

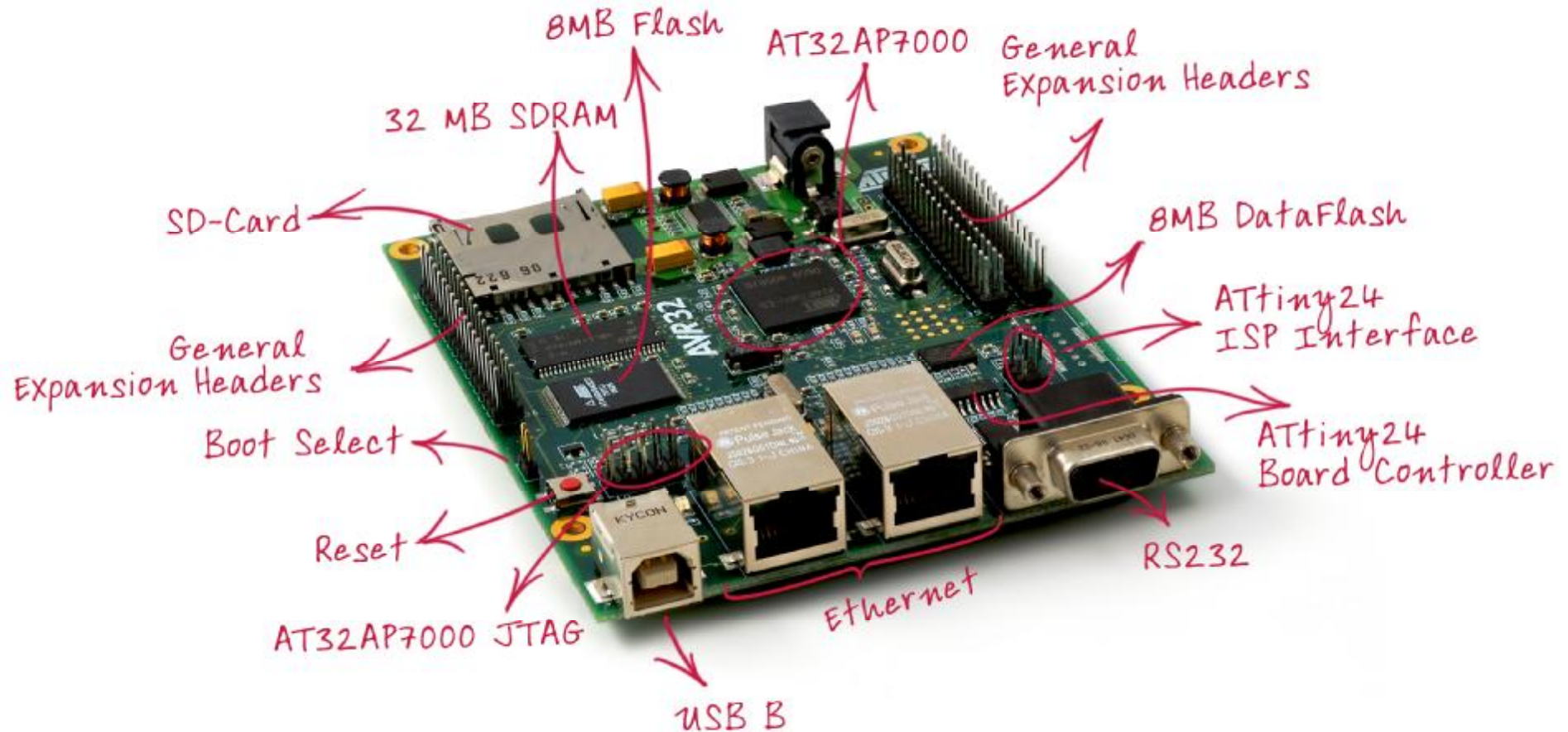
AVR32 Network Gateway Introduction

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Introducing the AVR32 Network Gateway



