

Gentoo on Netus the new ARM926EJ-S

Why GENTOO Linux on Netus Embedded platform? We decided to port Gentoo over NETUS ARM® system for 3 main reasons:

- The first is for the number of available packages
- The second is the incredible quantity of documentation available on the gentoo wiki
- Last but not least is the powerful portage package manager and the integrated compiler on board, yes you understand correctly you can compile on the board without loosing time on crosscompiling copying and so on!

Download NETUS+GENTOO wallpaper now!

What is Gentoo Gentoo is a free operating system based on either Linux or FreeBSD that can be automatically optimized and customized for just about any application or need. Extreme configurability, performance and a top-notch user and developer community are all hallmarks of the Gentoo experience. Thanks to a technology called Portage, Gentoo can become an ideal secure server, development workstation, professional desktop, gaming system, embedded solution or something else -- whatever you need it to be. Because of its near-unlimited adaptability, we call Gentoo a metadistribution. Of course, Gentoo is more than just the software it provides. It is a community built around a distribution which is driven by more than 300 developers and thousands of users. The distribution project provides the means for the users to enjoy Gentoo: documentation, infrastructure (mailinglists, site, forums ...), release engineering, software porting, quality assurance, security followup, hardening and more. To advise on and help with Gentoo's global development, a 7-member council is elected on a yearly basis which decides on global issues, policies and advancements in the Gentoo project.

HOW TO BUILD YOUR KERNEL What is Portage? Portage is the heart of Gentoo, and performs many key functions. For one, Portage is the software distribution system for Gentoo. To get the latest software for Gentoo, you type one command: emerge --sync. This command tells Portage to update your local "Portage tree" over the Internet. Your local Portage tree contains a complete collection of scripts that can be used by Portage to create and install the latest Gentoo packages. Currently, we have more than 10000 packages in our Portage tree, with updates and new ones being added all the time.

Portage is also a package building and installation system. When you want to install a package, you type emerge packagename, at which point Portage automatically builds a custom version of the package to your exact specifications, optimizing it for your hardware and ensuring that the optional features in the package that you want are enabled -- and those you don't want aren't.

Portage also keeps your system up-to-date. Typing emerge -uD world -- one command -- will ensure that all the packages that you want on your system are updated automatically.

What is NETUS?

- CPU Atmel ATSAM9G20 based on ARM926EJ-S™ ARM® Thumb® Processor with a clock speed of 400MHz
- 64MBytes SDRAM with 32bit access
- 8MBytes Dataflash
- Size 40x40mm
- Weight: 10g
- Four 60 pin connectors (0.8mm pitch) with the following signals available on top and bottom sides
- 1 USB 2.0 Full Speed (12 Mbits per second) Device Port
- 2 USB 2.0 Full Speed (12 Mbits per second) Host and Double Port
- 1 Ethernet MAC 10/100 Base T
- Image Sensor Interface (ITU-R BT. 601/656 12 bit)
- One Two-slot MultiMedia Card Interface (MCI). SDCard/SDIO and MultiMediaCard™ Compliant
- Four Universal Synchronous/Asynchronous Receiver Transmitters (USART) RS485 support
- Two 2-wire UARTs
- Two Master/Slave Serial Peripheral Interfaces (SPI)
- One Synchronous Serial Controller (SSC). I²S Analog Interface Support
- Two Wire Interface (TWI read more...)
- Four-channel 10-bit ADC
- 80 general purpose I/O lines multiplexed with up to two peripheral I/Os
- Individually Programmable Open-drain, Pull-up Resistor and Synchronous Output
- All I/O Lines are Schmitt Trigger when programmed as inputs
- Input Change Interrupt Capability on Each I/O Line
- Serial 2 wire console port
- JTAG Console and Boundary Scan on All Digital Pins (IEEE® 1149.1)
- Two Three-channel 16-bit Timer/Counters with PWM Generation
- Watchdog timer
- Real-time clock (optional external battery backup)

- Very Slow Clock Operating Mode
- Supported by the Netus Evaluation Board, Netus Carrier Boards and extensive third-party application development tools.
- Supports Linux and extensive environments available for the AT91SAM processors.

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Many thanks for their contribute on this documentation to: Davide Cantaluppi, Claudio Mignanti, Stefano Barbato, Lee McLoughlin, Roberto Fasulo, Roberto Asquini, Andrea Leganza, John Crispin, Luca Pascarella, Marco Cavallini, Tiziano Galizia, Sebastien Philippe, Antonio Galea, Matteo Carnevali and to the developers community of the Open Source softwares mentioned on it. [News from Acme Systems](#)

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Last 5 news:

- New Gentoo ISO image is available from KDev (2009/11/16 18:30)

Contacts

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