

AVR32 Network Gateway Introduction

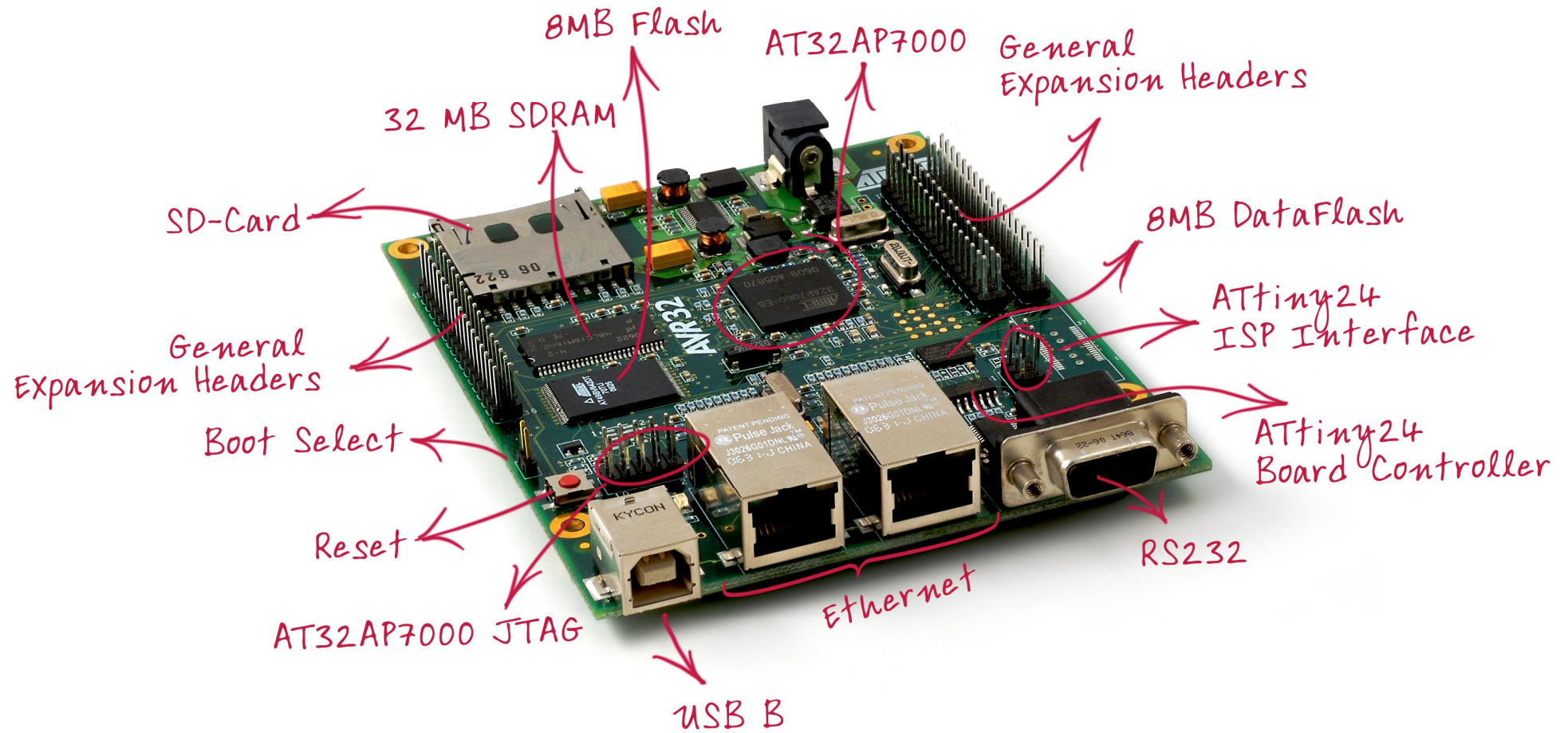
Haakon Skar

Director of Product Marketing - AVR32

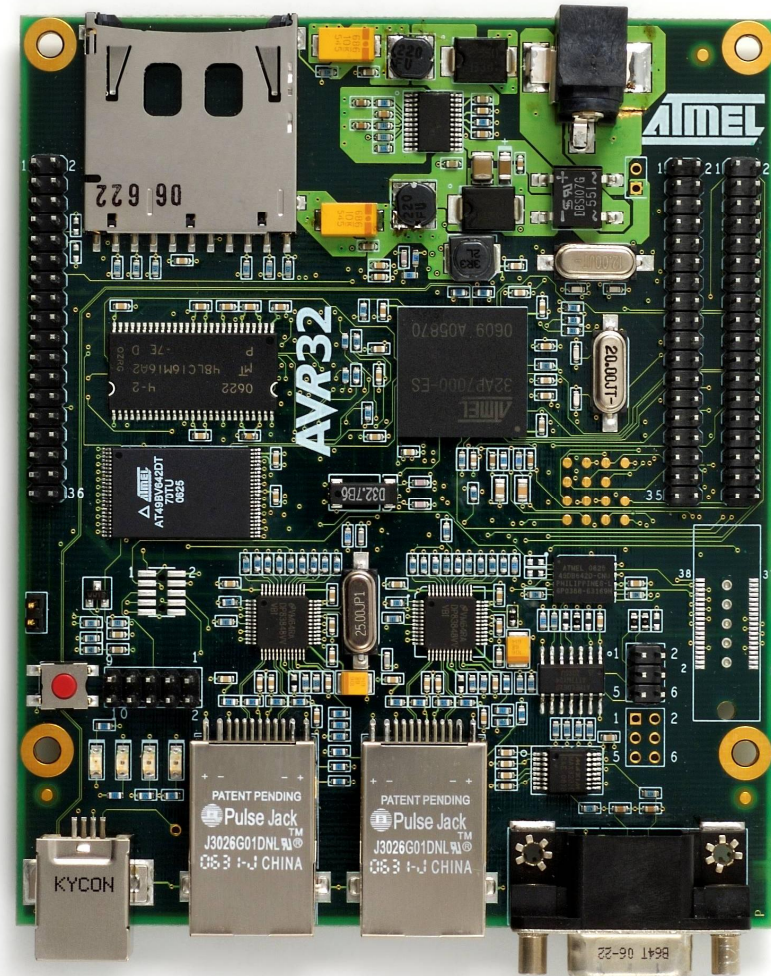
AVR[®]

ATMEL[®]