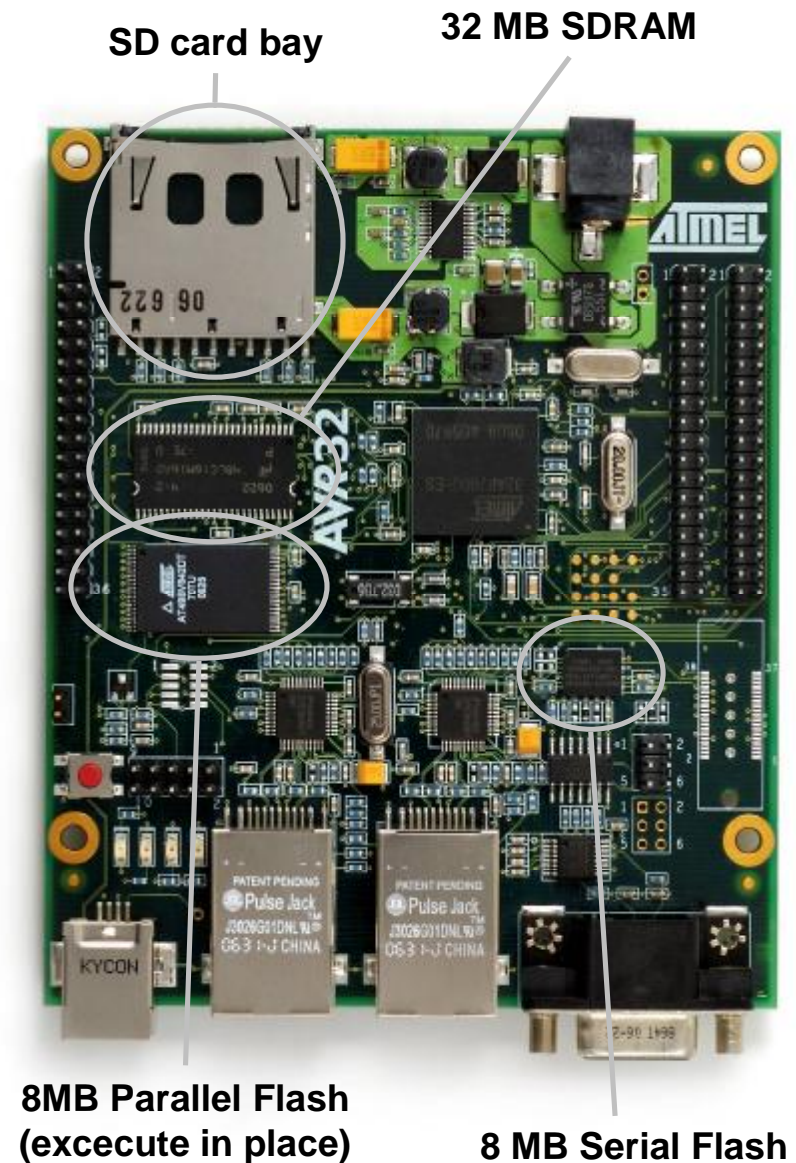
- § **Demonstrator for the AVR32 Application Processors**
- § **Low cost (US\$ 69) evaluation and reference kit**
- § **Ships with Linux OS and a selection of popular networking & storage applications**
- § **Demonstrates the power of Dual Ethernet and USB 2.0 Hi-Speed interface**
- § **Royalty and license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

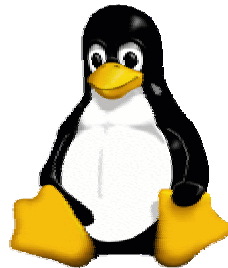
- § PCB
- § Free Linux Operating System
- § Free C compiler
- § Free GDB debugger
- § Free drivers and applications
- § Free TCP/IP stack
- § Free networking software
- § Embedded Web Server with User Guide and links to web site for documentation and software updates

