One (1) PCIe mini-card connector for wireless adapter
- Realtek ALC268* High Definition Audio codec
- Front-panel headphone and mic-in support
- 10/100/1000 Realtek RTL8111* Ethernet Controller
- Legacy I/O:
 - PS/2
 - Serial
- 12 VDC input

Included in the Kit

- Mini-ITX (6.75" x 6.75") development board
- Mini-ITX chassis
- One (1) GB DDR2 533 MHz memory SODIMM
- 12 VDC power supply
- SATA hard drive
- SATA DVD drive
- Pre-installed jumpers
- BIOS pre-installed in flash memory
- Documentation and software CD

Software Overview

The following operating systems are supported on this platform.

Operating System	Contact
Microsoft Windows* XP Embedded SP2	Intel provides drivers
Microsoft Windows* Embedded CE 6.0	Adeneo, BSQUARE, WPro
Fedora Core Linux*	Fedora Community
SUSE Linux*	Novell

The following BIOS vendors support this platform.

- American Megatrends, Inc.
- General Software, Inc.
- Insyde Software
- Phoenix Technologies, including AwardCore*

Please contact your preferred vendor or an Intel representative for operating system and BIOS options. Or contact a member of the Intel® Embedded and Communications Alliance for application support (intel.com/go/eca).

Intel strives to provide customers with a complete development environment supporting customer applications and operating systems. Any software provided in this development kit is subject to change without notice. Customers are encouraged to check for software updates at intel.com/design/intarch/devkits/index.htm.

Order Information

EMBAT945GSERRDK

Intel in Embedded and Communications: [Intel.com/go/embedded](http://intel.com/go/embedded)

[^] Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. See http://www.intel.com/products/processor_number for details.

¹ 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 <http://www.intel.com/>.

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