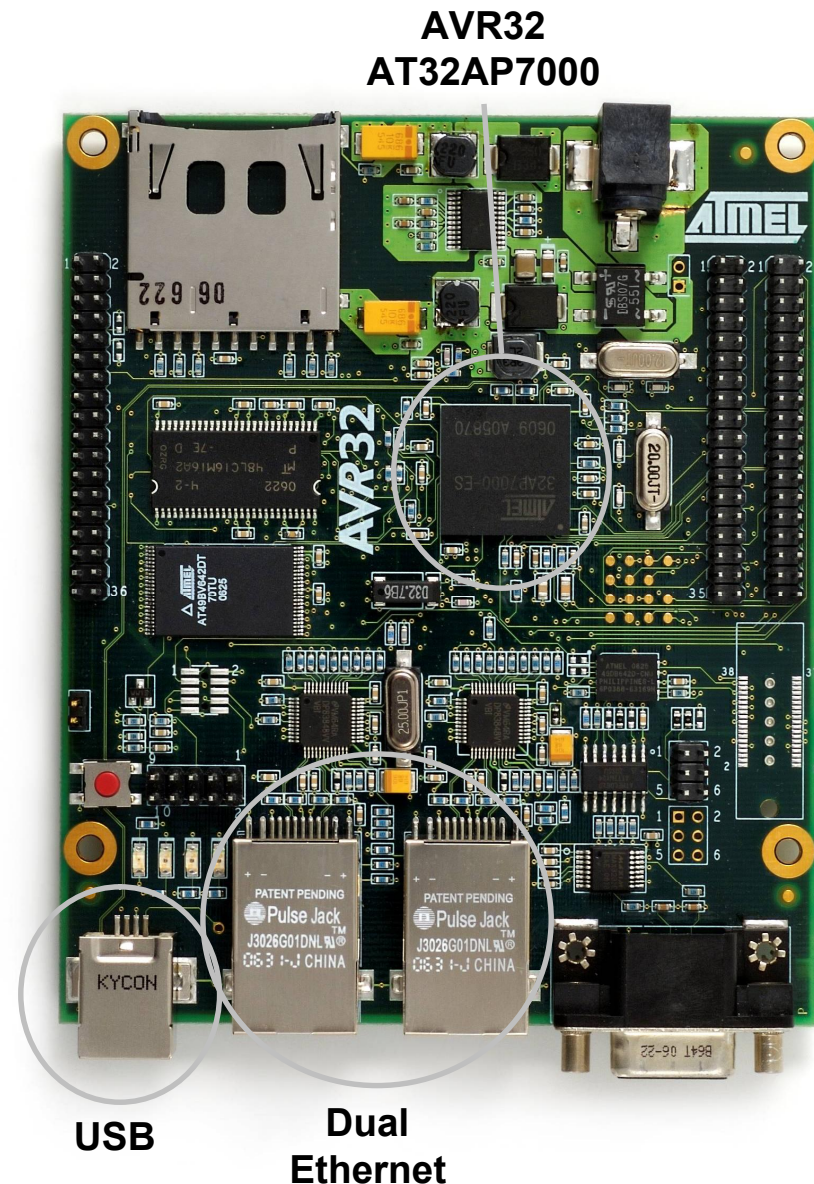
Introducing the AVR32 Network Gateway



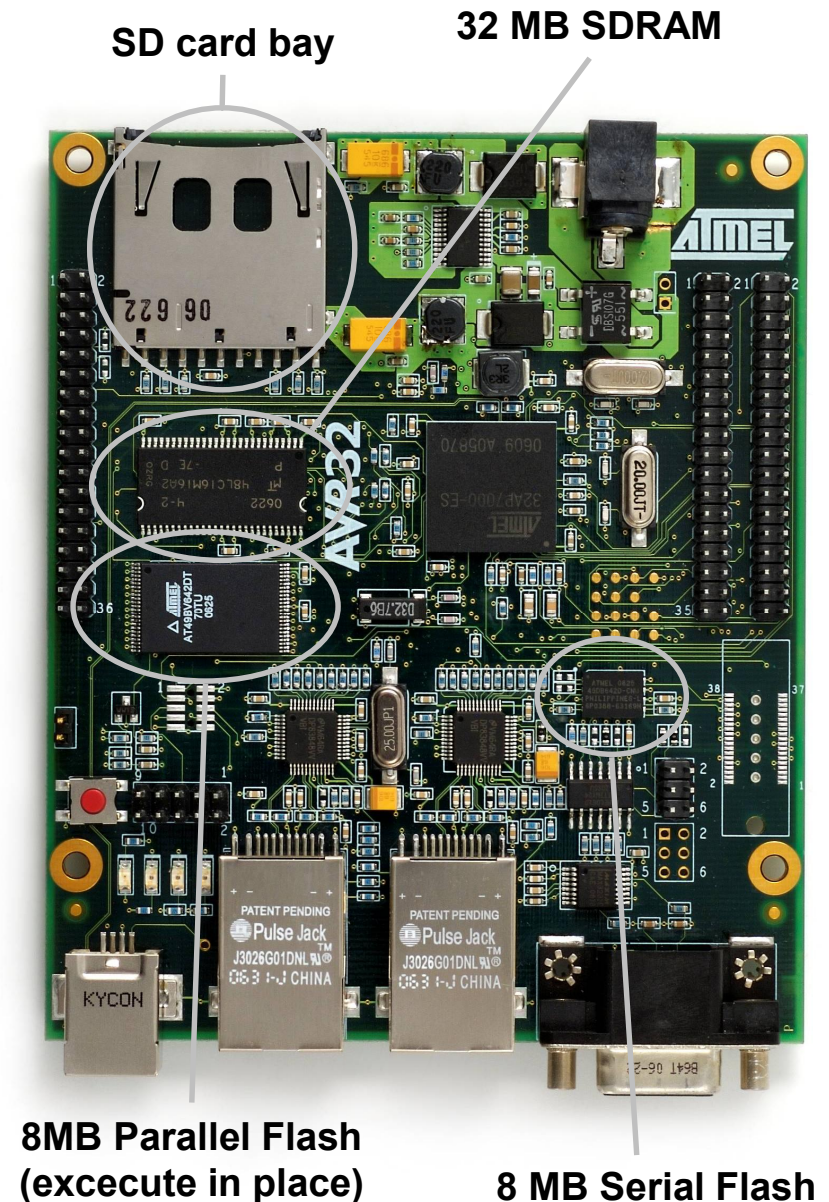
- § Demonstrator for the AVR32 Application Processors
- § Low cost (US\$ 69) evaluation and reference kit
- § Ships with Linux OS and a selection of popular networking & storage applications
- § Demonstrates the power of Dual Ethernet and USB 2.0 Hi-Speed interface
- § Royalty and license free source code