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

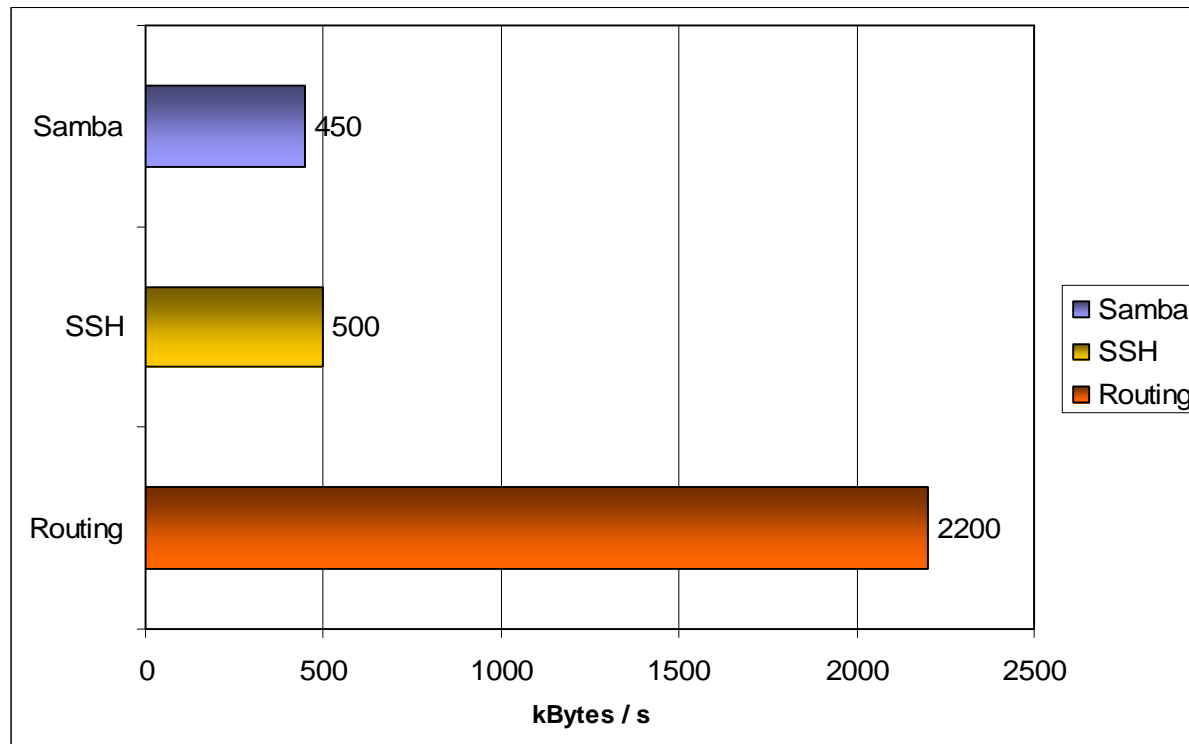


The screenshot shows the NGW Admin Console web interface. At the top, there are navigation links for 'CATEGORIES: »Info«', 'Status', 'System', and 'Network'. The main title is 'NGW Admin Console'. On the right side, system information is displayed: 'Host Name: ngw.example.net', 'Uptime: 3:55', 'Load: 0.00, 0.00, 0.00', and 'Version: AVR32 NGW (0.99999)'. Below the title, there are links for '»Router Info«' and 'About'. The 'Router Info' section features a large 'AVR32 NGW' logo and a list of features: 'AVR32 NGW (0.99999)', '• Network router', '• Network firewall', '• Webserver with dynamic scripting', '• DHCP Server', '• DNS Server', '• FTP Server', '• SSH Server', and '• Mass-storage-device'. Below this, system details are listed: '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', and 'MAC Address 00:00:04:25:19:02'. At the bottom right, there are three buttons: 'Apply Changes <', 'Clear Changes <', and '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