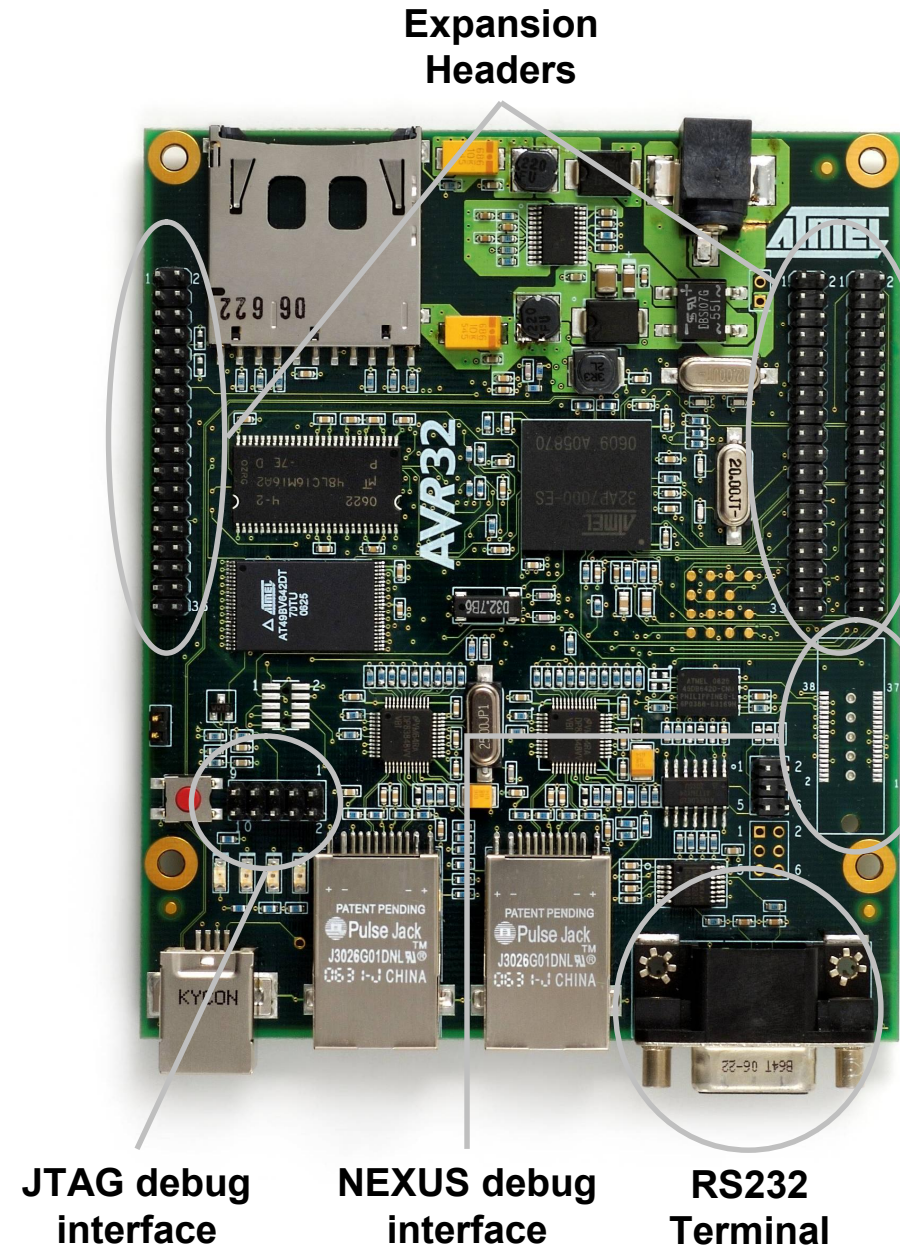
- § **The Network Gateway demonstrates the capabilities of the AVR32 to run operating systems and route network traffic**
- § **Provides 2 Ethernet RJ45 10/100 Mbps auto-sensing TP ports with RX/TX and LINK LEDs integrated in the RJ-45 Connectors.**
- § **USB v2.0 Hi-Speed device port adds support for network adapter and mass storage class device.**