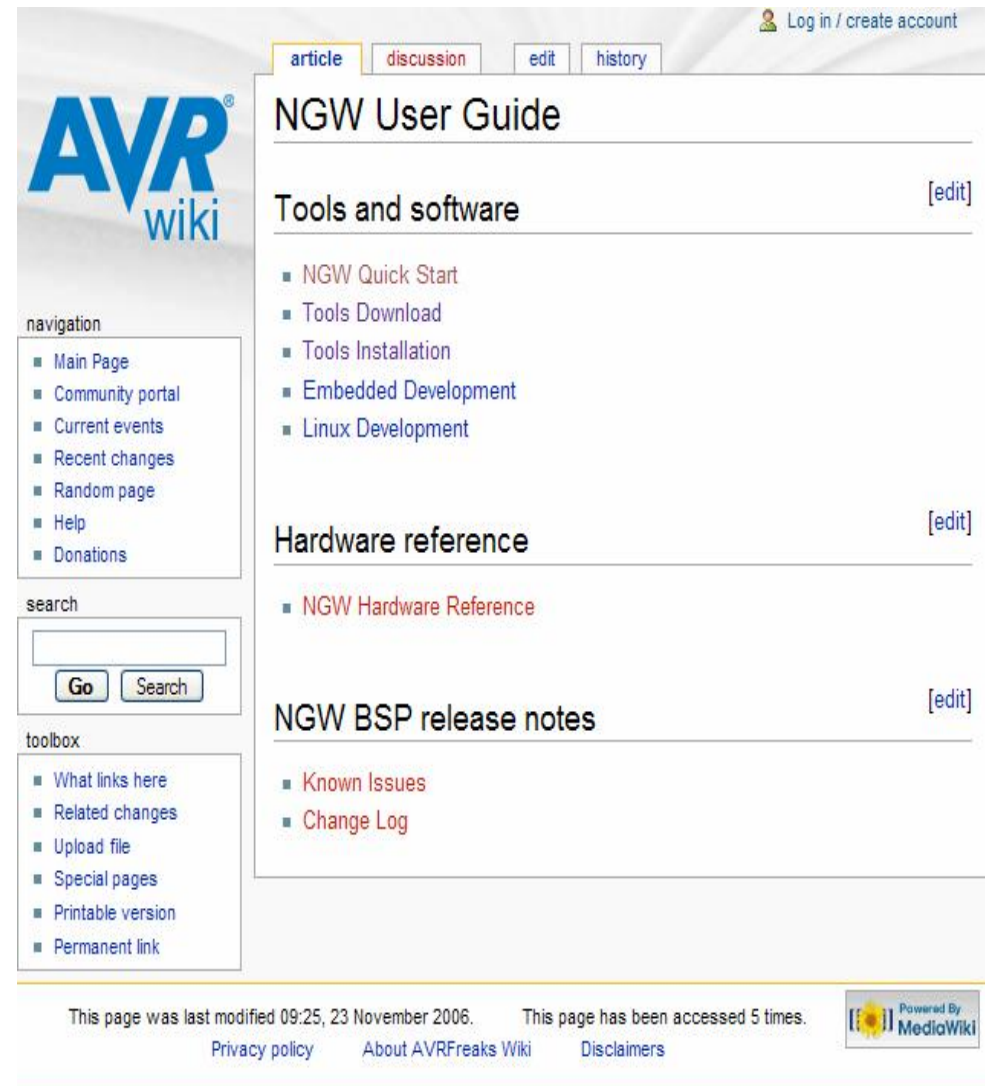
§ Hardware description

§ 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



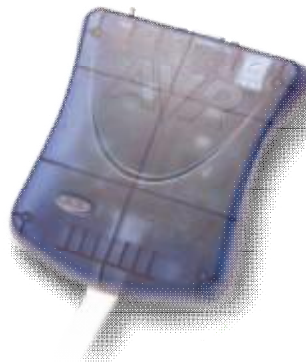
The screenshot shows the AVR Wiki page for the NGW User Guide. The page title is "NGW User Guide" and it includes tabs for "article", "discussion", "edit", and "history". The main content area is divided into sections: "Tools and software" (with an [edit] link), "Hardware reference" (with an [edit] link), and "NGW BSP release notes" (with an [edit] link). Each section contains a list of links: "Tools and software" includes "NGW Quick Start", "Tools Download", "Tools Installation", "Embedded Development", and "Linux Development"; "Hardware reference" includes "NGW Hardware Reference"; "NGW BSP release notes" includes "Known Issues" and "Change Log". On the left side, there is a navigation menu with links like "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, 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.



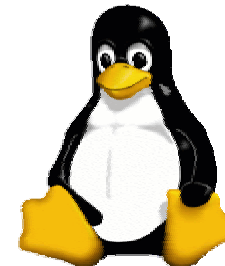
IAR C/C++
Compiler & Debugger



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**