- § 32 MB SDRAM for OS and applications
- § 8 MB parallel Flash for Execute in place storage
- § 8 MB serial Dataflash for File system storage
- § SD memory card (not included) mounts as drive, used for additional mass storage



- § The RS232 connector provides command line terminal access to Linux operating system
- § Expansion header for connection to unused signals (LCD, SSC, I2S, USART, SPI, TWI, AC97, PWM, Power)
- § JTAG and NEXUS interfaces for debugging



Included

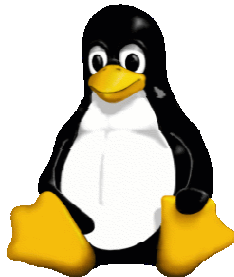
- § PCB
- § Free Linux Operating System
- § Free C compiler
- § Free GDB debugger
- § Free drivers and applications
- § Free TCP/IP stack
- § Free networking software
- § Embedded Web Server with User Guide and links to web site for documentation and software updates

Not Included

- § Ethernet / USB Cables
- § Power Supply
- § SD memory card
- § CD with software etc
- § JTAG ICE mk. II

OS

- § Linux 2.6.18
- § BusyBox 1.2.1
- § Drivers & APIs
- § File System (EXT2)
- § Das uBoot



Dual Ethernet

- § TCP/IP Stack
- § Network Monitoring (SNMP)
- § Terminal Server (Telnet/SSH)
- § Network Bridge (iptables)
- § Network packet filtering firewall (iptables)

Hi-Speed USB

- § Hi-Speed USB Mass Storage Driver
- § Hi-Speed USB-to-RJ45 Ethernet network adapter driver

Network Services

- § Web Server (HTTP)
- § DHCP server (DHCP)
- § Network name server (DNS)
- § Network file server (FTP / SAMBA)
- § Mail Server (POP/SMTP)

§ Dynamic web pages

§ Access system from web server

§ View Status and Settings

§ Remote configuration



CATEGORIES: »Info« Status System Network

Host Name: ngw.example.net
Uptime: 3:55
Load: 0.00, 0.00, 0.00
Version: AVR32 NGW (0.99999)

»Router Info« About

Router Info

AVR32 NGW (0.99999)

- * Network router
- * Network firewall
- * Webservice with dynamic scripting
- * DHCP Server
- * DNS Server
- * FTP Server
- * SSH Server
- * Mass-storage-device

Firmware Version AVR32 NGW (0.99999)

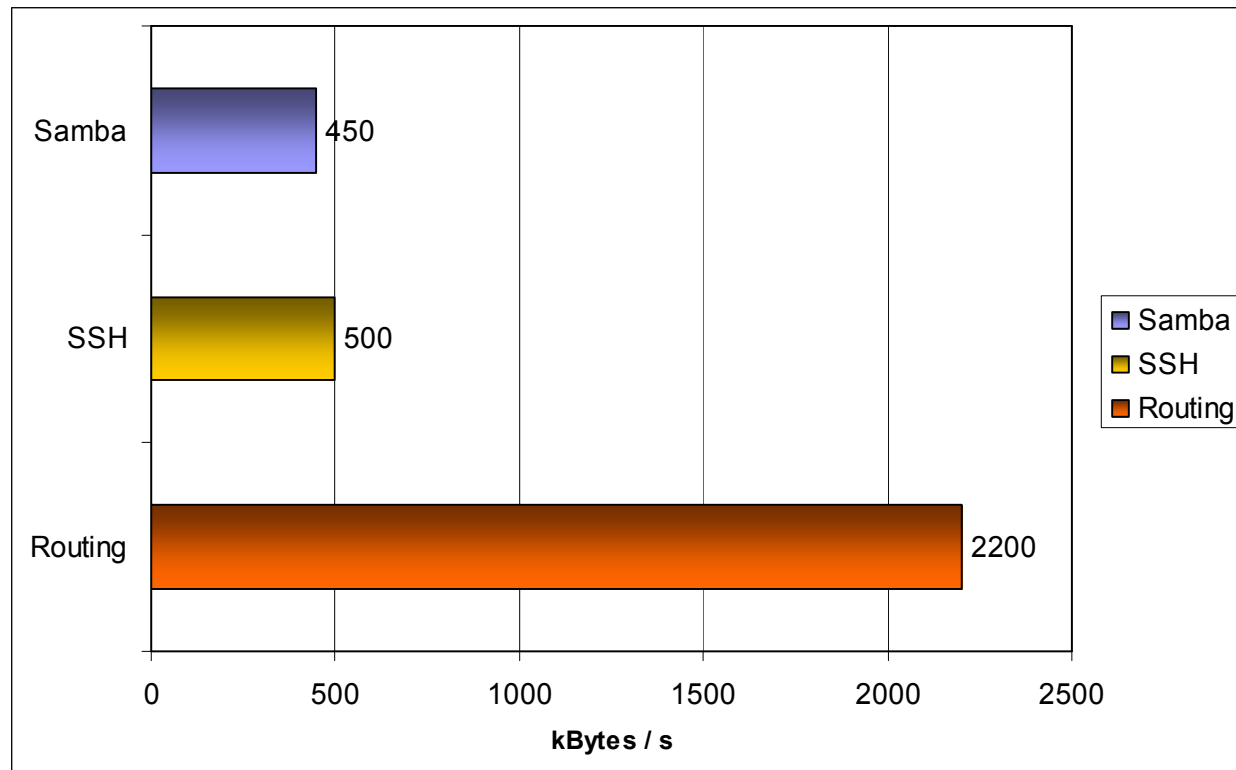
Kernel Version	Linux version 2.6.18-at0 (hcegtvedt@hcegtvedt) (gcc version 4.0.2) #62 Wed Nov 22 09:32:21 CET 2006
Current Date/Time	Wed Nov 22 14:12:58 UTC 2006
MAC Address	00:00:04:25:19:02

Apply Changes «
Clear Changes «
Review Changes «

§ Routing traffic between LAN and WAN

§ Preliminary test results

§ Samba and SSH speed is limited by flash speed SD-card



Online user guide

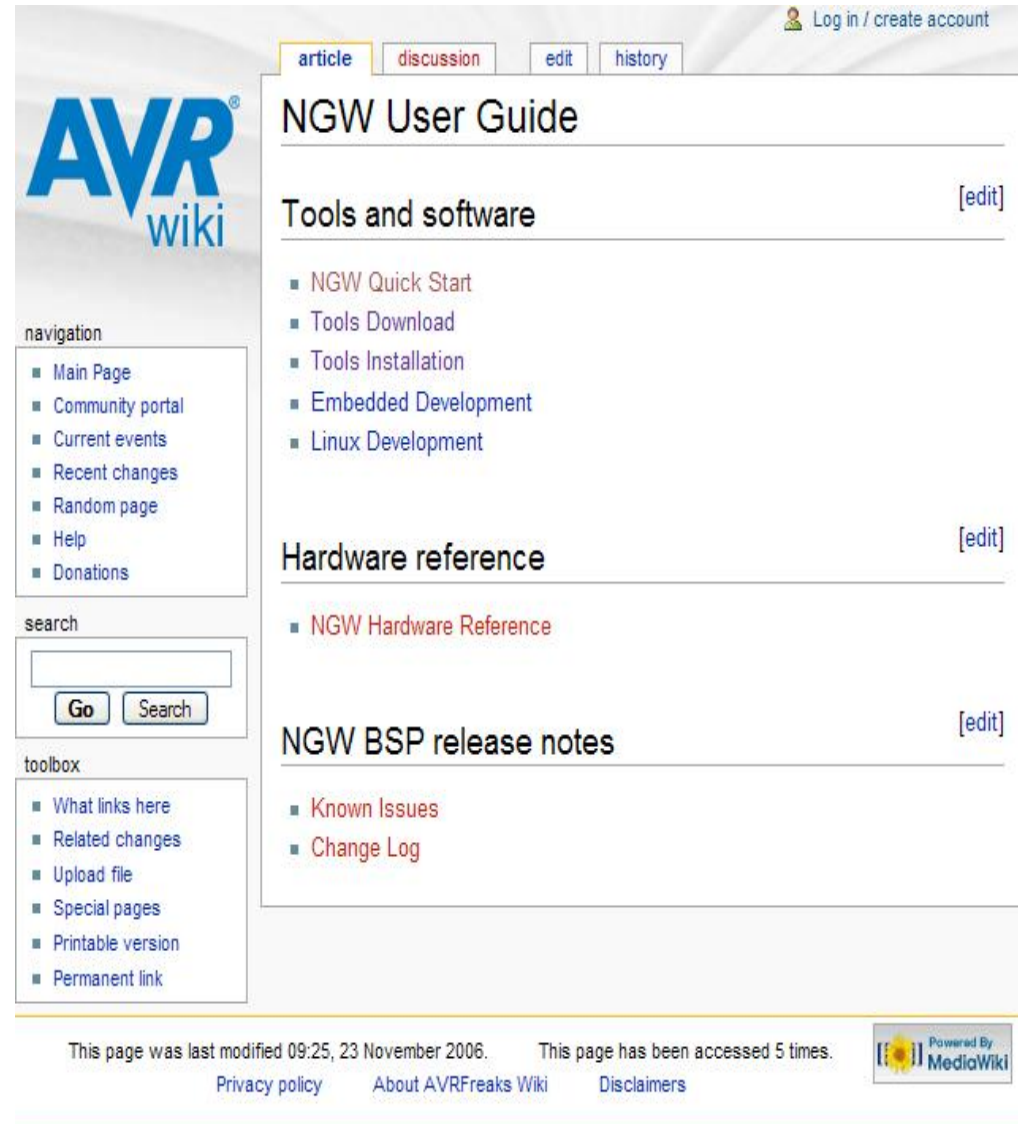
§ Hardware description

§ Application descriptions

§ Getting Started, How-to's and FAQ

§ Maintained by Atmel and the users

§ A copy of documentation is also stored in on-board flash and accessed via web server



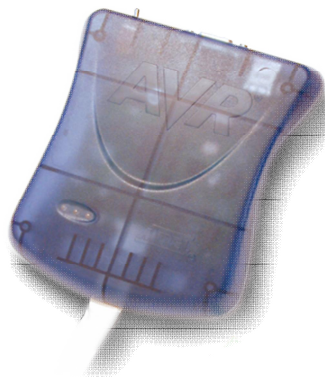
The screenshot shows a MediaWiki page titled "NGW User Guide". At the top right, there are links for "article", "discussion", "edit", and "history", along with a "Log in / create account" link. The main content area lists several sections: "Tools and software" (with an [edit] link), "Hardware reference" (with an [edit] link), and "NGW BSP release notes" (with an [edit] link). Each section has a list of sub-items. The "Tools and software" section includes: NGW Quick Start, Tools Download, Tools Installation, Embedded Development, and Linux Development. The "Hardware reference" section includes: NGW Hardware Reference. The "NGW BSP release notes" section includes: Known Issues and Change Log. On the left side, there is a navigation menu with links: Main Page, Community portal, Current events, Recent changes, Random page, Help, and Donations. Below the navigation menu is a search box with "Go" and "Search" buttons. At the bottom left, there is a toolbox with links: What links here, Related changes, Upload file, Special pages, Printable version, and Permanent link. At the bottom of the page, there is a footer with the text: "This page was last modified 09:25, 23 November 2006. This page has been accessed 5 times." and links for "Privacy policy", "About AVRFreaks Wiki", and "Disclaimers". A "Powered By MediaWiki" logo is also present in the bottom right corner.



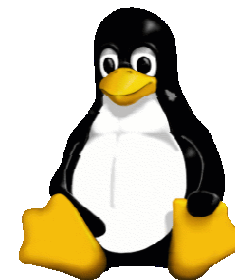
IAR C/C++
Compiler & Debugger



GCC v4.0 C/C++
Compiler & Debugger



Atmel JTAGICE mkII
Runtime Control and
Trace



Linux
OS & Apps
Atmel Supported

- § **Low cost AVR32 development kit**
- § **Linux reference design**
- § **Drivers for all AT32AP7000 on-chip peripherals**
- § **TCP/IP stack & applications**
- § **USB v2.0 Hi-Speed drivers (multiple classes)**

- § **All software installed**
- § **Plug and play evaluation of AVR32**